



Linear Property Assessment

2016 Annual Report

Linear Property Assessment Unit
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Municipal Affairs

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Table of Contents

Executive Summary.....	1
Service Delivery Improvements.....	2
Linear Property Assessment Process	2
2016 Summary of Assessment by Property Type	3
Pipeline (PL).....	4
Wells (WL)	5
Utility Properties	6
Electric Power Systems (ELE)	7
Electric Power Generation (EPG)	8
Telecommunications Systems (TEL).....	8
Cable Distribution (CBL)	8
Telecommunications Systems and Cable Distribution Changes	8
Confidence and Stability in the Linear Property Assessment	9
2006 – 2016 Tax Year Linear Property Assessment Changes	10
Linear Property Annual and Year End Assessment Change	11
Quick Facts about Linear Property Assessment	12
Charts	13
2016 Tax Year Linear Property Assessment Distribution by Municipal Type	13
2016 Tax Year Linear Property Assessment Growth by Municipal Type	13
2016 Tax Year Linear Property Assessment Distribution by Property Type	14
2016 Tax Year Linear Property Assessment Overall Change Percentage by Property Type ..	14
Appendix 1: 2016 Tax Year Change Report - Alphabetical.....	Tab 1
Appendix 2: 2016 Tax Year Change Report - Numerical	Tab 2

Exact definitions for terms contained in this report are found in the *Municipal Government Act* and the attending regulations.

Detailed change reports of individual municipalities are attached to this report as Appendix 1 and Appendix 2.

Executive Summary

The linear property assessment function is a legislated requirement that must be completed by February 28th for taxation in that year. For more than a decade, Municipal Affairs has prepared and delivered the linear property assessment to taxpayers and municipalities by January 31 to support municipal budgetary planning.

In 2016, the linear property assessment is \$76.3 billion and is expected to generate an estimated \$822 million in municipal tax revenue and \$238 million in education property tax for the province of Alberta.

The annual linear property assessment was completed on January 29, 2016 and declared and posted to the provincial assessment reporting system known as the Assessment Shared Services Environment (ASSET). The 2016 tax year linear property assessment notices were mailed to all assessed persons with copies to municipalities on January 29, 2016. Sending these notices met the statutory obligations of the Designated Linear Assessor (DLA), the Executive Director of the Assessment Services Branch, Municipal Affairs. The linear property assessment roll was mailed to municipalities on February 4, 2016.

The final date to submit a complaint regarding this year's assessment to the Municipal Government Board within the legislated 60 day time frame is March 29, 2016.

Linear property assessment is conducted on a full cost recovery basis. The preparation and defense of the linear property assessment is completed by 16 staff located in the Assessment Services Branch of the Municipal Assessment and Grants Division, Municipal Affairs. The staff complement includes accredited property assessors and experts in other disciplines assisting the process of preparing the linear property assessment that include accounting, telecommunication and regulatory specialization, statistics, and business administration.

In addition to the statutory requirements, a *Growth Inflationary Policy Report* identifying year-over-year changes in the assessment is included with the municipal linear property assessment notices. Municipalities require this information for budgetary purposes in the management of possible tax shifting between market value-assessed non-residential properties and regulated-assessed non-residential properties.

Changes in the linear property assessment are categorized into three areas: inventory change; inflationary change; and policy change. These categories are defined as:

Inventory Change This is a growth calculation indicating the impact of properties being added or removed; changes in production volumes used in the assessment calculation and changes to the base costs of property.

Inflationary Change This reflects assessment increases or decreases resulting from changes due to regulated depreciation and changes in the regulated costs for each property type as per the Assessment Year Modifiers (AYM) in the *2015 Linear Property Assessment Minister's Guidelines* (Minister's Guidelines). The rate or base cost is adjusted by the annual AYM.

Policy Change This indicates changes in the assessment due to policy decisions and directed by the legislation.

In 2016, the linear property assessment decreased by 2.53% to \$76.3 billion down from the 2015 tax year's closing balance of \$78.3 billion. The change in the linear assessment is comprised of a 3.97% increase to inventory and decrease of 6.50% due to a reduction in construction costs and depreciation. There were no policy changes which impacted the 2016 assessed value of linear properties.

The graph on page 10 of this report provides greater detail on the year over year changes in linear property assessment for the past decade.

Service Delivery Improvements

The business unit (unit) consistently seeks innovative and efficient ways to improve processes and services provided to our stakeholders. The following projects continued or were newly undertaken in 2015.

- The first public distribution of the Annual Linear Property Assessment Report through the Alberta Municipal Affairs website.
- The management and application of geospatial data shifted from contracted resources to in-house resources. This change offers flexibility with impact studies and boundary changes caused by annexations and dissolutions and it enables the unit to improve response times when assisting our stakeholders. The 2016 assessment was prepared using data management and processes of the internal staff.
- In 2013 the unit undertook a pilot project with Canada Post's electronic mailing product called ePost Connect to address changing technology and provide stakeholders easier, secure access to their assessment information. Participation is voluntary, and on January 29 we delivered the assessment notices through ePost to 40% of our municipalities and 15% of our taxpayers. Traditionally, posted CDs should arrive in stakeholder mail boxes the first week of February. The unit has made a commitment to this project and continues to invite all stakeholders to participate and use this service.
- The unit undertook a project to address resource pressures responding to individual requests from municipalities to provide year end assessment totals to support their financial audit. The project intent was to eliminate unnecessary correspondence between the municipality, the financial auditor and the unit, as well as assist in streamlining the municipal audit process. The assessment totals by property type were compiled in a letter addressed to the municipality's chief administrative officer and mailed on January 5, 2016. The pilot was deemed successful and the unit intends to use this approach in the upcoming years.

Linear Property Assessment Process

In the province of Alberta, the linear property assessment is a regulated valuation process. Linear properties include pipelines (includes gas distribution systems); wells; electric power systems; electric power generation (subset of electric power systems); telecommunications systems and cable

2016 Annual Report

distribution undertakings (subset of telecommunications systems). These properties will be discussed in greater detail throughout this document.

The statute governing linear property assessment and taxation is the *Municipal Government Act (MGA)* and its attending regulations. This legislative regime provides the definitions, the process for preparation and the calculation formulas to be used to determine the linear property assessment. This legislation can be accessed directly from the Municipal Affairs website at: http://www.municipalaffairs.alberta.ca/mc_property_assessment_and_taxation_legislation.cfm.

The *2015 Alberta Linear Property Minister's Guidelines (Minister's Guidelines)* are a regulation of the MGA and direct the processes the DLA must follow to calculate the assessment of the linear properties. Some properties are assessed using a rate per quantity (length or number of items assessable) of the property and others are assessed using the reported project construction costs. The *Minister's Guidelines* also contain:

- the annual inflationary factor known as the assessment year modifier (AYM),
- the fixed depreciation and additional regulated depreciation factors, and
- directions on which linear properties are allowed additional depreciation and under what circumstance the depreciation can be determined.

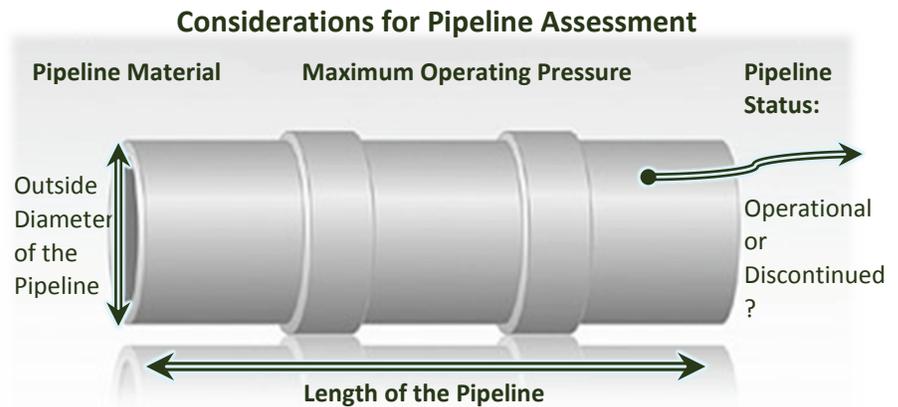
2016 Summary of Assessment by Property Type

Changes in the taxable linear property assessment for Alberta municipalities between the 2015 and 2016 tax years are indicated in table below. Property type definitions and some of the higher assessed properties added to this year's assessment roll are outlined in the following pages.

Property Type	Linear Assessment \$ (in millions)		Change				% of Prov. Base
	2015	2016	Overall \$	Overall %	Inventory %	Inflationary %	
Cable Distribution Systems	337	356	19	5.71%	2.23%	3.47%	0.46%
Electric Power Systems	6,751	7,421	671	9.94%	10.45%	-0.51%	9.73%
Electric Power Generation	6,310	7,179	870	13.78%	14.19%	-0.41%	9.41%
Pipelines (includes Gas Distribution)	32,896	30,269	-2,627	-7.99%	1.39%	-9.38%	39.67%
Telecommunication Systems	1,908	1,929	29	1.51%	0.72%	0.79%	2.53%
Wells	30,080	29,142	-938	-3.12%	3.43%	-6.54%	38.20%
Total	78,274	76,296	-1,977	-2.53%	3.97%	-6.50%	100%

Pipeline (PL)

Pipeline is defined as a continuous string of pipe intended or used in gathering, distributing or transporting natural resource products or by-products. It does not include the pump stations and other surface components along the pipeline or within the pipeline right-of-way.



Components not defined as linear property and the land and associated buildings are assessed by the municipal assessor. Pipelines used to transport potable water for human consumption and sewer systems, as per the MGA, are not assessable.

There is a total of 424,116 kilometers of assessed pipeline. Significant pipelines added to the 2016 tax year’s linear property assessment include:

- The Woodland Pipeline Expansion Project: a new 388 km crude oil pipeline with an outside diameter (O.D.) of 36” (914 mm) and a total assessment of \$242.1 million (MM).

This pipeline starts at the Cheecham Terminal in the RM of Wood Buffalo and ends at the Edmonton Terminal in Strathcona County. The pipeline will increase assessment for the following municipalities:

- RM Wood Buffalo - \$49.8 MM
- Lac La Biche County - \$59.6 MM
- Athabasca County - \$46.7 MM
- Thorhild County - \$33.7 MM
- Sturgeon County - \$0.9 MM
- Lamont County - \$14.8 MM
- Strathcona County - \$ 26.4 MM
- Sherwood Park - \$4.2 MM
- City of Edmonton - \$3.9 MM
- City of Fort Saskatchewan - \$1.7 MM

- The Cold Lake Pipeline South Leg Main Line Twinning Project: a new 243 km pipeline with an O.D. of 42” (1067mm) and a total assessment of \$168 MM.

This pipeline starts at La Corey Terminal in the MD of Bonnyville and ends at the Hardisty Terminal in the MD of Provost. The pipeline will increase the assessment for the following municipalities:

- MD of Bonnyville - \$38.7 MM
- Flagstaff County - \$5.3 MM
- County of Minburn - \$17 K
- MD of Provost - \$6.2 MM
- County of St Paul - \$26 MM
- County of Vermillion River - \$62.9 MM
- MD of Wainwright - \$28.8 MM

- The Edmonton to Hardisty (E2H) Pipeline Project: a new 182 km pipeline with a 36” O.D. (914 mm) and a total assessment of \$100.7 MM.

2016 Annual Report

This pipeline runs along an existing Enbridge pipeline right of way from Enbridge's Edmonton Terminal to its Hardisty Terminal in the MD of Provost. The pipeline will increase assessment for the following municipalities:

- Flagstaff County - \$44.9 MM
 - Strathcona County - \$15.2 MM
 - MD of Provost - \$421 K
 - Camrose County - \$31.5 MM
 - Leduc County - \$8.6 MM
 - Beaver County - \$ 47 K
- The Cold Lake Pipeline Foster Creek Extension Twinning Project: a new 76 km pipeline from the Foster Creek Station in ID 349 to the La Corey station in the MD of Bonnyville. This pipeline has an O.D. of 36" (914mm) and a total assessment of \$42 MM. The pipeline will increase the assessment for:
 - MD of Bonnyville - \$22.7 MM
 - ID 349 - \$19.3 MM
 - The Norealis Pipeline Project: a new 112 km pipeline with an O.D. of 24" (310 mm) that extends from the Husky-operated Sunrise Energy in-situ production project to Enbridge Athabasca's Cheecham Terminal. The pipeline project also has two 9 km pipelines with an O.D. of 10" (273.1 mm) and 20" O.D. (508 mm) connecting the Sunrise facility to the Hartley Terminal. Located fully within the RM of Wood Buffalo, it has a total assessment of \$38.9 MM

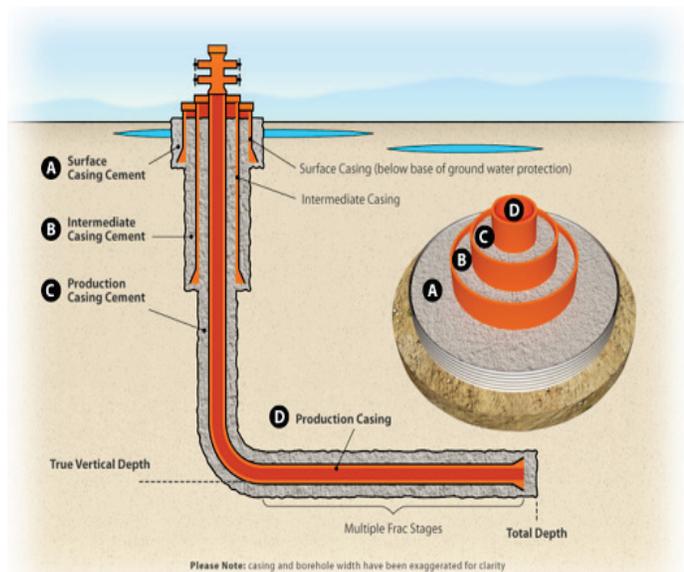
Wells (WL)

Wells are defined as any pipe in a well used to obtain natural resources; a pipe in a well used for injecting or disposing of water or products to an underground formation; or a well used to monitor or observe performance of a pool, aquifer or oil deposit.

Water wells are not assessed unless it supplies water for injection into an underground formation.

Well properties receive a fixed depreciation and may receive additional depreciation based on the amount of production from the well over the assessment year (November 1 to October 31).

Considerations for Well Assessment include: the Well Status, i.e. drilled and cased, suspended, crude oil, gas, etc.; Number of Zones the well is capable of producing from; Type and Amount of zone(s) production and Full Length of pipe in the hole (km).



Graphic from the Petroleum Services Association of Canada (www.OilandGasInfo.ca)

There are 256,179 assessed wells in the province this year, which is a 0.29% overall decrease (745 wells). Some statistical well information for 2016 includes:

- **Highest assessed well**

- Located in Yellowhead County, this is a multi-zone crude oil pump well
- 5,097 metres total depth
- Assessed at \$988,090

- **Highest assessed Oil producing well**

- Located in Yellowhead County, this is a multi-zone crude oil pump well
- 5,097 metres total depth
- Assessed at \$988,090

This year, the highest assessed oil producing well is the same as the province's highest assessed well.

- **Highest assessed Gas producing well**

- Located in Yellowhead County
- 6,707 metres total depth
- Assessed at \$832,980

- **Deepest well**

- Located in the M.D. of Greenview
- 7,092 metres total depth
- Assessed at \$830,630

Being the deepest well does not mean it will have the highest assessment as the other factors such as status, product and/or producing zones determine its final assessed value.

- **Oldest well**

- located in Lac La Biche County
- 737 metres total depth
- Assessed at \$8,260

The well's completed drilling date, as contained in the AER records, is January 1, 1897.

Utility Properties

Utility properties are: electric power systems, electric power generation, telecommunications systems and cable distribution undertakings.

The *Minister's Guidelines* provide the rates for most of the utility properties. Where there are no rates provided, the linear property assessment is based on the actual project construction costs, less deductions allowed by the *2005 Alberta Construction Cost Reporting Guide* (CCRG) regulation.

Utility properties with both linear and non-linear components must be reviewed by the linear and municipal assessors with the company to determine what is and is not linear property. It is very important all three parties work together to ensure the total property is assessed correctly. The company may hire an agent to assist them with this. The municipal assessor is responsible for the

2016 Annual Report

land, buildings and structures that do not meet the definition of linear property. This process requires assessment expertise, an understanding of how to apply the CCRG and a solid understanding of the accounting and engineering practices for the property under review.

The assessment of electric power systems and electric power generation properties utilizes tabled depreciation unlike the fixed depreciation used when assessing other linear properties. Legislation allows for additional depreciation to be granted under special circumstances.

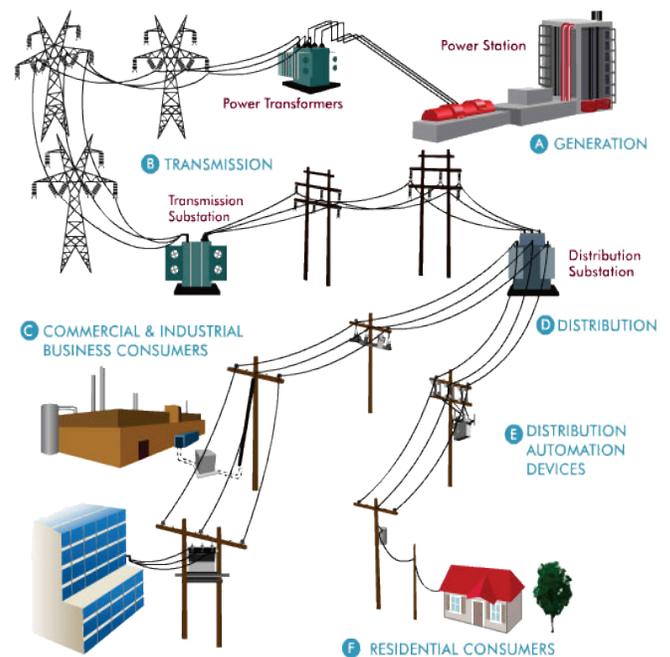
Telecommunications systems and cable distribution undertakings have fixed depreciation and additional depreciation based on the actual use of the property.

Electric Power Systems (ELE)

Electric power systems include all the generation, transmission, and distribution components necessary for electricity sales throughout the province.

The generation component of an electric power system is separately discussed in the section Electric Power Generation (EPG) below.

When a power system has been constructed and exclusively operated to provide internal electricity to a specific plant site in situations such as those that occur in the oil sands regions, the power cannot be sold to the Alberta power grid. When this is the case, their electric power system is not linear property and is assessed by the municipal assessor along with the land and buildings.



Graphic from Venture Beat magazine
(<http://venturebeat.com/2010/12/08/smartgrid-europe-renewables/>)

In 2015, the transmission operators completed over 30 new substation and major additions in the provincial electrical grid. Over \$580 million of the \$670 million increase in ELE is directly due to the work completed on substations. These projects contributed to the largest increases and net change in the power systems in the following municipalities:

- MD of Willow Creek - \$94 MM
- City of Calgary - \$76 MM
- Lac La Biche County - \$42 MM
- RM of Wood Buffalo - \$78 MM
- MD of Foothills - \$44 MM
- Rocky View County - \$38 MM

The two largest municipal decreases were in Woodlands County and Yellowhead County due to two substations location reporting errors last year. These substations are located in the towns of White Court and Hinton not in the surrounding counties.

In 2016, it is expected the province will see the two major direct current transmission systems come on line and will be assessable for the 2017 tax year.

Electric Power Generation (EPG)

Structures and equipment used to generate electricity which is then sold to the province's electric power grid are known as the electric power generation portion of an electric power system. Only the structures and equipment used to produce electricity are considered EPG linear property. This does not include land or buildings which are assessed by the municipal assessor. This means electricity generated on an oilsands site, completely consumed by the plant, is not linear property and will be assessed by the municipal assessor along with the land and buildings.

There are 152 linear power generation facilities and 930 power generation wind towers assessed.

The largest new generation facilities added in 2016 are:

- The Shepard Power Plant in the City of Calgary ENMAX and Capital Power partnered to construct the 800 megawatts (MW) power project.
This project increased the City of Calgary's linear assessment by approximately \$700 MM.
- The Imperial Oil Naybie Co-generation facility in the MD of Bonnyville added 170 MWs to the power grid.
This increased the linear assessment by \$63 MM.
- Genalta Power added a 20 MW waste gas generation facility located in Northern Sunrise County.
This increased the linear assessment by \$8.9 MM.

Telecommunications Systems (TEL)

Alberta's telecommunications system includes components of the communication system including cable distribution undertakings and telecommunication carriers, but not the land or buildings as they are assessed by the municipal assessor. Telecommunications consist of the equipment, conduit, fiber optical cable, towers and copper lines necessary in a telecommunications system.

Cable Distribution (CBL)

The cable distribution undertaking portion of a telecommunications system includes the equipment and the lines necessary to provide residential and business cable services. This portion of the telecommunication systems is identified separately as it is perceived by the public as a different service. In order to provide cable distribution undertakings service a company must be regulated by the CRTC. Only the equipment and lines components necessary for a cable system are considered linear property, the land or buildings will be assessed by the municipal assessor.

Telecommunications Systems and Cable Distribution Changes

Telecommunication and cable systems infrastructure and technologies have changed significantly over the past ten years. The development of cell phones, Wi-Fi devices and computing abilities has effectively decreased the amount of (home) land lines. Smaller municipalities no longer have cable TV infrastructure (coaxial lines); they have been replaced by satellite dishes. This has reduced any cable linear assessment they previously had. Although the province has had significant increases in population, the growth in cable and telecommunication properties has not increased in parallel.

Bell Mobility has indicated that it will be decommissioning all its cell sites in Alberta over the next two years. Bell Mobility has a reciprocal agreement with Telus Mobility on the use of Telus's cell sites in Western Canada and for Telus's use of Bell Mobility cell sites in Eastern Canada. More details will be coming to the linear property assessment unit in the next few months.

Confidence and Stability in the Linear Property Assessment

The linear property assessment, as with any property assessment, is subject to change within the tax year. The percentage of change in any given year is an indicator of quality and stability in the processes and data used to prepare the assessment. The linear property assessment's stability and predictability is tested by analysing the assessment over the past decade. When comparing the first assessment roll to the last assessment roll of the year, the change is consistently between +0.47% and -0.33%. This indicates the assessment is stable and the stakeholders can have confidence in the linear property assessment prepared by Municipal Affairs.

The assessment changes within a tax year are a result of new or additional information coming forward after the assessment notices are mailed. Provisions within the legislation allows for an amended property assessment notice to be prepared. Typically, there are three times within a tax year when the changes are processed and amended assessment notices are mailed out. Another way an assessment may change during the course of the tax year is by a decision made by either the Municipal Government Board (MGB) or a court. These types of changes do not require an amended assessment notice to be prepared, but rather a notification of the change is sent directly from the MGB or court to the affected parties.

The following graph is based on ten years of linear property assessments between 2006 and 2016 tax years. It demonstrates:

- the year over year changes in the linear property assessment; and
- the change in the assessment during each tax year (January 31 assessment versus the December 31 assessment) as indicated by the different colored lines.

2006 – 2016 Tax Year Linear Property Assessment Changes

The actual numbers to create this chart are shown in the table on the following page.



Linear Property Annual and Year End Assessment Change

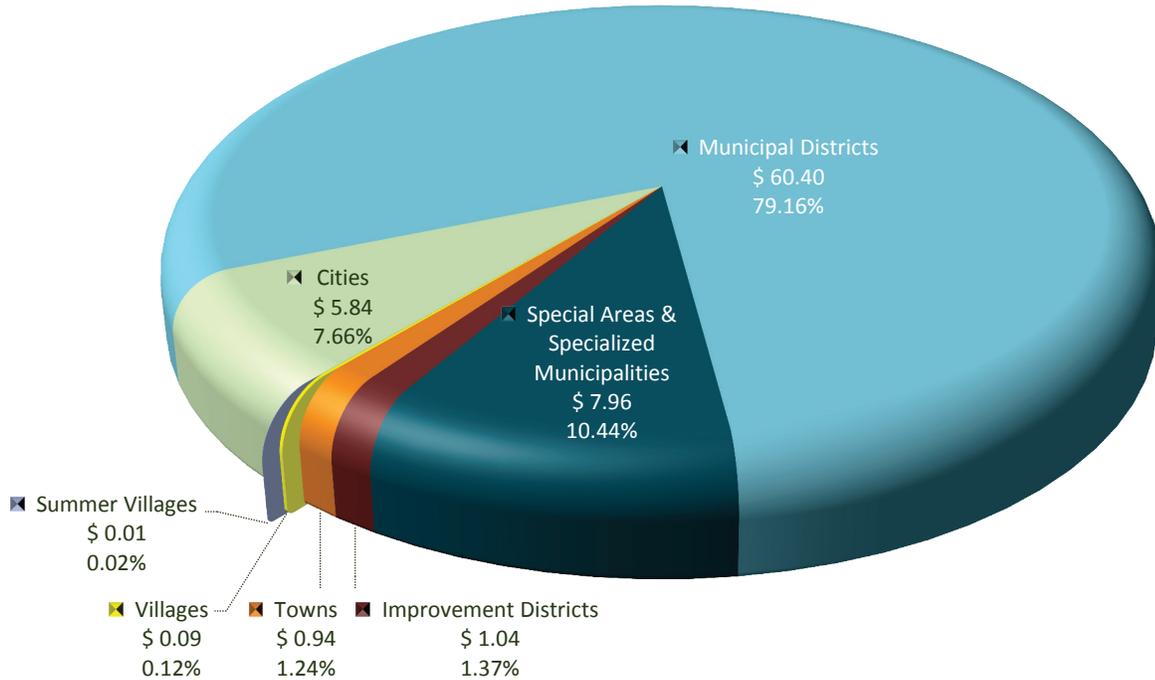
Linear Property Assessment	Tax Years (\$ in Billions)										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January 31 Annual Assessment	44.7	54.81	60.7	66.81	63.4	63.48	67.44	71.06	75.06	78.23	76.29
December 31 Year End Assessment	44.85	54.66	60.98	66.83	63.26	63.38	67.46	71.00	74.81	78.27	To be determined
Assessment Value Change	0.15	-0.15	0.28	0.02	-0.14	-0.09	0.02	-0.06	-0.25	0.05	To be determined
Assessment Percent Change	0.33%	-0.28%	0.47%	0.03%	-0.22%	-0.15%	0.03%	-0.09%	-0.33%	0.06%	To be determined
Assessment Year to Year Change		9.97	6.04	5.83	-3.43	0.21	4.05	3.61	4.06	3.41	-1.98
Assessment Year to Year Change Percent		22.22%	11.05%	9.56%	-5.13%	0.34%	6.40%	5.34%	5.72%	4.56%	-2.53%

Quick Facts about Linear Property Assessment

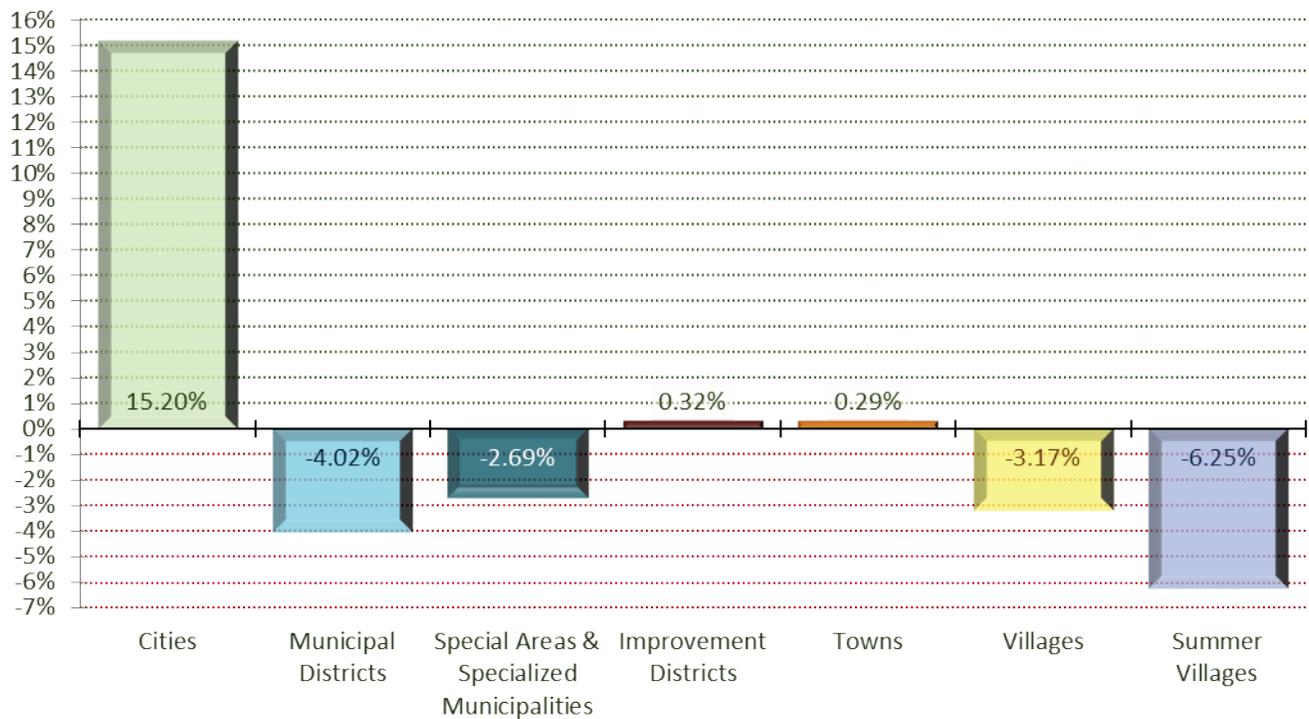
Property Type	
Pipeline	
Kilometers assessed = 424,116	
Assessment per kilometre of Steel Pipeline pressure greater than 1900 KPA	
6" (152 mm) <i>Steel Pipe rate/km</i> high pressure	\$ 59,000
12" (305 mm) <i>Steel Pipe rate/km</i>	\$ 144,000
20" (508 mm) <i>Steel Pipe rate/km</i>	\$ 247,000
30" (762 mm) <i>Steel Pipe rate/km</i>	\$ 425,000
See page 3 for more information regarding what is included when calculating a pipeline assessment	
Wells	
Total number assessed = 256,179	
Average Assessment for a well in full production	
Single zone gas well	\$ 246,000
Single zone oil flowing well	\$ 341,000
Multi zone gas well	\$ 265,000
Multi zone oil flowing well	\$ 319,000
Crude bitumen well	\$ 277,000
Single zone Injection/Disposal well	\$ 223,000
Multi zone Injection/Disposal well	\$ 371,000
See page 5 for more information regarding what is included when calculating a well assessment	
Electric Power Generation	
Size of Wind Turbines: 150 kilowatts to 3.0 megawatts	
Average Assessment per megawatt for new Wind Turbines	\$ 1,150,000
Electric Power Systems	
Total kilometers of Power Lines	23,000
Telecommunications	
Total number of towers	1,796
Total number of cell sites	1,957
Cable Distribution	
Total kilometers of Coax and Fibre Cable	25,300

Charts

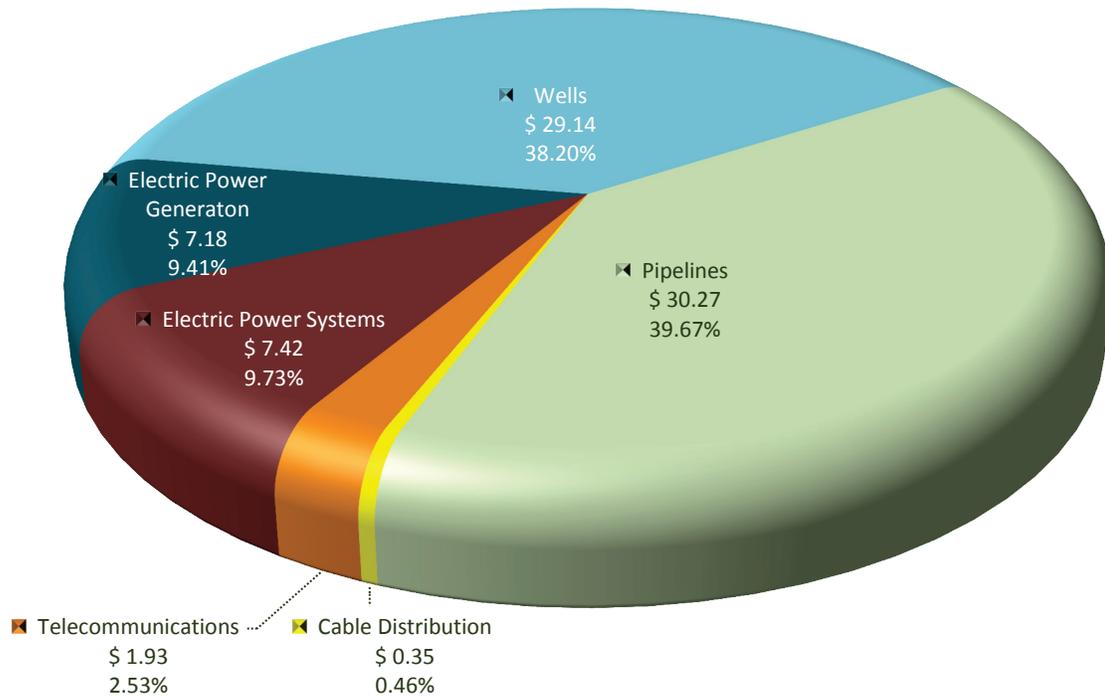
2016 Tax Year Linear Property Assessment Distribution by Municipal Type
(\$76.3 Billion)



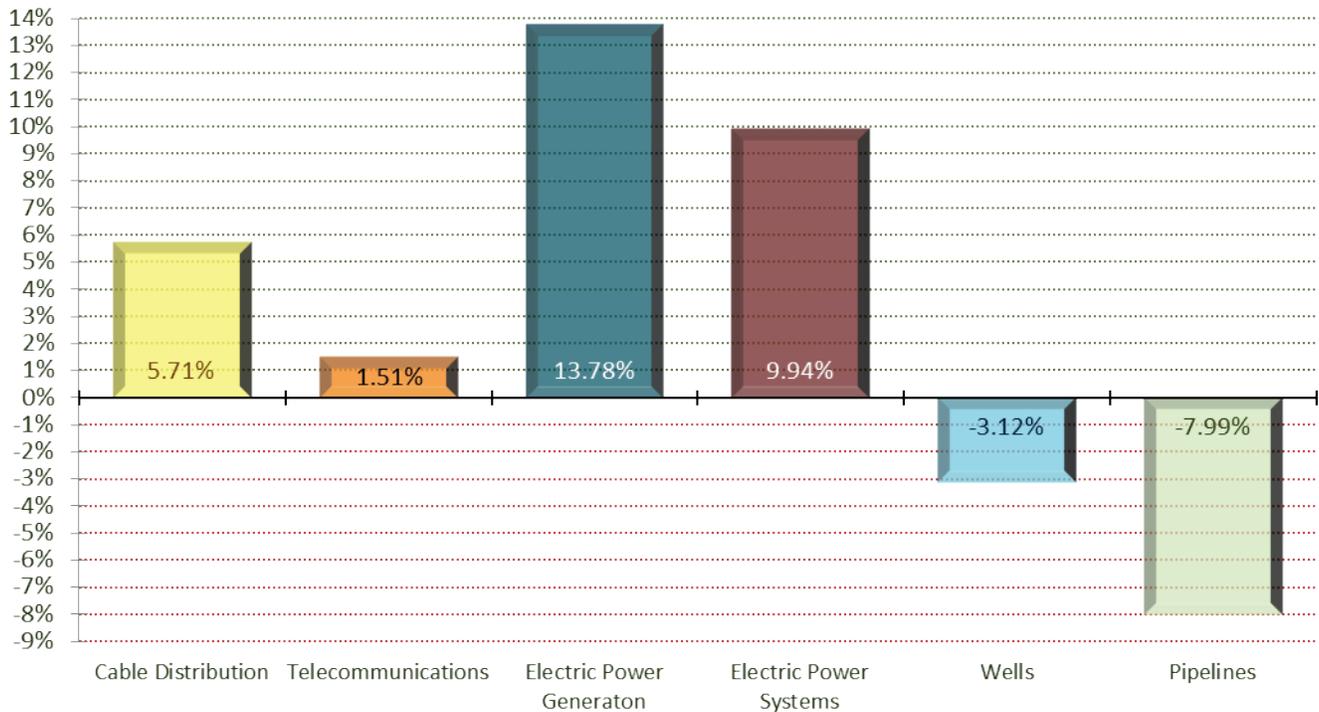
2016 Tax Year Linear Property Assessment Growth by Municipal Type



**2016 Tax Year Linear Property Assessment Distribution by Property Type
(\$76.3 Billion)**



2016 Tax Year Linear Property Assessment Overall Change Percentage by Property Type



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