Load forecasting Methodology to Incorporate Electrification

- No Change to Base Summer Load Forecasting
- No Change to DER or EV Forecasts or how they get incorporated into Base Load Forecasts
- Need to Develop Peak Winter Forecast as Electrification Could Drive Winter Peaking
- Electrification Forecasts – Need
  - o Treat Residential and C&I Customer Differently (should be able to get this from Grid Mod Reporting)
  - o Residential
    - ▪ AC/Heat
      - • Assume X% residential customers have central AC
        - o No change in summer peak load – increase in winter load – need to determine by how much
      - • Assume X% have window AC
        - o Increase X amount per customer for summer peak load
        - o Increase same amount as central AC customers for winter peak
      - • Remaining have no AC
        - o Increase X amount per customer for summer peak load
        - o Increase same amount as central AC customers for winter peak
    - ▪ Cooking and Dryers
      - • Assume all residential gas customers have gas ranges and dryers, assume all change to electric over time
  - o C&I
    - ▪ Assume all C&I have central AC – no increase in Summer Peak Load
      - • Need to determine impact on winter loads – perhaps increase similar to summer AC load?
    - ▪ Other C&I Fossil Fuel Conversion – may need to assume a percentage of existing load.
  - o Develop Hourly Load Profiles for Electrification Loads (this is already done for Base , EV and DER forecasts)
    - ▪ This should also allow us to shift the hourly profile to account for time of use rates
  - o Develop Hourly Profile for ESS
- Combine all hourly profiles together to create forecasted hourly profiles.
  - o Need to include inherency and coincident factors.

With the implementation of TOU rates and deployment of in home ESS It would not be surprising if this does not have as much of an impact on peak load as others are forecasting. EV may be a much bigger impact than other electrification.

TOU rates and ESS will all flatten the load curve and will have an impact equipment. Especially power transformers which may need to be "de-rated" such that the normal rating is top nameplate or whatever we assume for pre-load since their will no longer be as long of a light load period for

cooling.   Will also have an impact on the LTE criteria as their will no longer by twelve consecutive hours below normal.