

**VT Center for Geographic Information**



# VT 3-Phase Geodata-Exchange Standard

**Version 1.0**

08/08/2018



Vermont Enterprise GIS Consortium

## Updates

Date	Version	Note
02/08/2018	0.1	First draft.
02/13/2018	1.0	Second draft.
08/08/2018	1.0	Approved by Enterprise GIS Consortium (EGC).

## Acknowledgements

VCGI thanks the Vermont Department of Public Service (PSD) and Green Mountain Power for inputs to the standard-development process.

## Statutory Authority and Standard Review/Approval

The Vermont Center for Geographic Information (VCGI) has the statutory authority<sup>1</sup> to craft and adopt VT GIS standards and guidelines. Over the past 2 decades, VCGI has worked with the VT GIS community to carefully craft these standards and guidelines, helping to make sure that Vermont GIS data “is compatible with, useful to” others in the VT GIS community.

The State’s Enterprise GIS Consortium (EGC) has been established as the organization responsible for reviewing and approving Vermont GIS standards crafted by VCGI (in collaboration with the Vermont GIS Community).

## Purpose

This standard provides a common data-schema for exchanging and conflating generalized 3-phase-power GIS data; the intended result of using this standard is production of data sets that are used for cursory analysis and broad-stroke planning (e.g., energy planning). The data schema’s simplicity supports simple data-load processes and efficient exchange/conflation of data amid heterogeneous sources. Ideally, this standard yields a statewide 3-phase-power GIS data set that is updated at least annually.

## Specifications

### Data Format

While 3-phase-power data at the operational/engineering level can be in any of several formats (e.g., .dwg, .dxf, .dgn, .shp, etc.), this standard requires data in either of 2 particular GIS-oriented formats when data sets of multiple utilities are conflated; those formats are shapefile (.shp) and geodatabase (.gdb).

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<sup>1</sup> <http://legislature.vermont.gov/statutes/fullchapter/10/008>

### Spatial Reference

When data is exchanged, **Vermont State Plane Coordinate System (NAD1983, meters)** is the required spatial reference. Master copies of conflated data must also be in **Vermont State Plane Coordinate System (NAD1983, meters)**; however, other spatial references, such as **Web Mercator Auxiliary Sphere (WGS1984)**, might be used as needed when publishing conflated data—in web maps, for example.

### Geometry Type

Simple line geometry.

### Data-Set Naming

Data-set naming varies between 2 contexts.

Context	Naming
Data is exchanged.	<b>3PHASE4PLANNING_&lt;Utility Name&gt;</b>  For example: <b>3PHASE4PLANNING_GMP.shp</b>
Data is conflated—mostly relevant to back-end of <a href="#">Vermont Open Geodata Portal</a> .	Data set is within a geodatabase feature-dataset or shapefile folder named: <b>UtilityPower_3PHASE4PLANNING</b>  The feature class or shapefile is named: <b>Utility_3PHASE4PLANNING_line</b>

## Fields

Name	Type	Description						
UTILITY	Text, length = 25	Name of utility.						
XTRCT_DATE	Text, length = 6	Date–year and month–in which data was extracted, in YYYYMM format.						
RATING	Short integer	<p>Allowed values are 0,1, 2, and 3.</p> <div style="background-color: black; color: white; padding: 5px; margin: 5px 0;"> <p>0 = Unrated</p> <p>1 = Good</p> <p>2 = Fair</p> <p>3 = Poor</p> </div> <p>Rating values are encouraged but not required–ratings add a lot of value to the data. Suggested rating criteria–shared by Green Mountain Power–are:</p> <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td style="background-color: #00FF00; color: black;">Good (1)</td> <td>&gt;= 20% capacity remaining</td> </tr> <tr> <td style="background-color: #FFFF00; color: black;">Fair (2)</td> <td>&lt; 20% and &gt; 10% capacity remaining</td> </tr> <tr> <td style="background-color: #FF0000; color: black;">Poor (3)</td> <td>&lt;= 10% capacity remaining or voltage &lt; 12.47</td> </tr> </tbody> </table>	Good (1)	>= 20% capacity remaining	Fair (2)	< 20% and > 10% capacity remaining	Poor (3)	<= 10% capacity remaining or voltage < 12.47
Good (1)	>= 20% capacity remaining							
Fair (2)	< 20% and > 10% capacity remaining							
Poor (3)	<= 10% capacity remaining or voltage < 12.47							

## Metadata

The metadata requirement varies between 2 contexts. When data is exchanged, it must at least be accompanied by a readme.txt file that indicates that the data conforms to this standard. When data is conflated, the conflated data set must have updated metadata that conforms to the [Vermont GIS Metadata Standard](#).



Inclusion of field descriptions in the metadata (or in the readme.txt file, if applicable) is highly recommended.