Deliverable #2: Broader input request for Configuration Matrix

Transformer Attribute Consolidation background information provided:

Attribute Consolidation designed to identify the most prevalent transformer kVA sizing requested by the utilities as well as opportunities for consolidating for both sizing and selected attributes to minimize the number of transformer variations and streamline the manufacturing process. These opportunities could be the result of electrification which may increase the minimum transformer size from 10/15kVA to 25/50kVA. This was also expanded to rate critical options and accessories along with the potential for aftermarket installation at the utility.

Action:

1. The ask was identification of these sizes, options and accessories rated on a Red/Yellow/Green scale to identify the high running critical sizes and specifications that should be kept or not altered (RED), standard volume with flexibility in functionality or specification that could be altered if broadly agreed (YELLOW), and sizes and specifications that could be removed or exchanged relatively simply (GREEN).
2. Review of the Summary action points in conjunction with any additional input provided above for comments, concerns, and suggestions.

Configuration Matrix and Manufacturer Input to Configuration Matrix

There were several topics identified from the attribute consolidation that required some further refinement on the possible actions that might be considered to support the target goal of increasing the number of transformers that could be manufactured while maintaining the necessary operation and specifications for the utilities. To provide more insight to both the utilities and manufacturers, the Configuration Matrix was developed to help understand what functions and components were necessary for three different configurations:

- Minimalist Configuration: absolute minimum components to safely operate a transformer.
- Standard Configuration: which included minimalist with more streamlined components to ensure full IEEE standard compliance and baseline operation.
- Custom Utility Configuration: fully customizable to each utility specification including component locations, alternate protections, paint/branding, and specific regional requirements.

Manufacturer Input to Configuration Matrix: Once these configurations were defined, the manufacturers were asked to provide input on their impact to manufacturing time to understand the potential impact to increasing the number of deliverable units. This break down is primarily focused on labor, impacts to design, and improved scaling in the factory. The impact of supply chain on the timeline and availability were not the primary focus due to variability among manufacturers though comments are included.

Action:

1. Review and comment on the Configuration categories as described in the accompanying Excel file. The configurations are represented in the three columns so if a component or function is needed for more than one configuration the columns are merged accordingly to show that. Please feel free to mark changes or comments in RED directly in the document or in a column just off to the side. There are separate tabs for single phase overhead, single phase pad mount, and three phase pad mount.
2. Review and comment on input from the manufacturers on the impact of the different configurations mostly targeted to manufacturing labor/scheduling impacts. The impact of supply chain was not accounted for in the percent labor as this is quite variable, but there are some related comments directly addressed.