Summary

This section describes the formulas, rules and principles for determining the assessed value of transmission pipelines.

Description

A pipeline is a line of pipe used for the transportation of petroleum, petroleum products, gas or any substance prescribed in the Regulations of a municipal Act. The line of pipe must be located on or under a continuing strip of land or pipeline right-of-way.

Transmission Pipeline
A transmission pipeline receives petroleum, petroleum products, or gas from a battery, satellite, gas plant, compressor station, or other facility at which the oil or gas is prepared for pipeline transport.

A primary transmission pipeline is the largest diameter line of pipe on or under a continuing strip of land or pipeline right-of-way.

A secondary transmission pipeline is any other line of pipe on or under a continuing strip of land or pipeline right-of-way occupied by a primary transmission pipeline.

An idle pipeline is a transmission pipeline that has not been used to transport petroleum, petroleum products, or gas during the period January 1 to December 31 of the year immediately preceding the year to which the assessment roll relates.

Replacement Cost New

The replacement cost new of the pipeline shall be determined using the unit-in-place method. The unit-in-place base rates account for all direct and indirect costs. No additional adjustments shall be made to the unit-in-place base rate.

Unit-In-Place Method
The replacement cost new shall be determined as follows:

1. Determine the type of pipeline using the rating guide.
2. Determine the features requiring adjustment.
3. Calculate the replacement cost new of the pipeline by adjustment of the base rate by the adjustment factors and applying the adjusted base rate to the number of units of pipeline.

Physical Deterioration

The amount of physical deterioration shall be determined using the lifetime depreciation method. No allowance shall be made for functional and economic obsolescence, except as may be accounted for in the volume adjustment factor.

The amount of physical deterioration shall be 50 percent.

Volume Adjustment Factor

The qualification for a pipeline shall be determined using the comparative unit method. The qualification for a pipeline shall be determined using the average 2016 to 2018 volume of the pipeline.

A volume adjustment factor shall not be applied to an idle pipeline as described by this Manual or to a pipeline that does not have a volume in any of the three years, 2016 to 2018.

The volume adjustment factor shall be determined using the comparative unit method.

Idle Pipeline Factor

The factor that is to be applied to an idle transmission pipeline shall be 0.25.

Calculation Procedure

Description	Document No.	Page No.
a) Base Rate	5.1.2	2
b) Secondary Line Factor	5.1.2	1
c) Adjusted Base Rate = (a x b)		
d) Length of Pipe		
e) Replacement Cost New = (c x d)		
f) RCN less Physical Deterioration = e x (1 - f_1)		
f_1. Physical Deterioration	5.1.1	1
g) Volume Adjustment Factor	5.1.3	1-3
h) Idle Pipeline Factor	5.1.1	2
i) Assessed Value = (f x g) or (f x h)		

Replacement Cost New

This section contains the rate schedules and calculation procedures for determining the replacement cost new of transmission pipelines.

<u>Primary Pipelines</u>
Primary transmission pipelines shall be valued at 100 percent of replacement cost new.

<u>Secondary Pipelines</u>
Secondary transmission pipelines shall be valued at 75 percent of replacement cost new. The secondary line factor shall be 0.75.

<u>Classifications</u>

Oil pipeline: An oil pipeline transports hydrocarbons or hydrocarbon mixtures that, at a temperature of 15°C and a pressure of 101.325 kPa, are in a liquid state.

Gas pipeline: A gas pipeline transports hydrocarbons or hydrocarbon mixtures that, at a temperature of 15°C and a pressure of 101.325 kPa, are in a gaseous state.

Rates

The rates for transmission pipelines are in dollars per mile.

Pipe Diameter (in.)	Oil Pipeline Rate	Gas Pipeline Rate
2	175,500	175,500
3	220,100	220,100
4	235,800	235,800
6	268,500	298,700
8	328,800	361,700
10	434,800	484,800
12	486,800	589,600
14	571,100	689,300
16	642,600	765,000
18	805,200	884,500
20	956,400	1,020,200
22	1,050,100	1,187,600
24	1,143,700	1,245,600
26	1,236,800	1,307,600
28	1,330,500	1,439,100
30	1,424,200	1,518,400
32	1,517,900	1,622,600
34	1,611,600	1,734,000
36	1,880,400	2,047,900
38	2,046,800	2,262,500
40	2,153,800	2,429,900
42	2,330,300	2,639,100
44	2,440,700	2,820,400
46	2,702,100	3,143,300
48	2,819,300	3,323,100
50	2,936,500	3,453,200
52	3,053,700	3,583,900
54	3,170,900	3,738,800
56	3,287,100	3,871,500

Summary

This section describes the formulas, rules and procedures for determining the volume adjustment factor for transmission pipelines.

Description

The volume adjustment factor adjusts the replacement cost new less depreciation of low volume transmission pipelines to account for the loss in value due to under-utilization of the pipeline.

The volume adjustment factor accounts for all of the loss in value due to under-utilization of the pipeline. This includes any loss in value due to differences in replacement cost new and differences in the amount of depreciation, that have not been taken into account using the procedures in this Manual.

Application

The volume adjustment factor shall be determined by the comparative unit method established in this section.

The volume adjustment factor shall be determined based on the average 2016 to 2018 volume of the pipeline.

The volume adjustment for all pipelines shall be determined using the volume at the exit point of the pipeline.

Comparative Unit Method

The volume adjustment factor for transmission pipelines shall be determined as follows:

1. Determine if the pipeline is qualified for a volume adjustment:
   i. Determine the average 2016 to 2018 volume of the pipeline.
   ii. Determine the rated volume level for the pipeline.
   iii. The pipeline qualifies for a volume adjustment if the average 2016 to 2018 volume is less than the rated volume of the pipeline.
2. Determine the volume adjustment factor for qualified pipelines:
   i. Determine the replacement cost new less depreciation of the pipeline.
   ii. Determine the replacement cost new less depreciation of a substitute pipeline required to carry the average 2016 to 2018 volume of the pipeline. The substitute pipeline must be identical to the pipeline being valued except for its size.
   iii. Calculate the volume adjustment factor by dividing the replacement cost new less depreciation of the substitute pipeline by the replacement cost new less depreciation of the pipeline being valued.

Rated Volume

Oil Pipeline

Pipe Diameter (in.)	Rated Volume	
	barrels/day	M^3/day
2	1,000	158.90
3	2,000	317.85
4	3,600	572.12
6	11,000	1,748.20
8	27,000	4,290.90
10	46,000	7,310.50
12	68,000	10,807.00
14	94,000	14,939.00
16	117,000	18,594.00
18	135,000	21,455.00
20	156,000	24,792.00
22	178,000	28,288.00
24	199,000	31,626.00
26	220,000	34,963.00
28	242,000	38,460.00
30	263,000	41,797.00
32	285,000	45,293.00
34	306,000	48,631.00
36	327,000	51,968.00
38	349,000	55,464.00
40	370,000	58,802.00
42	391,000	62,139.00
44	413,000	65,636.00
46	434,000	68,973.00
48	455,000	72,310.00
50	477,000	75,807.00
52	498,000	79,144.00
54	520,000	82,640.00
56	541,000	85,978.00
M^3/day = cubic meters per day		

Gas Pipeline

Pipe Diameter (in.)	Rated Volume	
	MCF/day	1000 M^3/day
2	0.45	12.83
3	1.39	39.29
4	2.81	79.54
6	7.72	218.60
8	15.95	451.80
10	28.99	821.20
12	42.44	1,202.00
14	63.43	1,797.00
16	89.80	2,544.00
18	122.00	3,456.00
20	161.00	4,547.00
22	206.00	5,827.00
24	258.00	7,306.00
26	318.00	8,997.00
28	385.00	10,906.00
30	461.00	13,048.00
32	545.00	15,427.00
34	637.00	18,056.00
36	739.00	20,946.00
38	851.00	24,098.00
40	972.00	27,529.00
42	1,103.00	31,246.00
44	1,244.00	35,240.00
46	1,369.00	38,781.00
48	1,559.00	44,163.00
50	1,733.00	49,092.00
52	1,919.00	54,361.00
54	2,116.00	59,942.00
56	2,325.00	65,862.00

MCF/day = millions of cubic feet per day
1000M^3/day = thousands of cubic meters per day