

Capital Optimization: Undergrounding prioritization

Case study

With the E Source solution, a recent utility client performed calculations for all 16k of its undergrounding candidates in around 5 minutes.

The challenge

Transitioning existing undergrounding analysis from feeder level to device or line segment level can be challenging.

Utilities should develop a model that will rank all undergrounding candidates at the device or line segment level. And they should visualize the outputs with a dashboard.

The approach

E Source's approach is to identify, evaluate, and prioritize subfeeder or device-level candidate locations for undergrounding.

By doing so, utilities can ingest and automate all collected data, including financial calculations such as total up-front cost, avoided capital, net present value (NPV), payback period, and amount saved per amount spent.

The impact

With the E Source solution, one utility client performed calculations for all 16,000 of its undergrounding candidates in less than five minutes.

The utility evaluated and ranked each candidate at the subfeeder or device level, creating a prioritized list of projects.

FEEDER	LINE	DEVICE	SUBFEEDER	LOCATION	DATE	UPFRONT COST	AVOIDED CAPITAL	NPV	PAYBACK PERIOD	AMOUNT SAVED PER AMOUNT SPENT	PRIORITY RANK
0001	0001	0001	0001	0001	0001	1000000	1000000	1000000	1000000	1000000	1
0002	0002	0002	0002	0002	0002	2000000	2000000	2000000	2000000	2000000	2
0003	0003	0003	0003	0003	0003	3000000	3000000	3000000	3000000	3000000	3
0004	0004	0004	0004	0004	0004	4000000	4000000	4000000	4000000	4000000	4
0005	0005	0005	0005	0005	0005	5000000	5000000	5000000	5000000	5000000	5
0006	0006	0006	0006	0006	0006	6000000	6000000	6000000	6000000	6000000	6
0007	0007	0007	0007	0007	0007	7000000	7000000	7000000	7000000	7000000	7
0008	0008	0008	0008	0008	0008	8000000	8000000	8000000	8000000	8000000	8
0009	0009	0009	0009	0009	0009	9000000	9000000	9000000	9000000	9000000	9
0010	0010	0010	0010	0010	0010	10000000	10000000	10000000	10000000	10000000	10