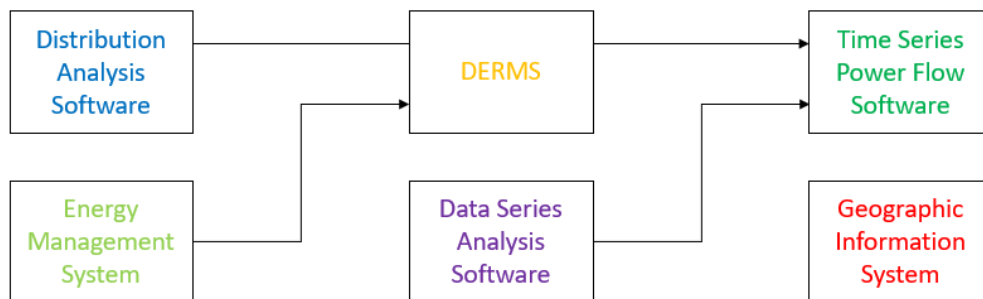


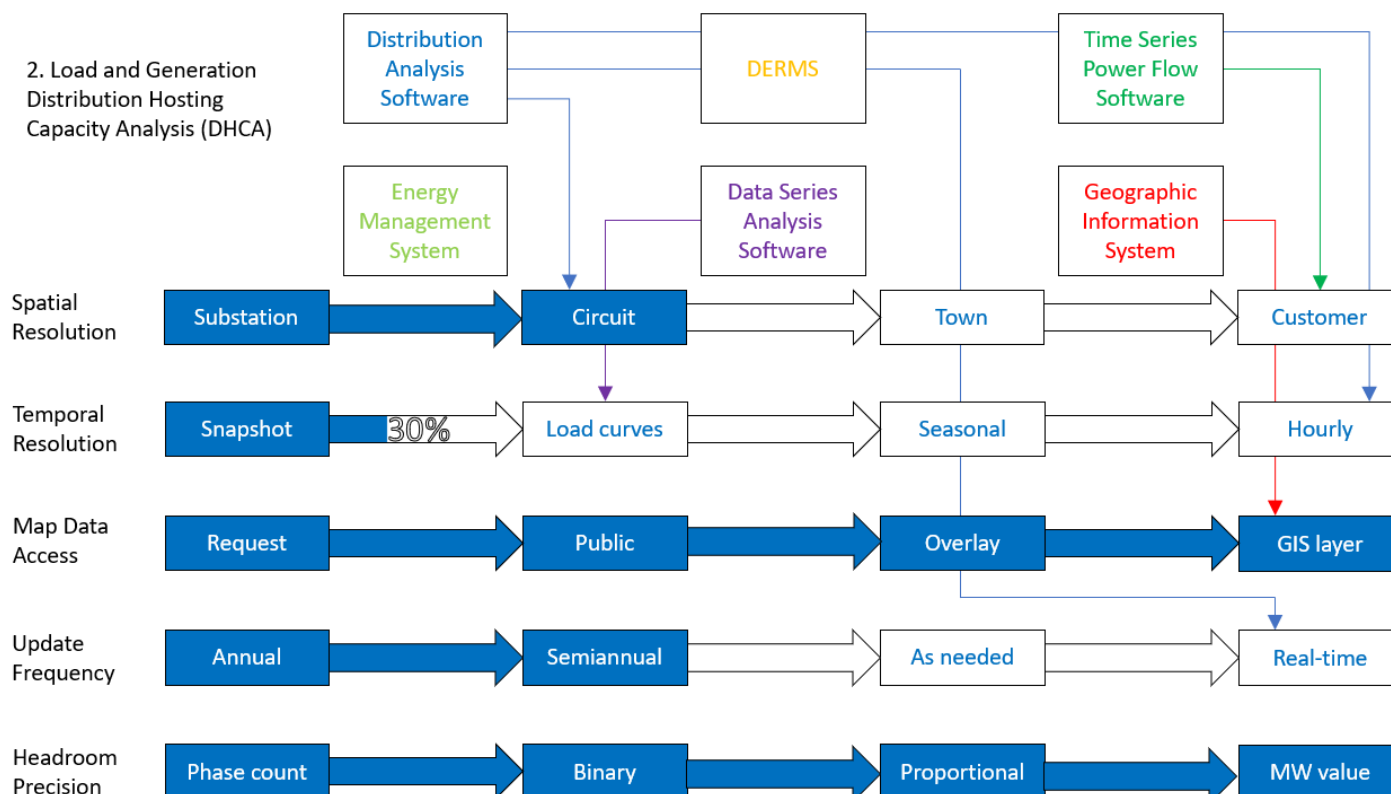
Appendix A – Initiative Flowcharts

1.1 Software Dependencies

1. Software Dependencies



1.2 Load and Generation Distribution Hosting Capacity Analysis (DHCA)



Spatial Resolution

VEC displays hosting capacity at the substation and circuit level for all locations on the distribution system. VEC does not determine hosting capacity by town. However, Regional Planning Commissions could use the solar map to determine how much hosting capacity is available on the distribution circuits that feed their towns. VEC does not determine hosting capacity for each member until an application is submitted.

Temporal Resolution

VEC currently takes minimum load on a feeder and substation into account when performing feasibility studies for larger solar projects and when a substation's power transformer nameplate capacity is reached to allow additional DG to interconnect. As the system becomes more saturated with DG and reverse flow on transformers reaches nameplate values, VEC will be exploring time-of-day limited export agreements where projects limit export at peak solar production hours to avoid exceeding transformer ratings. This will move VEC more towards a seasonal and hourly hosting capacity for individual feeders which are export limited

Map Data Access

VEC's solar map is publicly available and can be downloaded as a GIS layer.

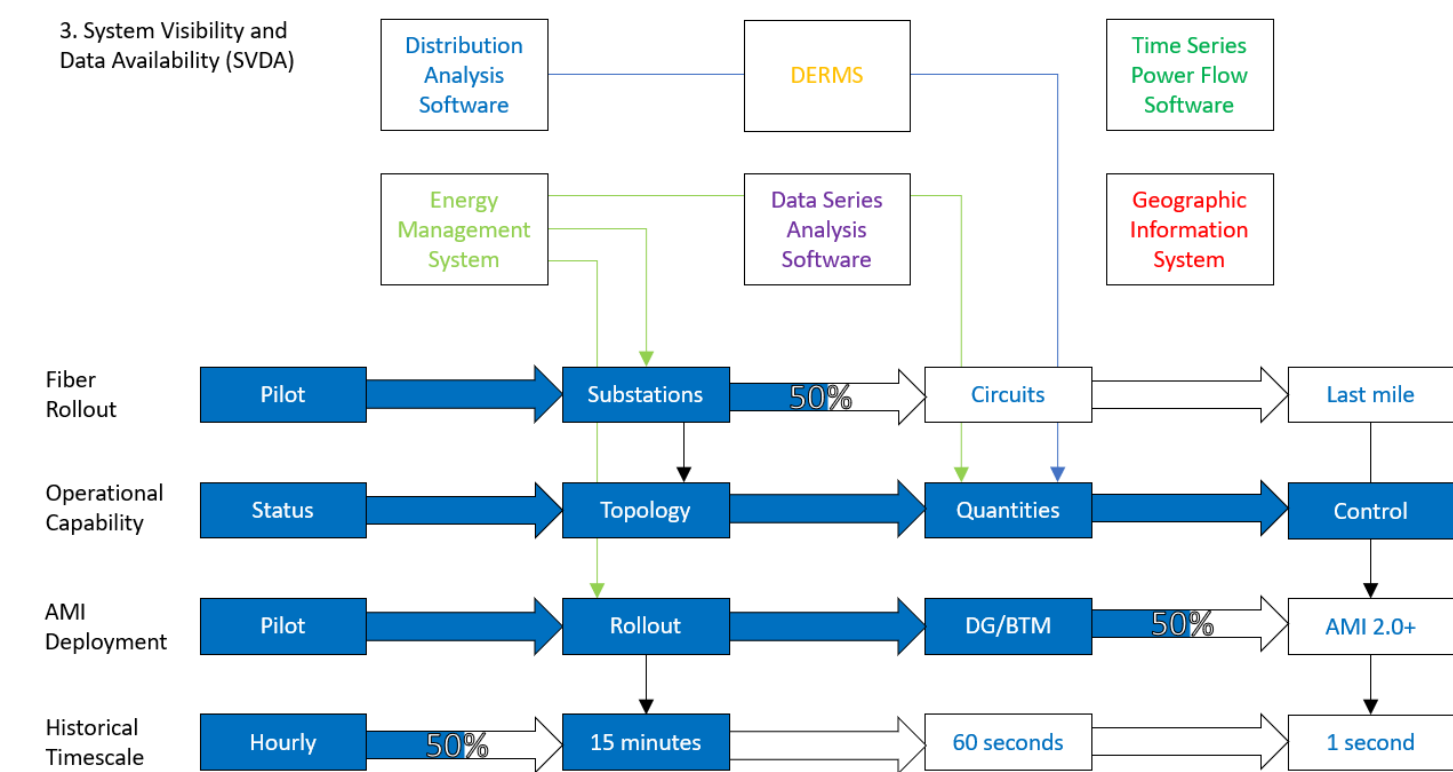
Update Frequency

VEC updates the fields on the solar map every 6 months.

Headroom Precision

VEC displays the transformer nameplate rating for each substation, the remaining headroom on the substation equipment, Phase count, and remaining hosting capacity.

1.3 System Visibility and Data Availability (SVDA)



Fiber Rollout

VEC has fiber to nearly all substations and some key circuit equipment. Through a partnership with VELCO all solar sites 150kW and greater will also have dedicated fiber connections. VEC does not have plans to install fiber to individual members.

Operational Capability

VEC operators have SCADA visibility and control to 100% of substations and feeders .

AMI Deployment

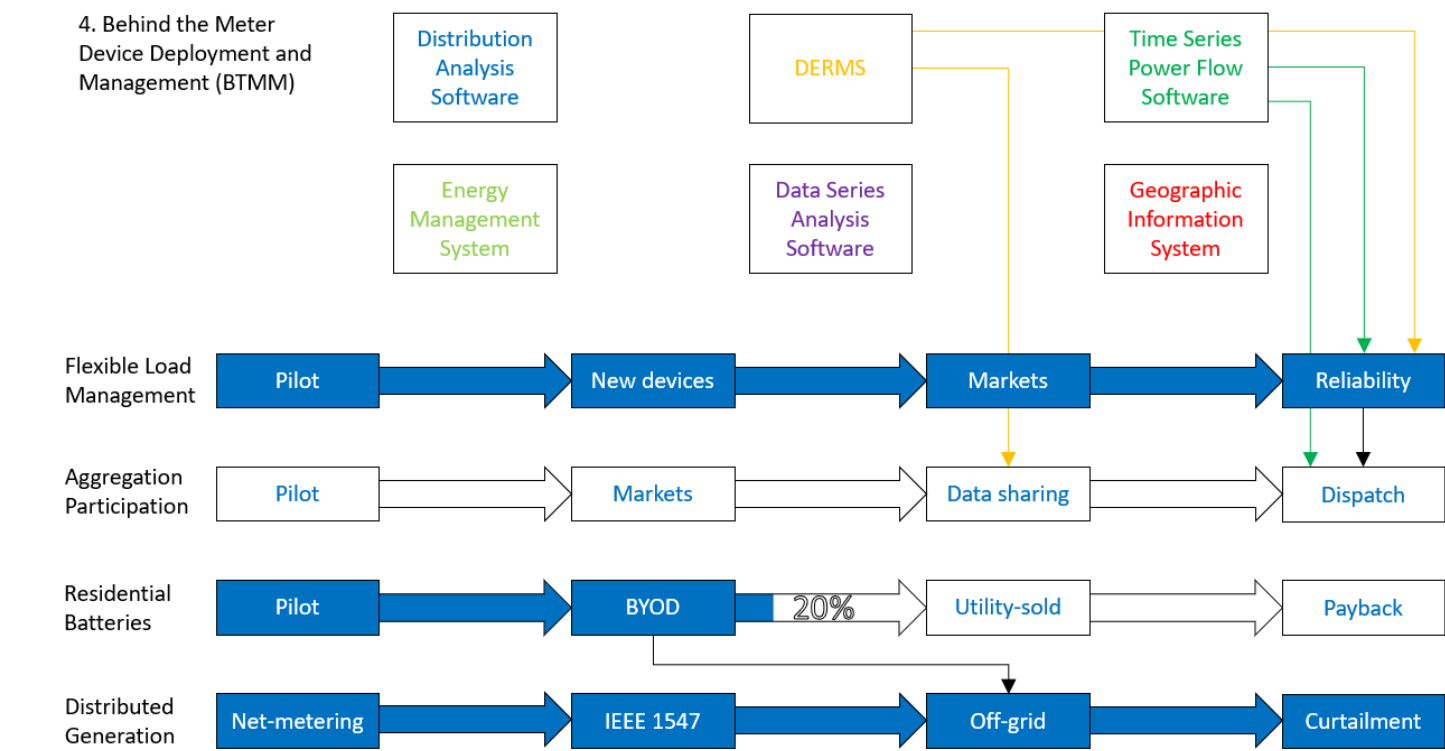
VEC’s AMI system is available to 100% of members. VEC is currently in the process of upgrading its PLC system with a new RF-based AMI system. Implementation will be completed by 2030.

Historical Timescale

VEC archives 2 second interval SCADA data and most AMI meters are stored at hourly increments. For commercial and industrial meters VEC stores data at 15-minute intervals. VEC anticipates reading and capturing 5–15-minute

interval data with its upgrade AMI system. VEC displays hosting capacity at the substation and circuit level for all locations on the distribution system.

1.4 Behind the Meter Device Deployment and Management (BTMM)



Flexible Load Management

VEC has run several pilots for FLM devices such as water heaters, C&I management and asset deferral. When a member enrolls into one of VEC’s FLM programs (EV’s and Batteries) they are compensated for participating in peak events. VEC’s utility scale assets partake in the ISONE frequency regulation market.

Aggregation Participation

VEC does not participate in any aggregation programs. VEC is currently able to opt out of FERC Order 2222 due to our annual energy sales being below 4 million MWh. We do not anticipate that our annual sales will increase beyond the 4 million MWh threshold.

VEC believes that there is tremendous value in expanding DER programs by leveraging aggregators if those providers provide VEC with visibility and emergency control.

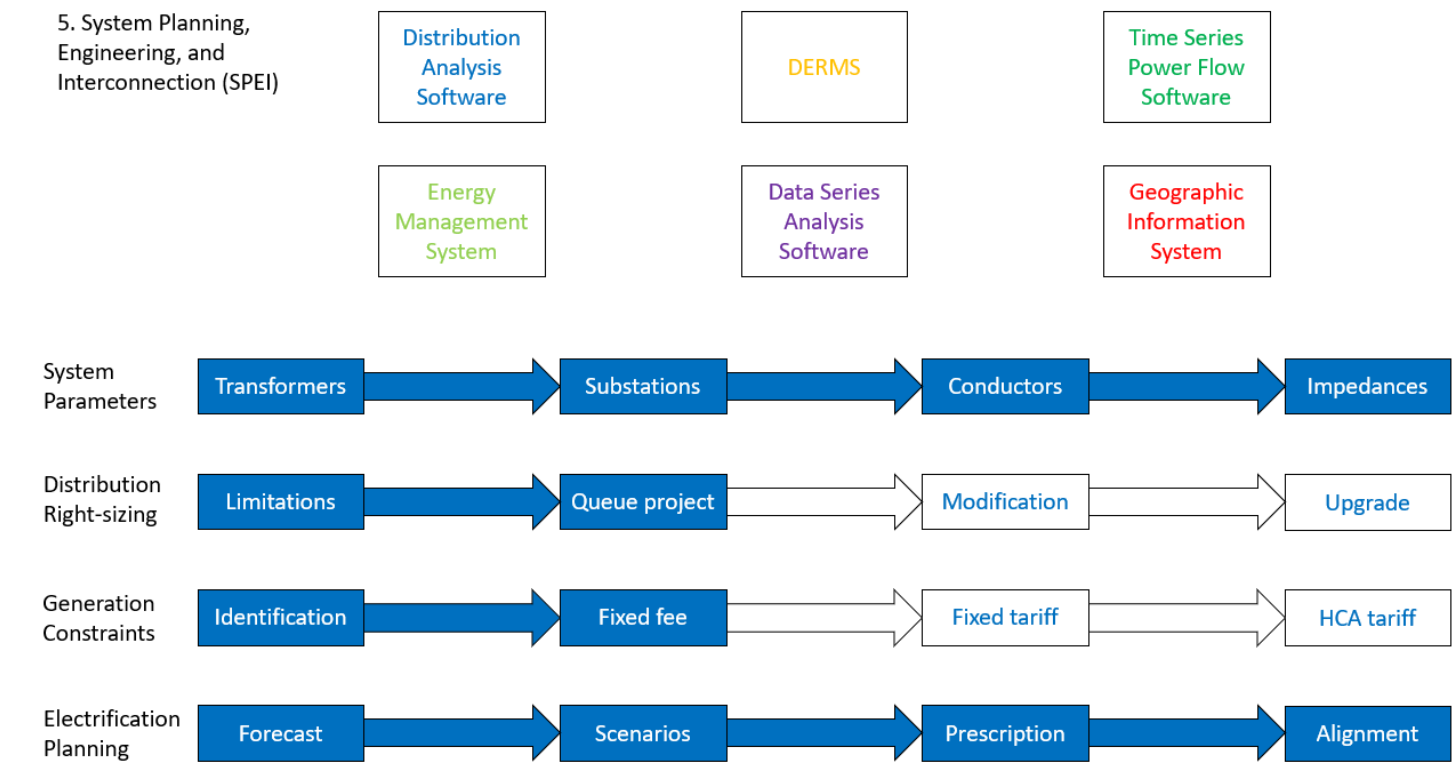
Residential Batteries

VEC has an active BYOD battery program with over 100 batteries enrolled (~750kW). The program is primarily focused on peak shaving but VEC is looking to expand the program to T&D asset deferral.

Distributed Generation

VEC has over 2,200 net metering sites providing almost 30MW of generation. All inverter-based resources must comply with IEEE 1547 and UL 1741 and for larger projects, VEC performs feasibility and system impact studies to ensure reliable operation. Members can disconnect from the grid if they would like. VEC can curtail larger projects and is reviewing flexible interconnections as a way of enabling connection without significant system upgrades.

1.5 System Planning, Engineering, and Interconnection (SPEI)



System Parameters

VEC has ratings for 100% of transformers, substations, conductors and impedances. VEC stores this information in GIS and that information is then pushed to engineering modeling tools and other applications.

Distribution Right-Sizing

For DG projects in the interconnection queue, VEC assesses the necessary system upgrades to ensure the new projects do not negatively affect the grid. The developer is responsible for covering the costs of these upgrades, which might include increasing line ratings in specific system areas. During reconductoring projects, medium-cost items like load break switches might be updated. However, there's no current mechanism for upgrading high-cost items like conductors that limit line ratings during routine work. Such upgrades would require extensive permitting and engineering efforts.

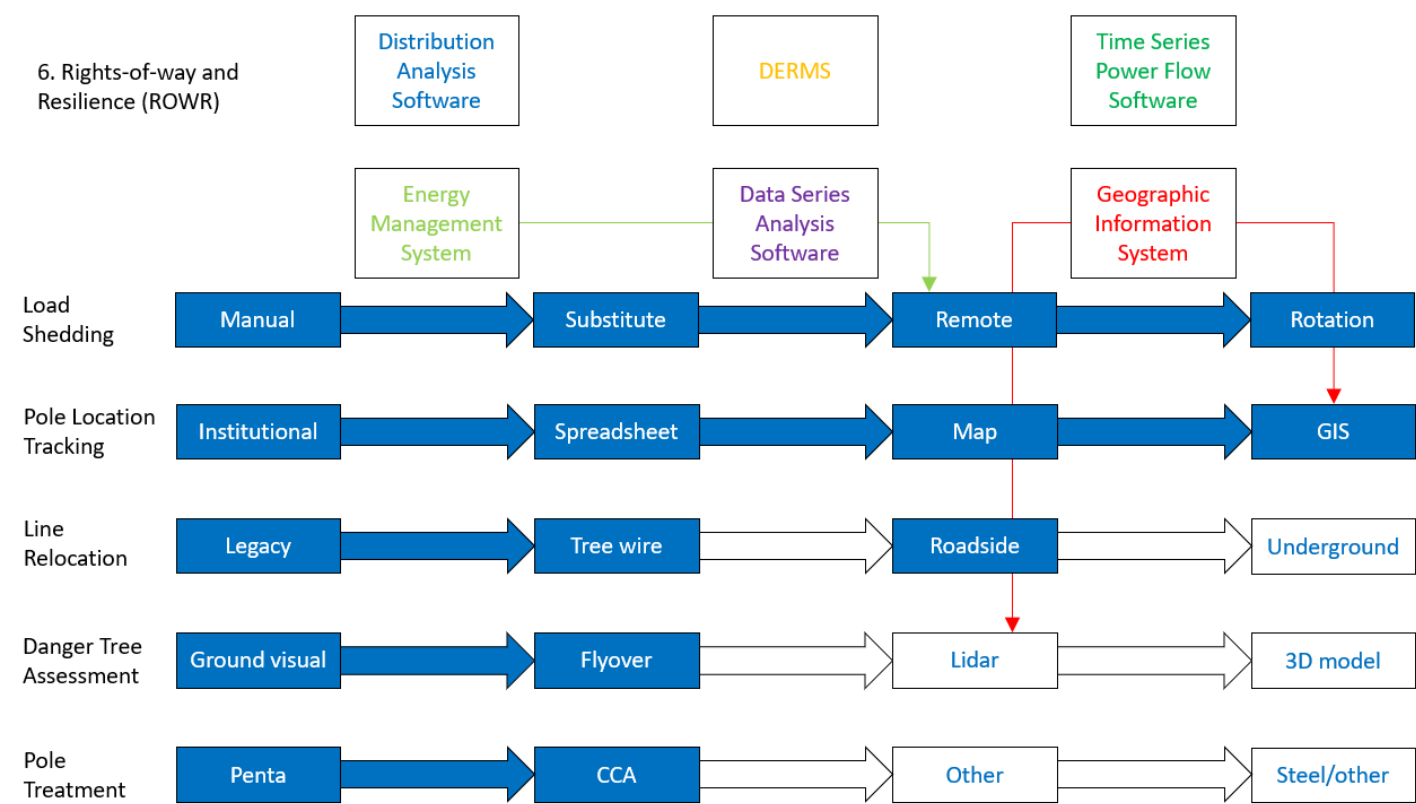
Generation Constraints

VEC displays hosting capacity at the substation and circuit level for all locations on the distribution system. VEC does not determine hosting capacity by town. However, the Regional Planning Commissions can request data from VEC. VEC does not currently have mechanisms for cost sharing for system upgrades.

Electrification Planning

VEC considers long and short-term electrification scenarios in our planning studies. In this IRP, we explored 5-, 10-, and 20-year forecasts between our engineering and power supply teams. These forecasts include alignment with State goals and the VELCO Long Range Transmission Plan and Vermont Climate Council.

1.6 Rights-of-way and Resilience (ROWR)



Load Shedding

VEC has an operating guide to reduce load during contingencies. VEC operators follow a procedure that rotates through feeders to reduce loads. This can be done remotely through VEC’s SCADA system.

Pole Location Tracking

VEC tracks all pole attributes and locations in GIS

Line Relocation

VEC relocates distribution lines due to reliability or condition needs. While VEC would love to move all off-road lines roadside – approximately 60% of VEC’s system is off road and therefore we need to prioritize which locations we focus on. VEC attempts to underground as much as possible but if ledge is present tree wire is generally preferred.

Danger Tree Assessment

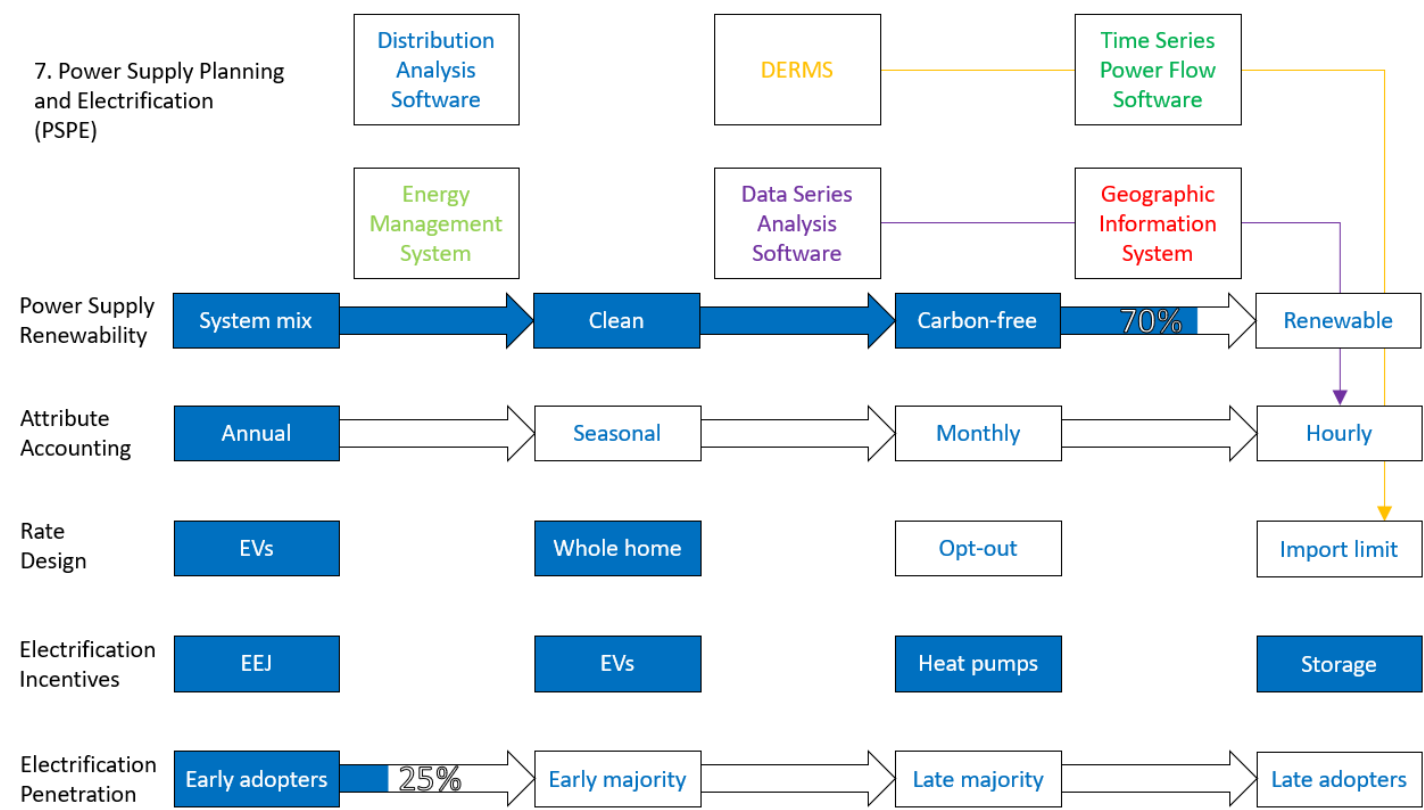
VEC utility arborists conduct ground inspections of their local circuits whenever they perform line maintenance. Additionally, tree crews who trim the lines routinely watch for hazardous trees as part of their job. Transmission lines are inspected for danger trees at least once annually using drone technology.

Pole Treatment

Pole Treatment: GMP is phasing out penta treated poles on our system. For certain poles on our system where extra strength is needed, we are moving towards laminated poles, and if not possible, we may consider some steel poles for added resiliency.

For new or replacement pole installations VEC installs CCA poles. VEC is exploring steel poles for added resiliency.

1.7 Power Supply Planning and Electrification (PSPE)



Power Supply Renewability

VEC power supply is 100% carbon free and 70% renewable.

Attribute Accounting

VEC keeps track of our RECs through the NEPOOL Generator Information System on an annual basis

Rate Design

VEC offers two time of use rates for whole-home demand. VEC offers monthly bill credit incentives for EV charging. See Section 4 – Engage Members for more information.

Electrification Incentives

See Section 4 – Engage Members for more information.

Electrification Penetration

VEC is just beginning to see the impacts of heat pump growth, especially in the summer months. EV growth is occurring in specific geographic areas and non-existent in lower income areas of our territory.