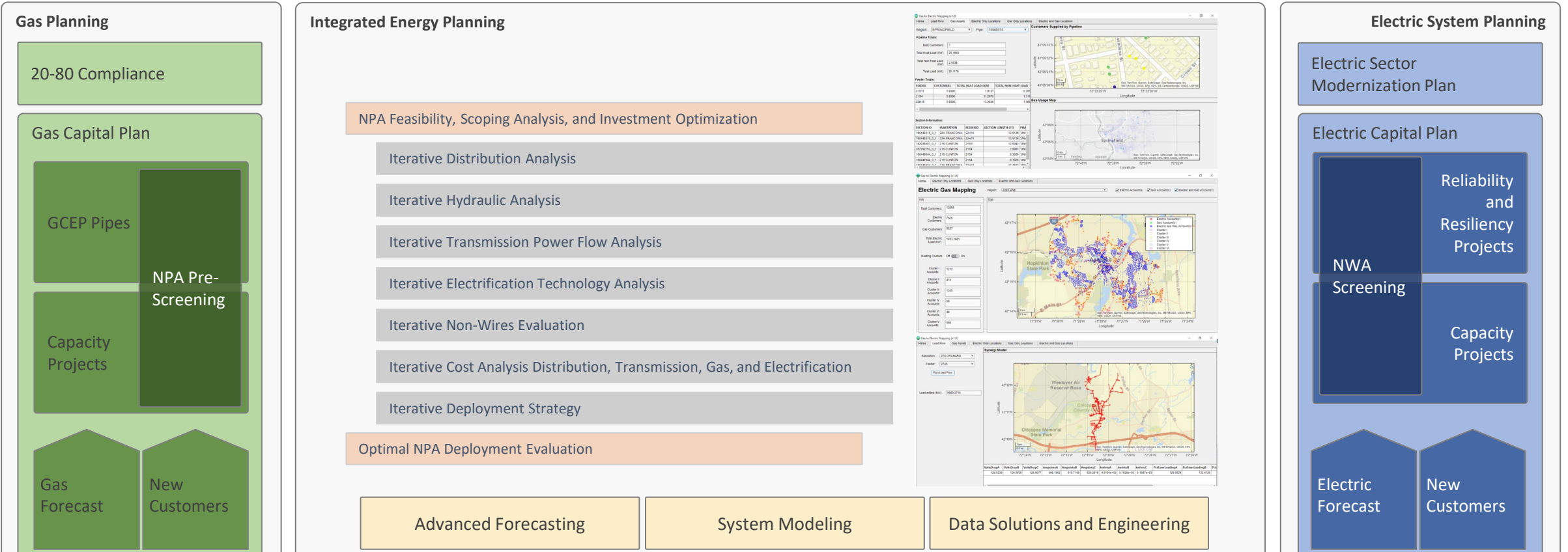


Gas-Electric

Integrated Energy Planning

Integrated Energy Planning

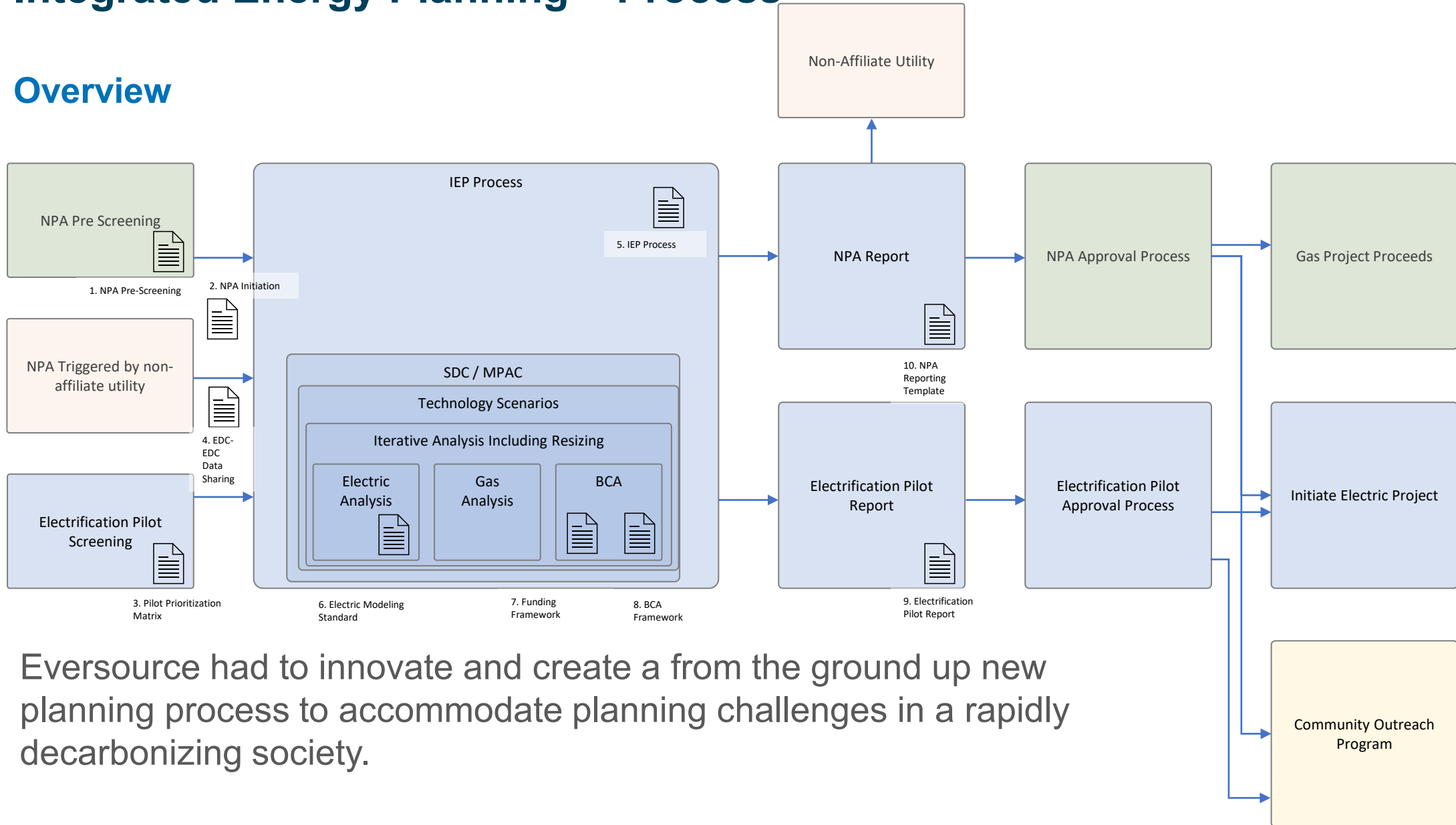
The Future of Utility Planning



Optimization of Gas Infrastructure Investments with Electric T&D Infrastructure Expansion requires coordinated Gas-Electric Planning

Integrated Energy Planning – Process

Overview

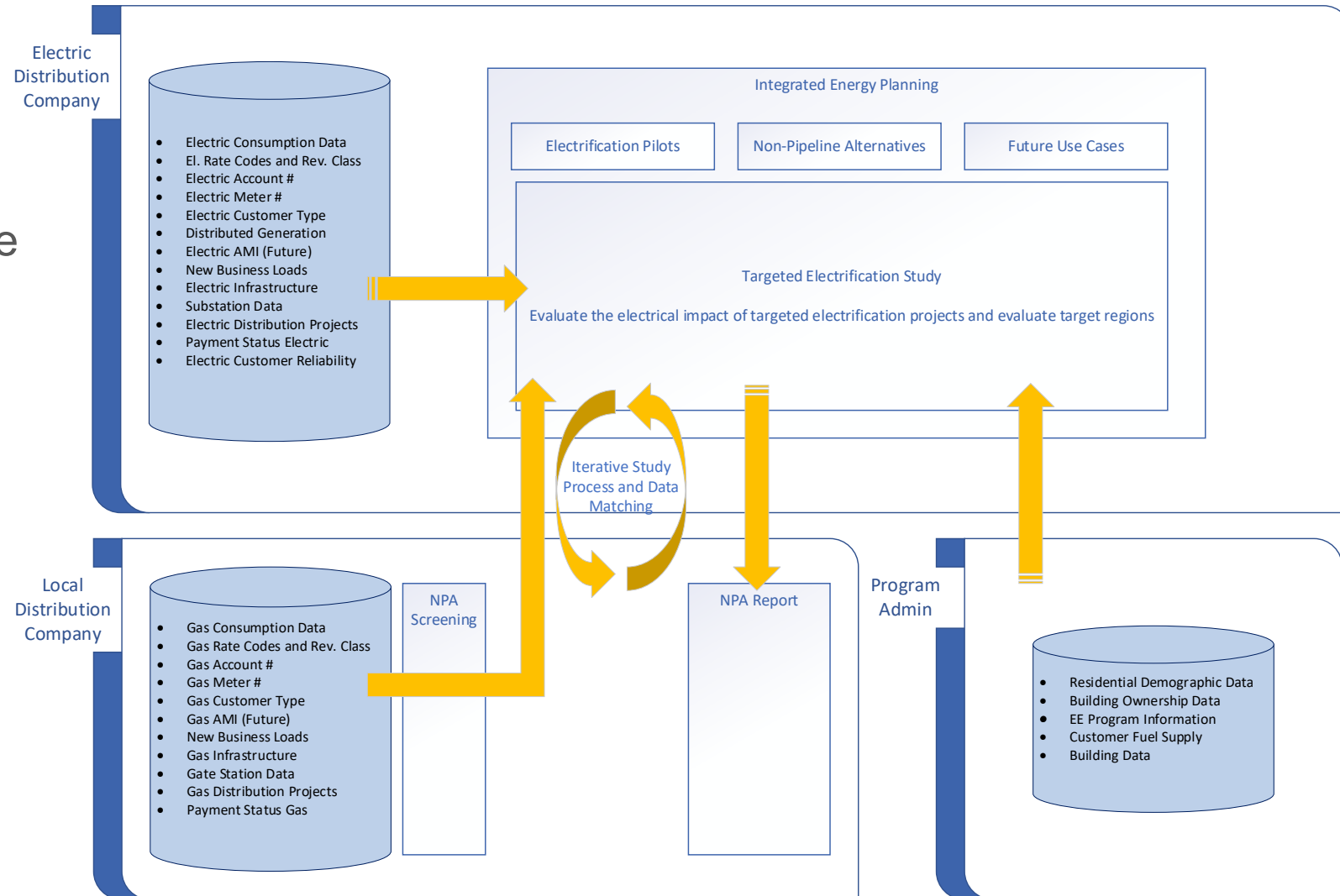


Eversource had to innovate and create a from the ground up new planning process to accommodate planning challenges in a rapidly decarbonizing society.

Integrated Energy Planning – Advanced Data Planning

Integration with Other Entities

- Development of Data Exchange and Cyber Security Processes
- Detailed modeling of customer by customer, at a premise level
- Coordination with EE Program Administrators



Integrated Energy Planning

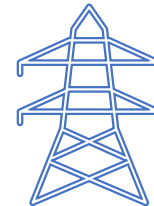
Ensuring an Equitable Energy Transition



- PCT
 - Ratio of participant benefits to participant costs.
 - Ensure participants do not carry undo burden



- Gas RIM
 - Ratio of gas ratepayer benefits to gas ratepayer costs.
 - Ensures gas rate payers do not carry undo burden



- Electric RIM
 - Ratio of electric ratepayer benefits to electric ratepayer costs.
 - Ensures electric rate payers do not carry undo burden



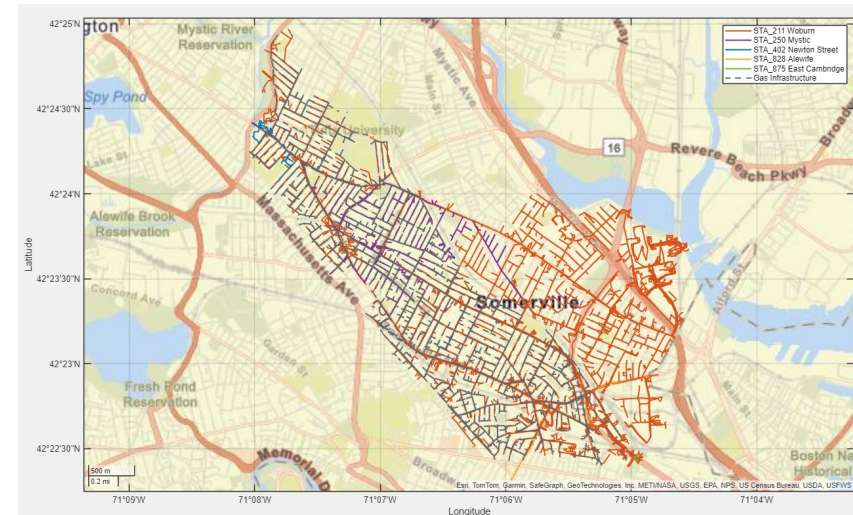
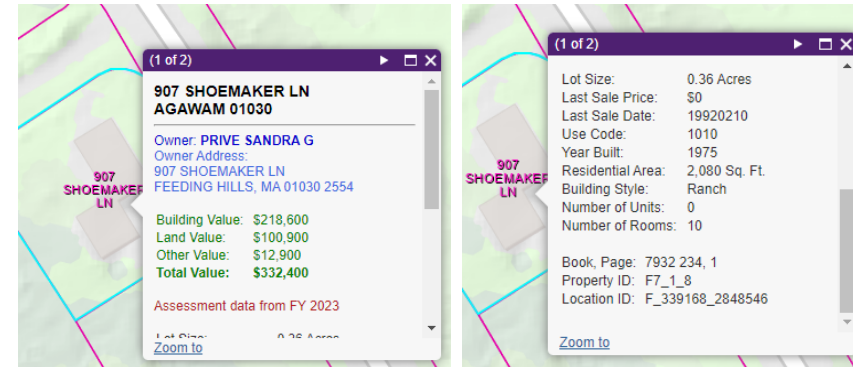
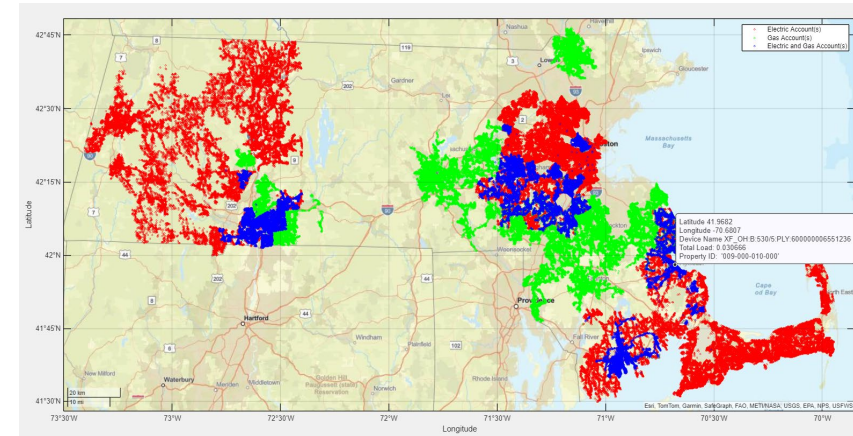
- TRC+
 - Ratio of system benefits to program and participant costs.
 - Ensures society as whole benefits from the effort

Integrated Energy Planning

Data Solutions and Engineering

Existing Tools and Market Review


- No end-to-end tools in the market
 - All solutions highly custom-made and do not lend themselves to rapid evolutions as the Company develops its processes in IEP
- ### Custom in-house build of an IEP Software solution
- The Company already utilizes Synergi Tools in gas and electric distribution planning
 - Utilization of statewide tax accessor data base to cross-walk all accounts into a joint planning tool
 - Development of user interfaces
 - Hosting of power flow and hydraulics engines into a single tool



Integrated Energy Planning Tool

Gas to Electric Mapping (v2.0)

Home Analysis



Non-Pipelines-Alternatives

Target Areas

ALL

ASHLAND

CAMBRIDGE

HOPKINTON

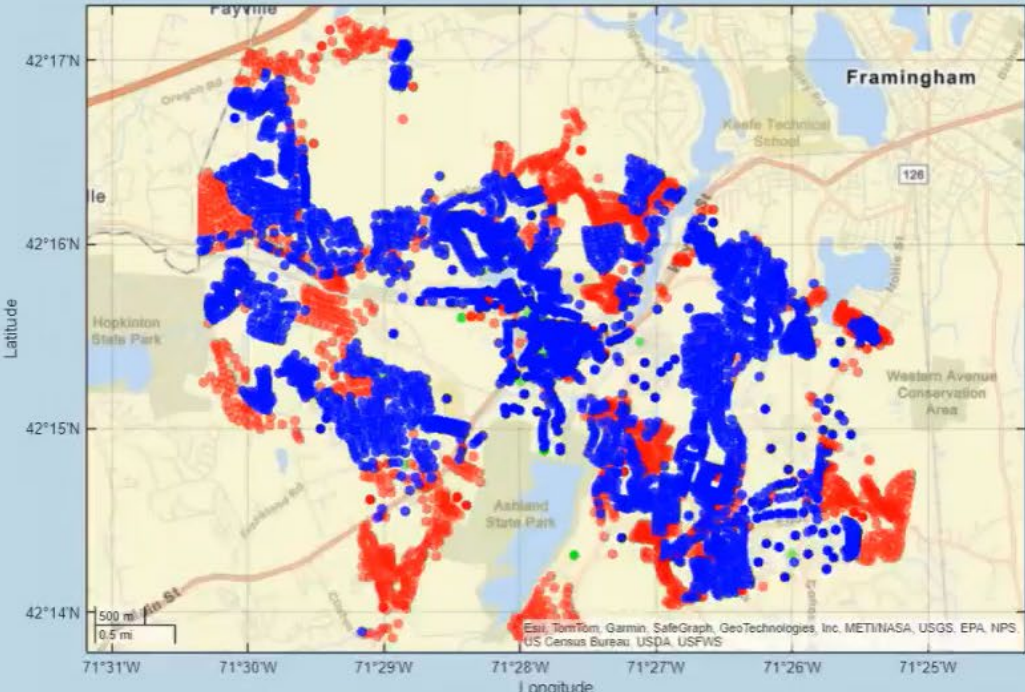
HYDE PARK

LONGMEADOW

Display Selected Area

Upload Pipe ID's

Map of Area



Summary of Region

Electric Customers:	7634
Gas Customers:	5229
Total Customers:	12863
Total Gas Load :	910.2494
Substations in Region:	STA_126 Hopkinton STA_274 Sherborn STA_455 West Framingham
Feeders in Region:	126-H2 126-H4 274-H1 274-H3 274-H5

Load Profile

TestProfile.mat

Save Profile

Profile Name:

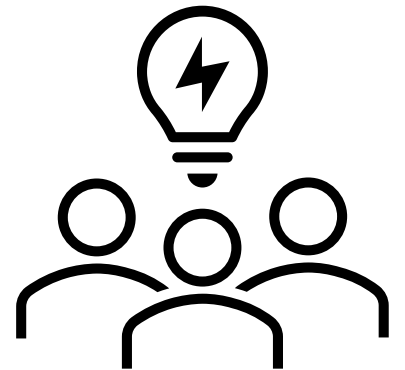
Next

Integrated Energy Planning

The Future of System Planning in New England

- I. Full Integration of Gas and Electric Capital Plans to drive targeted electrification on the heels of electric infrastructure build out.
- II. Seamless optimization of capital investments around key metrics of customer cost, equity, and GHG emissions reductions.
- III. Full consideration of environmental justice and equitable cost allocation.

→ Development of new regulatory and legislative policies to support IEP



Questions?

