VERMONT

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Inputs and Assumptions for Electric Utility Assessment Model: Electric Transmission Assets

The Department of Taxes has contracted with Utilities Appraisal Consultant, Brian D. Fogg, LLC, to establish utility values for electric transmission and distribution, as required under 32 V.S.A. § 4452. This document is intended to capture the specific methodology, including inputs and assumptions, for informational purposes only.

Inputs and Assumptions

1. **The following necessary data from the Continuing Property Records (CPRs) provided by owner:**
    a. Year in Service/ Year of Install
    b. Accumulated Cost/ Original Cost
    c. FERC Account (Transmission FERC accounts include 352, 353, 354, 355, 356, 357, 358 and 397 when attributable to Fiber Optic Assets)
    d. Town/City/Municipality
    e. Construction Work in Progress/CWIP (Currently not included in final assessment)
    f. A description of the asset if available

Year in Service	"Accumulated Cost"	FERC Account Used	Description	Town
2018	$1,071,638	352	352000-Structures and Improvements	VT Town

2. **Handy Whitman Index**
    To calculate the factor that will be applied to the "Accumulated Cost/Original Cost", utilized the most recent available July 1st data from Handy Whitman for the afore mentioned FERC codes.
    a. July 1 Handy Whitman index number of "Year in Service/ Year of Install" for the FERC code of the asset (or available entry for that year when no specific July 1 data is present)
    b. July 1st Handy Whitman index number of the year prior to the Valuation Year for the FERC Code of the asset (If Valuation year is 2024, use entry from July 1, 2023)

c. Divide the Entry for the year prior to the Valuation Year by the year prior to "Year in Service/ Year of Install" for your factor

Using the example above, a FERC 352 property with a Year in Service of 2018:

FERC Account 352

	Year	Handy Whitman Index	Handy Whitman Index Number
Year in Service	2018	7/1/2018	788
Valuation Year	2024	7/1/2023	1112

Factor (1112 ÷ 177) = 1.41

3. **Apply Factor for Replacement Cost New (RCN)**
   a. Multiply the "Accumulated Cost/ Original Cost" by the Factor

"Accumulated Cost"	Factor	Replacement Cost New (RCN)
$1,071,638	1.41	$1,512,260

4. **Actual Age of Assets and Useful Lives**
   a. Calculate the age of the Asset using the year prior to the Valuation Year (use 2023 for Valuation year of 2024).
      2023 – 2018 = age of 5 years
   b. The Useful Lives used in the model are provided in the table below.

Description of Transmission FERC Accounts	FERC	Useful Lives
Structures and Improvements	352	52
Station Equipment	353	42
Towers and Fixtures	354	55
Poles and Fixtures	355	58
Overhead Conductors and Devices	356	61
Underground Conduit	357	60
Underground Conductors and Devices	358	48
Fiber Optic	397	10

5. **Calculating Depreciation with a 20% Floor & 50% First Year Depreciation**
   a. Divide The Actual Age of the Asset by the Useful Life to get to the % Depreciation to the Bad. The inverse percentage is the Depreciation to the Good.

FERC Account 352

Actual Age (Years)	Useful Life (Years)	% Depreciation to the Bad	% Depreciation to the Good
5	52	9.6%	90.4%

b. If an asset is old enough for the Depreciation to the Good to fall below 20%, it would remain at that floor of 20%.
c. For an asset with a Year in Service/ Year of Install that is one year prior to the Valuation year (2023 for Valuation year of 2024), utilize 50% annual depreciation for the first year.

FERC Account 352 Installed in 2023 for Valuation Year 2024

Row	A	B
1	**Useful Life FERC 352**	**52**
2	**Age of Asset in First Year**	**1**
3	**Annual % Depreciation to the Bad (B2 ÷ B1)**	**1.92%**
4	**50% annual Depreciation to the Bad in First Year of Install (B3 × 50%)**	**0.96%**
5	**% Depreciation to the Good in First Year (1-B4)**	**99.04%**

6. Calculating the Replacement Cost New Less Depreciation (RCNLD) by Applying Depreciation to the RCN

a. Multiply the RCN by the % Depreciation to the Good to get the RCNLD

FERC Account 352 Installed in2018 for Valuation Year 2024

A	B	C	D	E	F
Replacement Cost New (RCN)	**Actual Age (Years)**	**Useful Life (Years)**	**% Depreciation to the Bad (B ÷ C)**	**% Depreciation to the Good (I – D)**	**Replacement Cost New Less Depreciation (A × E)**
$1,512,260	**5**	**52**	**9.6%**	**90.4%**	**$1,366,851**

b. When the Year in Service/ Year of Install is one year prior to Valuation Year

FERC Account 352 Installed in 2023 for Valuation Year 2024

A	B	C	D	E	F	G
Replacement Cost New (RCN)	**Actual Age (Years)**	**Useful Life (Years)**	**% Depreciation to the Bad (B ÷ C)**	**50% Annual Depreciation to the Bad for First Year (D × 50%)**	**% Depreciation to the Good (I – E)**	**Replacement Cost New Less Depreciation (A × F)**
$1,512,260	1	52	1.9%	0.96%	99.04%	$1,366,851

c. When the Actual Age of an asset would drop the Depreciation to the Good below 20%

FERC Account 352 Installed in 1965 for Valuation Year 2024

A	B	C	D	E	F
Replacement Cost New (RCN)	**Actual Age (Years)**	**Useful Life (Years)**	**% Depreciation to the Bad (B ÷ C)**	% Depreciation to the Good (if D > 80%, Use 20%)	Replacement Cost New Less Depreciation (A × E)
$1,512,260	48	52	92.3%	20.0%	$302,452

Definitions

The inputs and assumptions for the Electric Utility Assessment Model described above are intended to conform with the terms ”Mass Appraisal “ and “Mass Appraisal Model” as defined by The Dictionary of Real Estate Appraisal, 6th Edition, which are respectively :

mass appraisal. The process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing. (USPAP, 2016-2017 ed.) Often associated with real property tax assessment valuation.

and

mass appraisal model. A mathematical model used to develop values for each property within a group or universe of properties.

Therefore, the Electric Utility Assessment Model itself, and any resulting community-by-community assessments are considered to be in compliance with USPAP Standards 5 and 6. Additionally, the Electric Utility Assessment Model itself, and any resulting community-by-community assessments are not intended to be USPAP

Standard 1 and 2 appraisals and do not comply with USPAP Standards 1 and 2.

Disclaimer

The data and inputs described in this document are subject to change as annual adjustments are made to the model.