EB-2016-0085

InnPower Corporation
Application for electricity distribution rates beginning July 1, 2017

VULNERABLE ENERGY CONSUMERS COALITION

("VECC")

CAPITAL EXPENDITURES

October 2, 2017

TAB 1

Revenue Requirement Workform (RRWF) for 2017 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Technical Conference	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(2)	$57,907,639	($1,142,150)	$56,765,489	$ -	$56,765,489
2	Accumulated Depreciation (average)	(2)	($6,507,375)	$ -	($6,507,375)	$ -	($6,507,375)
3	Net Fixed Assets (average)	(2)	$51,400,264	($1,142,150)	$50,258,115	$ -	$50,258,115
4	Allowance for Working Capital	(1)	$2,874,695	($13,739)	$2,860,956	$ -	$2,860,956
5	**Total Rate Base**		$54,274,959	($1,155,888)	$53,119,071	$ -	$53,119,071

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$6,101,306	($173,935)	$5,927,371	$ -	$5,927,371
7	Cost of Power		$32,227,960	($9,250)	$32,218,710	$ -	$32,218,710
8	Working Capital Base		$38,329,266	($183,185)	$38,146,081	$ -	$38,146,081
9	Working Capital Rate %	(1)	7.50%	0.00%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$2,874,695	($13,739)	$2,860,956	$ -	$2,860,956

Notes

(1) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2017 cost of service applications is 7.5%, per the letter issued by the Board on June 3, 2015.

(2) Average of opening and closing balances for the year.

Soure: Excel Spreadsheet: RRWF_V7 1 TC_20170920

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SUMMARY OF CHANGES TO APPENDIX 2-AA

TOTAL CAPITAL EXPENDITURES NET OF CONTRIBUTIONS

Filing Date	2016	2017
June 2016	5,664,761	6,807,441
November 2016	4,486,793	6,688,946
May 2017	4,548,158	6,688,946
September 2017	4,548,158	4,404,647
Variance May-Sept 2017	**0.0**	**2,284,299**

SYSTEM ACCESS

System Access	Sept 2017	May 2017	Variance
BASE 4 SD	3,496,654	641,280	2,855,374
System Access Contributions	-4,153,553	-1,869,254	-2,284,299
Net change	**-656,899**	**-1,227,974**	**571,075**

SYSTEM SERVICE

System Service	Sept 2017	May 2017	Variance
Distribution SCADA control load interrupting gang switch	75,000	75,000	
Repol ing: Big Bay Point Road	0	362,570	-362,570
Repol ing: Lockhart Road	0	618,932	-618,932
Sandy Cove DS automation	125,000	125,000	
Repol ing: Mapleview Drive	0	837,831	-837,831
Repol ing: 5 SR - McKay Road to Salem Rd	0	636,000	-636,000
DS Transformer oi l containment	45,000	45,000	
Repol ing: McKay Rd - 5 SR to 10	0	400,041	-400,041
Net Change	**245,000**	**3,100,374**	**-2,855,374**

NB: THERE WERE NO CHANGES TO THE CATEGORIES OF SYSTEM RENEWAL AND GENERAL PLANT BETWEEN MAY AND SEPTEMBER 2017

Table 2.20 Appendix 2-AA 2016 – 2021 Capital Projects

Appendix 2-AA
Capital Projects Table

Totals are Net of Contibutions

Projects	2016 Bridge	2017 Test Year	2018	2019	2020	2021
Reporting Basis						
SYSTEM ACCESS						
BASE	$ 799,431	$ 1,251,376	$ 1,242,920	$ 1,257,772	$ 1,274,109	$ 1,292,080
DB001 Meters	$ 147,500					
IBR & 5 SR	$ 415,364					
Metering		$ 230,000	$ 270,000	$ 250,000	$ 250,000	$ 250,000
Intersection Widening IBR & Yonge St.		$ 272,430				
Road Widening IBR between Yonge St & 20 SR			$ 471,300			
Road Widening IBR between Yonge St & 10 SR				$ 86,985		
Road Widening IBR between Hwy 400 & 10 SR					$ 74,333	
Road Widening IBR between Hwy 27 & 5 SR						$ 471,300
Contributions System Access	$ 3,790,270	$ 5,561,525	$ 9,626,225	$ 9,675,905	$ 10,009,484	$ 10,666,010
Sub-Total System Access	**$ 1,362,295**	**$ 1,753,806**	**$ 1,984,220**	**$ 1,594,757**	**$ 1,598,442**	**$ 2,013,380**
SYSTEM RENEWAL						
BASE	$ 137,500	$ 116,885	$ 122,725	$ 128,861	$ 135,304	$ 148,834
Substandard Transformer Rehab	$ 109,505	$ 85,000	$ 30,000	$ 31,500	$ 33,075	
Pole Replacement Program	$ 200,914	$ 126,470	$ 148,500	$ 155,925	$ 163,721	$ 171,907
Infrastructure Replacements and Betterments	$ 143,098	$ 150,253	$ 157,766	$ 165,654	$ 173,936	$ 182,633
Line Reclosure Refurbishments - 4 Year Cycle	$ 15,186	$ 15,945	$ 16,742	$ 17,579	$ 18,458	$ 19,381
DS Oil Re-inhibit Treatment	$ 26,216	$ 27,527	$ 57,806	$ 60,696	$ 30,000	
Padmounted Transformer and Switchgear	$ 83,256	$ 43,710	$ 45,895	$ 48,190	$ 50,599	$ 53,129
Station rehab	$ 199,280	$ 104,300	$ 109,853	$ 115,346	$ 242,226	$ 115,680
Ewart Street Rebuild - Phased Approach	$ 101,790	$ 105,000	$ 50,000	$ 52,500	$ 56,700	$ 131,274
Transformers	$ 120,000	$ 100,000	$ 110,000	$ 121,000	$ 133,100	$ 146,410
Reliability Rebuild: Subtransmission - Lockhart		$ 170,650	$ 89,933	$ 294,429	$ 203,060	$ 213,214
Reliability Rebuild: Subtransmission - 5 SideRoad		$ 75,000		$ 550,000	$ 225,000	$ 225,000
Reliability Rebuild: Distribution - Cookstown		$ 50,000	$ 52,500	$ 55,125	$ 200,880	$ 156,000
Reliability Rebuild: Distribution - Lefroy		$ 22,500	$ 47,250	$ 49,613	$ 52,093	$ 54,697
Reliability Rebuild: Distribution - Alcona		$ 22,500	$ 47,250	$ 49,613	$ 52,093	$ 54,697
Everton Back Lot Conversion - Phased Approach				$ 155,000	$ 135,000	
Reliability Rebuild: Distribution - Phased			$ 22,500		$ 75,000	
Reliability Rebuild: Distribution - Strathallan			$ 31,500	$ 33,075	$ 34,728	$ 36,465
Sandy Cove: U/G Cable Replacement Phased				$ 700,000	$ 250,000	$ 250,000
Parkview Rear Lot: 1 Phase Relocate to Street				$ 135,000	$ 135,000	
Degrassi Cove: U/G Converstion						$ 150,000
Contributions System Renewal						
Sub-Total System Renewal	**$ 1,136,744**	**$ 1,215,740**	**$ 1,140,220**	**$ 2,919,106**	**$ 2,399,973**	**$ 2,109,321**
SYSTEM SERVICE						
Stroud DS Automation	$ 164,590					
Repoling: McKay Rd - 5 SR to 10 SR	$ 400,041	$ 273,427				
Cedar Point DS Transformer Upgrade	$ 1,578,016					
Repoling: 5 SR - McKay Road to Salem Rd	$ 362,573					
Distribution SCADA controlled load interrupting		$ 75,000	$ 78,750	$ 82,688	$ 86,821	$ 91,162
Repoling: BBP - Friday Harbour DS to FH		$ 362,570				
Repoling: Lockhart Road - Huronia to Stroud DS		$ 618,932				
Sandy Cove DS		$ 125,000				
Repoling: Mapleview Dr - Prince William Way to		$ 837,831				
DS Transformer Oil Containment		$ 45,000		$ 49,613	$ 52,093	$ 54,698
Subtransmission SCADA Controlled Switches				$ 148,500	$ 155,925	
SCADA PME Morotized Switch Gear				$ 165,000	$ 173,250	$ 181,913
Capacitor Intelilink to SCADA				$ 65,000	$ 65,000	
Friday Harbour DS			$ 2,750,000			
Repoling: 5 SR - 5th Line to IBR				$ 315,000	$ 330,750	$ 347,288
Repoling: 20 SR - 5th Line to 4th Line					$ 219,940	$ 230,937
400 Corridor Voltage Conversion & Servicing				$ 250,000	$ 262,500	$ 275,625
Alcona South Voltage Conversion				$ 200,000	$ 210,000	$ 220,500
Contributions System Service						
Sub-Total System Service	**$ 2,505,220**	**$ 2,337,760**	**$ 2,828,750**	**$ 1,275,801**	**$ 1,556,279**	**$ 1,402,123**

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GENERAL PLANT						
IT Hardware	$ 130,000					
IT Software	$ 115,000					
Furniture and Equipment	$ 15,000					
Buildings and Fixtures	$ 15,000					
Finance IT	$ 122,000					
Engineering IT	$ 121,500					
Fleet Tools	$ 15,000					
Stores Equipment	$ 5,000					
Tools, Shop and Garage Equipment	$ 23,000					
Measurement and Testing Equipment	$ 15,000					
Distribution Fault Current Indicators	$ 41,002					
System Supervisory	$ 43,000					
IT Hardware		$ 165,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000
IT Software		$ 95,000	$ 95,000	$ 95,000	$ 95,000	$ 95,000
Furniture and Equipment		$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000
Buildings and Fixtures		$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000
Finance IT		$ 77,000	$ 50,000	$ 60,000	$ 50,000	$ 50,000
Engineering IT		$ 167,325	$ 145,516	$ 119,000	$ 100,000	$ 105,000
Fleet Tools		$ 15,750	$ 16,538	$ 17,364	$ 18,232	$ 19,144
Stores Equipment		$ 5,250	$ 5,513	$ 5,788	$ 6,077	$ 6,381
Tools, Shop and Garage Equipment		$ 24,150	$ 25,358	$ 26,625	$ 27,956	$ 29,354
Measurement and Testing Equipment		$ 28,000	$ 30,800	$ 32,340	$ 33,957	$ 35,654
Distribution Fault Current Indicators		$ 18,760		$ 15,000	$ 15,750	$ 16,537
System Supervisory		$ 32,400	$ 47,408	$ 49,778	$ 52,266	$ 54,880
Measuring Tools & Equipment IT & Meter		$ 23,000				
Replacement Double Bucket Truck - 1993 Altec		$ 373,500				
Fleet Vehicle Replacement: 1-2006 Ford 1/2 Ton		$ 45,000				
Tech Vehicle - Ford Escape 2009 (#89)			$ 45,000			
Locator Vehicle Mini-Van (x2)		$ 63,000				
Tehnologist Vehicle - NEW		$ 43,500				
Inspector Vehicle - NEW		$ 43,500				
RBD - New Crew		$ 250,000				
Tech Vehicle - Ford Escape 2008 Replacement			$ 45,675			
Meter Tech Vehicle - NEW			$ 45,675			
Inspector Vehicle - NEW			$ 45,675			
Tech Vehicle - Ford Escape 2009 & 2010				$ 95,918		
Fleet Vehicle Replacement: 2005 1/2 Ton (#87)					$ 51,750	
Tech Vehicle - Ford Escape 2008 Replacement					$ 49,329	
Fleet Vehicle Replacement: 2011 -1/2 To (#96)						$ 54,337
Fleet Vehicle Replacement: 2011 - 1 Ton (#101)						$ 60,000
65' Double Bucket - New Crew			$ 400,000			
1 Ton Pickup Truck - New Crew			$ 45,000			
Clothing for 3 Men			$ 10,000			
Tools for 3 Men			$ 15,000			
Tooling for Bucket & RBD			$ 150,000			
100 Travellers			$ 5,000			
Additional Spider System			$ 20,000			
Tension Machines				$ 200,000		
Sub Total Contributions	$ 19,351,810	$ 20,018,968	$ 21,332,020	$ 9,675,905	$ 10,009,484	$ 10,666,010
Sub-Total General Plant	**$ 20,012,312**	**$ 21,519,103**	**$ 22,755,178**	**$ 10,572,718**	**$ 10,689,801**	**$ 11,372,297**
Sub-Total System Service	**$ 2,505,220**	**$ 2,337,760**	**$ 2,828,750**	**$ 1,275,801**	**$ 1,556,279**	**$ 1,402,123**
Sub-Total System Renewal	**$ 1,136,744**	**$ 1,215,740**	**$ 1,140,220**	**$ 2,919,106**	**$ 2,399,973**	**$ 2,109,321**
Sub-Total System Access	**$ 1,362,295**	**$ 1,753,806**	**$ 1,984,220**	**$ 1,594,757**	**$ 1,598,442**	**$ 2,013,380**
Miscellaneous						
Total	**$ 5,664,761**	**$ 6,807,441**	**$ 7,376,348**	**$ 6,686,477**	**$ 6,235,011**	**$ 6,231,111**
Less Renewable Generation Facility Assets						
Total	**$ 5,664,761**	**$ 6,807,441**	**$ 7,376,348**	**$ 6,686,477**	**$ 6,235,011**	**$ 6,231,111**

Notes:

1 Please provide a breakdown of the major components of each capital project undertaken in each year. Please
1 2 The applicant should group projects appropriately and avoid presentations that result in classification of significant

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Table 2.15 Appendix 2-AA Capital Projects Table

Appendix 2-AA
Capital Projects Table

Projects	2012	2013	2014	2015	2016 Bridge Year	2017 Test Year
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
SYSTEM ACCESS						
DO-015 County relocates IBR & 20th SDRD	203					
DO-016 County relocated 7th Line & 20th SDRD	297,101					
DO-017 County relocates IBR & 10th SDRD	441,029					
DO-018 Urbanization carry forward	119,210					
DO-022 TS Land	526,913					
DB-001 Retail meters	50,794	96,757	120,569			
Base	1,016,719	968,603	1,665,195			
Economic Evaluation	942,138		893,568			
DO-009 Big Bay Point F3 for BBPT development		2,979				
DO-010 Utility relocates		1,766				
DO-012 BBPT line ext for BBPT dev & new 27.6 kV sub stn		397,894				
IPC2015BASE1 - C & CTC WORK ORDERS				282,319	275,010	116,880
IPC2015BASE2 - PO WORK ORDERS				30,806	36,248	34,254
IPC2015BASE3 - L, DG, RPO, RCTC WORK ORDERS				901,869	900,530	945,557
IPC2015BASE4 - SD WORK ORDERS				1,557,550	3,711,228	641,280
IPC2015DB001 - RETAIL/WHOLESALE METERS				95,343	147,500	230,000
IPC2015DO013 - COUNTY RELOCATES IBR & 20TH SR				253,796		
Intersection Widening IBR & Yonge St						430,000
Intersection Widening IBR & 5 SR						656,981
Contributions	- 1,643,538	-428,863	-1,416,471	-2,225,541	-3,986,075	-1,869,254
Sub-Total System Access	**1,750,570**	**1,039,136**	**1,262,861**	**896,142**	**1,084,441**	**1,185,698**
SYSTEM RENEWAL						
DO-005 2012 Pole Replacement Program	446,005					
DO-006 System Renewal	163,797					
DO-012 UG padmount TX replacements	16,873					
DO-013 Substandard trnasformer rehabs	27,623					
DO-004 System Renewal & Betterments		181,259				
DO-005 U/G Padmounted TX Replacements & painting		81,562				
DO-006 Substandard Transformer Rehabs		179,665				
DO-007 Pole Replacements		395,175				
DO-015 3 ph 44kV Repoling/Reconductoring 20th btwn 6th & 7th		149,284				
DO-001 Pole replacement			401,651			
DO-002 Substandard Transformer Rehabs			131,794			
DO-003 Transformer/Switchgear replacements & painting			7,574			
DO-004 System Renewal & betterments			156,029			
IPC2015DO008 - POLE REPLACEMENT 2015				114,433		
IPC2015DO009 - INFRASTRUCTURE REPLACEMENTS & BETTERMENTS				185,862		
IPC2015DO010 - TRANSFORMER/SWITCHGEAR REPLACEMENTS				30,455		
IPC2015DO017 - DS TRANSFORMER OIL RE-INHIBIT PROGRAM				18,591		
IPC2015GB003 - INFRASTRUCTURE REPLACEMENT				16,883		
IPC2015DO005 - LINE RECLOSER REFURBISHMENT				17,459		
IPC2015DO006 - SUBSTANDARD TRANSFORMER REHAB				103,800		
IPC2016DO001 - Substandard Infrastructure Replacement					109,505	
IPC2016DO002 - Pole Replacement Program					200,914	
IPC2016DO003 - Infrastructure Replacements and Betterments					143,098	
IPC2016DO004 - Line Reclosure Refurbishments - 4 Year Cycle					15,186	
IPC2016DO005 - DS Oil Re-inhibit Treatment per/each					26,216	
IPC2016DO006 - U/G Padmounted Transformer and Switchgear					83,256	
IPC2016DO012 - Station Reliability Upgrade					199,280	
IPC2016DO015 - Ewart Street Rebuild					101,790	
IPC2016DO016 - Transformers					120,000	
Base 1 (50%)						116,885
Substandard Transformer Rehab						85,000
Pole Replacement Program						126,470
Infrastructure Replacements and Betterments						150,253
Line Reclosure Refurbishments - 4 Year Cycle						15,945
DS Oil Re-inhibit Treatment						27,527
Padmounted Transformer and Switchgear Replacements and Painting						43,710
Station rehab						104,300
Ewart Street Rebuild - Phased Approach						105,000
Transformers						100,000
Reliability Rebuild: Subtransmission - Lockhart Road						170,650
Reliability Rebuild: Subtransmission - 5 Side Road						75,000
Reliability Rebuild: Distribution - Cookstown						50,000
Reliability Rebuild: Distribution - Alcona						22,500
Reliability Rebuild: Distribution - Lefroy						22,500
Sub-Total System Renewal	**654,298**	**986,945**	**697,048**	**487,483**	**999,245**	**1,215,739**

Appendix 2-AA
Capital Projects Table

Projects	2012	2013	2014	2015	2016 Bridge Year	2017 Test Year
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**

SYSTEM SERVICE						
DO-007 Reclosurer automation	33,443					
DO-009 27.6kv Mechanized SCADA Load Interpt	124,767					
DO-010 44kv Mechanized SCADA Load Interpt	149,065					
GO-004 System Supervisory	19,208					
GO-005 Radio repeated faulted indicators	3,800					
GO-011 Scada program conversion	253,248					
DO-009 - 27.6kv Mechanized SCADA Load Interpt	69					
DO-010 - 44kv Mechanized SCADA Load Interpt	2,375					
DO-001 Station Reclosurer		169,828				
DO-002 44 kV Alduti Ruptor		185,785				
DO-003 27.6 kV Mechanized SCADA controlled load interpt		13,384				
DO-008 27 kV Extension 20th SR, BBPT to 13th Line		687,654				
DO-014 3 ph 27.6kV conductoring 20th btwn 5th & 7th		123,174				
GO-007 System Supervisory		45,457				
GO-012 Scada program conversion		151,319				
DO-005 Reclosurere automation & replacement 4 yr cycle			214,679			
DO-010 Lefroy Distribution Station			2,336,737			
GO-007 System Supervisory			54,572			
GO-012 Scada program conversion			212,788			
IPC2015DO002 - LINE EXT MAPLEVIEW RD 20TH SR TO PR WILLIAM WAY				325,911		
IPC2015DO004 - LINE REBUILD YONGE ST FROM LOCKHART TO MAPLEVIW				433,436		
IPC2015DO007 - LINE EXT BBP RD & 25TH SR TO FRIDAY HARBOUR S ENTR				599,917		
IPC2015DO020 - LOCKHART ROAD REBUILD PHASE 1				260,002		
IPC2015DO012 - 44KV ALDUTIRUPTOR SCADA CONTROLLED SWITCHES				175,151		
IPC2015DO014 - DS ELECTRICAL CODE COMPLIANCE UPGRADE				129,692		
IPC2015DO015 - DS BATTERY BACKUP SYSTEM				545,994		
IPC2015DO018 - RADIO COMMUNICATION 2014 CARRYFORWARD				136,938		
IPC2015DO019 - LEFROY DS UPGRADE				152,900		
IPC2015GO014 - SCADA BATTERIES & CHARGERS & CABINET REPLCMNT				183,883		
IPC2015DO011 & IPC2015GO11				273		
IPC2016DO008 - Cedar Point DS Transformer Upgrade					1,578,016	
IPC2016DO013 - Stroud DS Automation					164,590	
Distribution SCADA controlled load interrupting gang switch						75,000
Repoling: Big Bay Point Road - Friday Harbour DS to Friday Harbour Development						362,570
Repoling: Lockhart Road - Huronia Road to Stroud DS						618,932
Sandy Cove DS automation						125,000
Repoling: Mapleview Drive - Prince William Way to Seline Crescent						837,831
Repoling: 5 SR - McKay Road to Salem Rd						636,000
DS Transformer oil containment						45,000
Repoling: McKay Rd - 5 SR to 10 SR						400,041
Sub-Total System Service	**585,975**	**1,376,601**	**2,818,776**	**2,944,097**	**1,742,606**	**3,100,374**
GENERAL PLANT						
GO-010 New Building	662,562					
GB-001 Hardware General	73,117					
GO-001 New Building & Land		1,015,496				
GB-001 Hardware General		53,604				
GB-001 Software General		124,394				
GO-003 Transport Equipment		64,048				
GB-002A Hardware General			80,063			
GB-002B Software General			88,347			
IPC2015GB001A - HARDWARE GENERAL				148,675		
IPC2015GB001B - SOFTWARE GENERAL				61,990		
IPC2015GF001 - FINANCE & REGULATORY IT HW & SW				94,356		
IPC2015GO001 - ENGINEERING IT PROJECT				82,472		
IPC2015GO005 - STORES EQUIPMENT				117,204		
IPC2015GO009 - SYSTEM SUPERVISORY & CONTROL ROOM				67,317		
IPC2015GO013 - NEW BUILDING				12,475,713		
IPC2015GO015 - POLE BUNK				68,583		
IPC2016GB001 - IT Hardware					130,000	
IPC2016GB001 - IT Hardware					115,000	
IPC2016GF001 - Finance IT					122,000	
IPC2016GO001 - Engineering IT					121,500	
IPC2016GO006 - Distribution Fault Current Indicators					41,001	
IPC2016GO007 - System Supervisory					43,000	
IT Hardware						165,000
IT Software						95,000
Finance IT						77,000
Engineering IT						167,325
Transprtation/Vehicles						505,500
System Supervisory						32,400
Miscellaneous	91,856	90,911	84,288	133,674	88,000	144,910
Sub-Total General Plant	**827,535**	**1,348,453**	**252,698**	**13,249,984**	**660,501**	**1,187,135**
Total Capital (Net of Contibutions)	**3,818,378**	**4,751,135**	**5,031,383**	**17,577,706**	**4,486,793**	**6,688,946**

Total
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets ***(input as negative)***
Total

InnPower Corporation's complete details of the Distribution Plan is contained in Appendix B of this Exhibit.

Accumulated Depreciation

FILED MAY 2017

Appendix 2-AA
Capital Projects Table

Projects	2012	2013	2014	2015	2016 Bridge Year	2017 Test Year	
Reporting Basis	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	
SYSTEM ACCESS							
DO-015 County relocates IBR & 20th SDRD	203						
DO-016 County relocated 7th Line & 20th SDRD	297,101						
DO-017 County relocates IBR & 10th SDRD	441,029						
DO-018 Urbanization carry forward	119,210						
DO-022 TS Land	526,913						
DB-001 Retail meters	50,794	96,757	120,569				
Base	1,016,719	968,603	1,665,195				
Economic Evaluation	942,138		893,568				
DO-009 Big Bay Point F3 for BBPT development		2,979					
DO-010 Utility relocates		1,766					
DO-012 BBPT line ext for BBPT dev & new 27.6 kV sub stn		397,894					
IPC2015BASE1 - C & CTC WORK ORDERS				282,319	1,085,568	116,880	x
IPC2015BASE2 - PO WORK ORDERS				30,806	0	34,254	x
IPC2015BASE3 - L, DG, RPO, RCTC WORK ORDERS				901,869	1,013,610	945,557	x
IPC2015BASE4 - SD WORK ORDERS				1,557,550	814,168	641,280	x
IPC2015DB001 - RETAIL/WHOLESALE METERS				95,343	285,652	230,000	x
IPC2015DO013 - COUNTY RELOCATES IBR & 20TH SR				253,796			
					718,072		
Intersection Widening IBR & Yonge St						430,000	
Intersection Widening IBR & 5 SR						656,981	
Contributions	- 1,643,538	-428,863	-1,416,471	-2,225,541	-2,334,510	-1,869,254	x
Sub-Total System Access	**1,750,570**	**1,039,136**	**1,262,861**	**896,142**	**1,582,560**	**1,185,698**	671,082.31
SYSTEM RENEWAL							
DO-005 2012 Pole Replacement Program	446,005						
DO-006 System Renewal	163,797						
DO-012 UG padmount TX replacements	16,873						
DO-013 Substandard tmasformer rehabs	27,623						
DO-004 System Renewal & Betterments		181,259					
DO-005 U/G Padmounted TX Replacements & painting		81,562					
DO-006 Substandard Transformer Rehabs		179,665					
DO-007 Pole Replacements		395,175					
DO-015 3 ph 44kV Repoling/Reconductoring 20th btwn 6th & 7th		149,284					
DO-001 Pole replacement			401,651				
DO-002 Substandard Transformer Rehabs			131,794				
DO-003 Transformer/Switchgear replacements & painting			7,574				
DO-004 System Renewal & betterments			156,029				
IPC2015DO008 - POLE REPLACEMENT 2015				114,433			
IPC2015DO009 - INFRASTRUCTURE REPLACEMENTS & BETTERMENTS				185,862			
IPC2015DO010 - TRANSFORMER/SWITCHGEAR REPLACEMENTS				30,455			
IPC2015DO017 - DS TRANSFORMER OIL RE-INHIBIT PROGRAM				18,591			
IPC2015GB003 - INFRASTRUCTURE REPLACEMENT				16,883			
IPC2015DO005 - LINE RECLOSER REFURBISHMENT				17,459			
IPC2015DO006 - SUBSTANDARD TRANSFORMER REHAB				103,800			
IPC2016DO001 - Substandard Infrastructure Replacement					40,937		x
IPC2016DO002 - Pole Replacement Program					193,714		x
IPC2016DO003 - Infrastructure Replacements and Betterments					122,976		x
IPC2016DO004 - Line Reclosure Refurbishments - 4 Year Cycle					9,394		x
IPC2016DO005 - DS Oil Re-inhibit Treatment per/each					27,886		x
IPC2016DO006 - U/G Padmounted Transformer and Switchgear					45,691		x
IPC2016DO007 - McKay Rd Rebuild					27,265		x
IPC2016DO012 - Station Reliability Upgrade					209,478		x
IPC2016DO015 - Ewart Street Rebuild					87,109		x
IPC2016DO016 - Transformers					29,328		x
Base 1 (50%)						116,885	
Substandard Transformer Rehab						85,000	
Pole Replacement Program						126,470	
Infrastructure Replacements and Betterments						150,253	
Line Reclosure Refurbishments - 4 Year Cycle						15,945	
DS Oil Re-inhibit Treatment						27,527	
Padmounted Transformer and Switchgear Replacements and Painting						43,710	
Station rehab						104,300	
Ewart Street Rebuild - Phased Approach						105,000	
Transformers						100,000	
Reliability Rebuild: Subtransmission - Lockhart Road						170,650	
Reliability Rebuild: Subtransmission - 5 Side Road						75,000	
Reliability Rebuild: Distribution - Cookstown						50,000	
Reliability Rebuild: Distribution - Alcona						22,500	
Reliability Rebuild: Distribution - Lefroy						22,500	
Sub-Total System Renewal	**654,298**	**986,945**	**697,048**	**487,483**	**793,776**	**1,215,739**	
SYSTEM SERVICE							
DO-007 Reclosurer automation	33,443						
DO-009 27.6kv Mechanized SCADA Load Interpt	124,767						
DO-010 44kv Mechanized SCADA Load Interpt	149,065						
GO-004 System Supervisory	19,208						
GO-005 Radio repeated faulted indicators	3,800						
GO-011 Scada program conversion	253,248						
DO-009 - 27.6kv Mechanized SCADA Load Interpt	69						
DO-010 - 44kv Mechanized SCADA Load Interpt	2,375						
DO-001 Station Reclosurer		169,828					
DO-002 44 kV Alduti Ruptor		185,785					
DO-003 27.6 kV Mechanized SCADA controlled load interpt		13,384					
DO-008 27 kV Extension 20th SR, BBPT to 13th Line		687,654					
DO-014 3 ph 27.6kV conductoring 20th btwn 5th & 7th		123,174					
GO-007 System Supervisory		45,457					
GO-012 Scada program conversion		151,319					
DO-005 Reclosurere automation & replacement 4 yr cycle			214,679				
DO-010 Lefroy Distribution Station			2,336,737				
GO-007 System Supervisory			54,572				
GO-012 Scada program conversion			212,788				
IPC2015DO002 - LINE EXT MAPLEVIEW RD 20TH SR TO PR WILLIAM WAY				325,911			
IPC2015DO004 - LINE REBUILD YONGE ST FROM LOCKHART TO MAPLEVIW				433,436			
IPC2015DO007 - LINE EXT BBP RD & 25TH SR TO FRIDAY HARBOUR S ENTR				599,917			
IPC2015DO020 - LOCKHART ROAD REBUILD PHASE 1				260,002			
IPC2015DO012 - 44KV ALDUTIRUPTOR SCADA CONTROLLED SWITCHES				175,151			
IPC2015DO014 - DS ELECTRICAL CODE COMPLIANCE UPGRADE				129,692			
IPC2015DO015 - DS BATTERY BACKUP SYSTEM				545,994			
IPC2015DO018 - RADIO COMMUNICATION 2014 CARRYFORWARD				136,938			
IPC2015DO019 - LEFROY DS UPGRADE				152,900			
IPC2015GO014 - SCADA BATTERIES & CHARGERS & CABINET REPLCMNT				183,883			
IPC2015DO011 & IPC2015GO11				273			
IPC2016DO008 - Cedar Point DS Transformer Upgrade					1,585,545		x
IPC2016DO013 - Stroud DS Automation					168,829		x
Distribution SCADA controlled load interrupting gang switch						75,000	
Repoling: Big Bay Point Road - Friday Harbour DS to Friday Harbour Development						362,570	
Repoling: Lockhart Road - Huronia Road to Stroud DS						618,932	
Sandy Cove DS automation						125,000	
Repoling: Mapleview Drive - Prince William Way to Seline Crescent						837,831	
Repoling: 5 SR - McKay Road to Salem Rd						636,000	
DS Transformer oil containment						45,000	
Repoling: McKay Rd - 5 SR to 10 SR						400,041	
Sub-Total System Service	**585,975**	**1,376,601**	**2,818,776**	**2,944,097**	**1,754,374**	**3,100,374**	
GENERAL PLANT							
GO-010 New Building	662,562						
GB-001 Hardware General	73,117						
GO-001 New Building & Land		1,015,496					
GB-001 Hardware General		53,604					
GB-001 Software General		124,394					
GO-003 Transport Equipment		64,048					
GB-002A Hardware General			80,063				
GB-002B Software General			88,347				
IPC2015GB001A - HARDWARE GENERAL				148,675			
IPC2015GB001B - SOFTWARE GENERAL				61,990			
IPC2015GF001 - FINANCE & REGULATORY IT HW & SW				94,356			
IPC2015GO001 - ENGINEERING IT PROJECT				82,472			
IPC2015GO005 - STORES EQUIPMENT				117,204			
IPC2015GO009 - SYSTEM SUPERVISORY & CONTROL ROOM				67,317			
IPC2015GO013 - NEW BUILDING				12,475,713			
IPC2015GO015 - POLE BUNK				68,583			
IPC2016GB001 - IT Hardware					101,516		x
IPC2016GB001 - IT Hardware					39,242		x
IPC2016GF001 - Finance IT					76,868		x
IPC2016GO001 - Engineering IT					83,734		x
IPC2016GO006 - Distribution Fault Current Indicators					38,759		x
IPC2016GO007 - System Supervisory					29,343		x
IT Hardware						165,000	
IT Software						95,000	
Finance IT						77,000	
Engineering IT						167,325	
Transprtation/Vehicles						505,500	
System Supervisory						32,400	
Miscellaneous	91,856	90,911	84,288	133,674	47,987	144,910	
Sub-Total General Plant	**827,535**	**1,348,453**	**252,698**	**13,249,984**	**417,448**	**1,187,135**	
Total Capital (Net of Contibutions)	**3,818,378**	**4,751,135**	**5,031,383**	**17,577,706**	**4,548,158**	**6,688,946**	

Total
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets *(input as negative)*
Total

Notes:

1 Please provide a breakdown of the major components of each capital project undertaken in each year. Please ensure that all projects below the materiality threshold are included in the miscellaneous line. Add more projects as required.

FILED AS UNDERTAKING SEPTEMBER 20, 2017

Appendix 2-AA

Capital Projects Table

Projects	2012	2013	2014	2015	2016 Bridge Year	2017 Test Year	
Reporting Basis	**CGAAP**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**	
SYSTEM ACCESS							
DO-015 County relocates IBR & 20th SDRD	203						
DO-016 County relocated 7th Line & 20th SDRD	297,101						
DO-017 County relocates IBR & 10th SDRD	441,029						
DO-018 Urbanization carry forward	119,210						
DO-022 TS Land	526,913						
DB-001 Retail meters	50,794	96,757	120,569				
Base	1,016,719	968,603	1,665,195				
Economic Evaluation	942,138		893,568				
DO-009 Big Bay Point F3 for BBPT development		2,979					
DO-010 Utility relocates		1,766					
DO-012 BBPT line ext for BBPT dev & new 27.6 kV sub stn		397,894					
IPC2015BASE1 - C & CTC WORK ORDERS				282,319	1,085,568	116,880	x
IPC2015BASE2 - PO WORK ORDERS				30,806	0	34,254	x
IPC2015BASE3 - L, DG, RPO, RCTC WORK ORDERS				901,869	1,013,610	945,557	x
IPC2015BASE4 - SD WORK ORDERS				1,557,550	814,168	3,496,654	x
IPC2015DB001 - RETAIL/WHOLESALE METERS				95,343	285,652	230,000	x
IPC2015DO013 - COUNTY RELOCATES IBR & 20TH SR				253,796			
					718,072		
Intersection Widening IBR & Yonge St						430,000	
Intersection Widening IBR & 5 SR						656,981	
Contributions	- 1,643,538	-428,863	-1,416,471	-2,225,541	-2,334,510	-4,153,553	x

Sub-Total System Access	**1,750,570**	**1,039,136**	**1,262,861**	**896,142**	**1,582,560**	**1,756,773**	671,082.31
SYSTEM RENEWAL							
DO-005 2012 Pole Replacement Program	446,005						
DO-006 System Renewal	163,797						
DO-012 UG padmount TX replacements	16,873						
DO-013 Substandard trnasformer rehabs	27,623						
DO-004 System Renewal & Betterments		181,259					
DO-005 U/G Padmounted TX Replacements & painting		81,562					
DO-006 Substandard Transformer Rehabs		179,665					
DO-007 Pole Replacements		395,175					
DO-015 3 ph 44kV Repoling/Reconductoring 20th btwn 6th & 7th		149,284					
DO-001 Pole replacement			401,651				
DO-002 Substandard Transformer Rehabs			131,794				
DO-003 Transformer/Switchgear replacements & painting			7,574				
DO-004 System Renewal & betterments			156,029				
IPC2015DO008 - POLE REPLACEMENT 2015				114,433			
IPC2015DO009 - INFRASTRUCTURE REPLACEMENTS & BETTERMENTS				185,862			
IPC2015DO010 - TRANSFORMER/SWITCHGEAR REPLACEMENTS				30,455			
IPC2015DO017 - DS TRANSFORMER OIL RE-INHIBIT PROGRAM				18,591			
IPC2015GB003 - INFRASTRUCTURE REPLACEMENT				16,883			
IPC2015DO005 - LINE RECLOSER REFURBISHMENT				17,459			
IPC2015DO006 - SUBSTANDARD TRANSFORMER REHAB				103,800			
IPC2016DO001 - Substandard Infrastructure Replacement					40,937		x
IPC2016DO002 - Pole Replacement Program					193,714		x
IPC2016DO003 - Infrastructure Replacements and Betterments					122,976		x
IPC2016DO004 - Line Reclosure Refurbishments - 4 Year Cycle					9,394		x
IPC2016DO005 - DS Oil Re-inhibit Treatment per/each					27,886		x
IPC2016DO006 - U/G Padmounted Transformer and Switchgear					45,691		x
IPC2016DO007 - McKay Rd Rebuild					27,265		x
IPC2016DO012 - Station Reliability Upgrade					209,478		x
IPC2016DO015 - Ewart Street Rebuild					87,109		x
IPC2016DO016 - Transformers					29,328		x
Base 1 (50%)						116,885	
Substandard Transformer Rehab						85,000	
Pole Replacement Program						126,470	
Infrastructure Replacements and Betterments						150,253	

Line Reclosure Refurbishments - 4 Year Cycle						15,945
DS Oil Re-inhibit Treatment						27,527
Padmounted Transformer and Switchgear Replacements and Painting						43,710
Station rehab						104,300
Ewart Street Rebuild - Phased Approach						105,000
Transformers						100,000
Reliability Rebuild: Subtransmission - Lockhart Road						170,650
Reliability Rebuild: Subtransmission - 5 Side Road						75,000
Reliability Rebuild: Distribution - Cookstown						50,000
Reliability Rebuild: Distribution - Alcona						22,500
Reliability Rebuild: Distribution - Lefroy						22,500
Sub-Total System Renewal	**654,298**	**986,945**	**697,048**	**487,483**	**793,776**	**1,215,739**
SYSTEM SERVICE						
DO-007 Reclosurer automation	33,443					
DO-009 27.6kv Mechanized SCADA Load Interpt	124,767					
DO-010 44kv Mechanized SCADA Load Interpt	149,065					
GO-004 System Supervisory	19,208					
GO-005 Radio repeated faulted indicators	3,800					
GO-011 Scada program conversion	253,248					
DO-009 - 27.6kv Mechanized SCADA Load Interpt	69					
DO-010 - 44kv Mechanized SCADA Load Interpt	2,375					
DO-001 Station Reclosurer		169,828				
DO-002 44 kV Alduti Ruptor		185,785				
DO-003 27.6 kV Mechanized SCADA controlled load interpt		13,384				
DO-008 27 kV Extension 20th SR, BBPT to 13th Line		687,654				
DO-014 3 ph 27.6kV conductoring 20th btwn 5th & 7th		123,174				
GO-007 System Supervisory		45,457				
GO-012 Scada program conversion		151,319				
DO-005 Reclosurere automation & replacement 4 yr cycle			214,679			
DO-010 Lefroy Distribution Station			2,336,737			
GO-007 System Supervisory			54,572			
GO-012 Scada program conversion			212,788			
IPC2015DO002 - LINE EXT MAPLEVIEW RD 20TH SR TO PR WILLIAM WAY				325,911		
IPC2015DO004 - LINE REBUILD YONGE ST FROM LOCKHART TO MAPLEVIW				433,436		
IPC2015DO007 - LINE EXT BBP RD & 25TH SR TO FRIDAY HARBOUR S ENTR				599,917		
IPC2015DO020 - LOCKHART ROAD REBUILD PHASE 1				260,002		
IPC2015DO012 - 44KV ALDUTIRUPTOR SCADA CONTROLLED SWITCHES				175,151		
IPC2015DO014 - DS ELECTRICAL CODE COMPLIANCE UPGRADE				129,692		

IPC2015DO015 - DS BATTERY BACKUP SYSTEM				545,994			
IPC2015DO018 - RADIO COMMUNICATION 2014 CARRYFORWARD				136,938			
IPC2015DO019 - LEFROY DS UPGRADE				152,900			
IPC2015GO014 - SCADA BATTERIES & CHARGERS & CABINET REPLCMNT				183,883			
IPC2015DO011 & IPC2015GO11				273			
IPC2016DO008 - Cedar Point DS Transformer Upgrade					1,585,545		x
IPC2016DO013 - Stroud DS Automation					168,829		x
Distribution SCADA controlled load interrupting gang switch						75,000	
Sandy Cove DS automation						125,000	
DS Transformer oil containment						45,000	
Sub-Total System Service	**585,975**	**1,376,601**	**2,818,776**	**2,944,097**	**1,754,374**	**245,000**	
GENERAL PLANT							
GO-010 New Building	662,562						
GB-001 Hardware General	73,117						
GO-001 New Building & Land		1,015,496					
GB-001 Hardware General		53,604					
GB-001 Software General		124,394					
GO-003 Transport Equipment		64,048					
GB-002A Hardware General			80,063				
GB-002B Software General			88,347				
IPC2015GB001A - HARDWARE GENERAL				148,675			
IPC2015GB001B - SOFTWARE GENERAL				61,990			
IPC2015GF001 - FINANCE & REGULATORY IT HW & SW				94,356			
IPC2015GO001 - ENGINEERING IT PROJECT				82,472			
IPC2015GO005 - STORES EQUIPMENT				117,204			
IPC2015GO009 - SYSTEM SUPERVISORY & CONTROL ROOM				67,317			
IPC2015GO013 - NEW BUILDING				10,080,510			
IPC2015GO015 - POLE BUNK				68,583			
IPC2016GB001 - IT Hardware					101,516		x
IPC2016GB001 - IT Hardware					39,242		x
IPC2016GF001 - Finance IT					76,868		x

IPC2016GO001 - Engineering IT					83,734		x
IPC2016GO006 - Distribution Fault Current Indicators					38,759		x
IPC2016GO007 - System Supervisory					29,343		x
IT Hardware						165,000	
IT Software						95,000	
Finance IT						77,000	
Engineering IT						167,325	
Transprtation/Vehicles						505,500	
System Supervisory						32,400	
Miscellaneous	91,856	90,911	84,288	214,135	47,987	144,910	
Sub-Total General Plant	**827,535**	**1,348,453**	**252,698**	**10,935,242**	**417,448**	**1,187,135**	
Total Capital (Net of Contibutions)	**3,818,378**	**4,751,135**	**5,031,383**	**15,262,964**	**4,548,158**	**4,404,647**	

Total
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets *(input as negative)*
Total

TAB 2

UNDERTAKING JT1.15

Undertaking:

TO PROVIDE AN EXPLANATION RELATED TO THE DOUBLE BUCKET MODEL.

Reference: Transcript dated September 12, 2017 page 99, line 9 to page 100 line 26.

Response:

The double bucket truck that was previously anticipated to go into service in Q4 of 2017 is now expected to go into service in Q1 of 2018.

InnPower does not agree that the cost of $490,000 should not be included in rate base in the test year. This would amount to a selective reduction to one category of test year capital expenditures without also adjusting for increases in other categories.

For example, please refer to Undertaking JT1.5. As explained in Note 4, actual System Access expenditures in the "Base 4" category are well in excess of budget. Basically, due to very high home prices, developments year-to-date in the InnPower service area have proceeded much faster than were conservatively forecasted. Budgeted amounts for Base 4 (net of contributions) was $128,256. Actual as of the end of August 2017 is (net of contributions) already $557,324. Forecasted for the end of 2017 is now (net of contributions) $2,103,476.

If an update to reflect actuals year-to-date is to be done, it should be done on a comprehensive basis across the entire capital program. It is not correct to reflect only reductions in one category and not reflect corresponding increases in other categories.

The models filed with these undertaking responses have not been updated to reflect the removal of the double bucket truck in 2017.

Witness: Michael Davison

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ONTARIO ENERGY BOARD

FILE NO.: **EB-2016-0085** **InnPower Corporation**

VOLUME: **Technical Conference**

DATE: **September 12, 2017**

in 2016, a 61,000 discrepancy, and in 2015 about a 2.3 million discrepancy.

I would like an undertaking to explain these differences.

MS. DJURDJEVIC: That will be JT1.14.

UNDERTAKING NO. JT1.14: TO EXPLAIN THE $65,000 DISCREPANCY IN 2016 AND THE $2.3 MILLION DISCREPANCY IN 2015.

MS. O'CONNELL: My last question regarding Exhibit 2 before I turn it over to my colleague, Ted, I just had a question regarding 2 VECC 8. If you call up 2 VECC 8 and scroll down, that last line there before part (b) says 2017 double bucket model. It says "not received." Do you know if this truck has been received yet?

MR. MALCOLM: InnPower has received the chassis of the truck and the manufacturer has it at their facility to install the bucket portion of it.

MS. O'CONNELL: Will it be put in service by the end of 2017?

MR. MALCOLM: We're probably looking at an in-service date in the first quarter of 2018.

MS. O'CONNELL: Is it still expected to cost 490,000?

MR. MALCOLM: As of today, it is still on track as budgeted.

MS. O'CONNELL: Do you think it would be reasonable to take this out of rate base, because it won't be put in service until 2018?

MR. MALCOLM: As we are incurring costs on the trucks,

we are booking it until 2017. So the truck chassis was the first part, so we booked that for 2017.

The cost of the -- our arterial device will be in 2017. So substantial completion of the vehicle will be done in 2017, but receipt of the vehicle won't be until 2018.

We'll have to go through our checks to make sure that what we ordered and anything that -- deficiencies are within that unit as it's being built are being addressed.

MR. SHEPHERD: You can help me understand how it's used for useful in 2017, there?

MR. MALCOLM: Pardon me?

MR. SHEPHERD: How is it used or useful in 2017 if it is still being worked on?

MR. MALCOLM: It does not provide a physical use for the utility, but we are incurring cost of the receipt of that vehicle. So it's not being used, but it is being --

MR. VELLONE: Can I mark an undertaking? I think I'd like to have a conversation with my client about what booked to rate base means, because I think that will help. And so if we could get back to you following an undertaking, that might be useful.

MS. O'CONNELL: Sure.

MS. DJURDJEVIC: That's JT1.15.

UNDERTAKING NO. JT1.15: TO PROVIDE AN EXPLANATION RELATED TO THE DOUBLE BUCKET MODEL

MS. O'CONNELL: Okay. I still have more questions, but I'll pass it on to Ted right now.

TAB 3

UNDERTAKING JT1.5

Undertaking:

TO UPDATE THE 2017 CAPITAL BUDGET APPENDIX 2AA WITH CURRENT SPENDING, PROJECT BY PROJECT, TO JULY 2017; ALSO TO PROVIDE THE 2016 ACTUAL SPENDING FOR WORK DONE IN THE BRIDGE YEAR, FROM JANUARY TO JULY 2016.

Reference: Transcript dated September 12, 2017 page 27, line 21 to page 31, line 3.

Response:

Actual capital expenditures year to date on a project by project basis to July 30th, 2017 is shown in Table JT1.5A. For comparison purposes, actual capital expenditures to July 30th, 2016 is shown in Table JT1.5B (the 2016 data could not be broken down on a project by project basis but totals were available).

InnPower is on track to spend more than what was forecasted in the test year on capital expenditures. As more fully detailed below, the actual spending has changed in several material respects versus what was originally forecasted in the Application. Despite now anticipating total expenditures higher than originally forecast, InnPower is not proposing to change the requested forecasted amount in the rate Application.

Explanations for the actual expenditures that will occur in 2017 relative to each line item are included in the notes below Tables JT1.5A.

Table JT1.5A Capital Expenditures YTD to July 30th 2017

Capital Expenditure

July 30, 2017 YTD							2017	2017
Budget Indicator	Notes	Project	Actual Cost YTD	Actual Contribution	WIP	Net ytd Actual Cost with WIP	Budget-Net	Year End Forecast-Net
BASE	Note 1	IPC2017Base1 - IPC2017SA01 50%, IPC2017SR01 50%	107,645.56	.00	76,204.28	$ 183,849.84	$ 233,765	$ 233,765
	Note 2	IPC2017Base2 - IPC2017SA02	1,059.68	-1,059.68	196,588.34	$ 196,588.34	$ 22,767	$ 132,929
	Note 3	IPC2017Base3 - IPC2017SA03	168,335.99	-258,050.17	333,766.72	$ 244,052.54	$ -	$ -
	Note 4	IPC2017Base4 - IPC2017SA04	142,929.27	-142,395.66	384,260.00	$ 384,793.61	$ 128,256	$ 2,103,476
BASE Total			419,970.50	-401,505.51	990,819.34	$ 1,009,284.33	$ 384,788	
CAR		IPC2017SA05 - Meters	15,032.96	.00	43,964.46	$ 58,997.42	$ 230,000	$ 230,000
		IPC2017SA06 - Intersection Widening IBR & Yonge St	.00	.00	314.71	$ 314.71	$ 272,430	$ -
	Note 5	IPC2017SR03 - Pole Replacement Program	72,057.43	.00	1,203.06	$ 73,260.49	$ 126,470	$ 126,470
	Note 5	IPC2017SR04 - Infrastructure Replacements and Betterments	32,754.83	.00	71,440.51	$ 104,195.34	$ 150,253	$ 150,253
	Note 5	IPC2017SR05 - Line Reclosure Refurbishments - 4 Year Cycle	.00	.00	.00	$ -	$ 15,944	$ 15,945
	Note 5	IPC2017SR06 - DS Oil Re-inhibit Treatment	.00	.00	193.49	$ 193.49	$ 27,527	$ 27,527
	Note 5	IPC2017SR07 - Padmounted Transformer and Switchgear Replacements and Pa	.00	.00	1,469.78	$ 1,469.78	$ 43,710	$ 43,710
	Note 5	IPC2017SR08 - Station Rehab	2,910.00	.00	8,213.61	$ 11,123.61	$ 104,300	$ 104,300
	Note 6	IPC2017SA07 - IBR & 5 SR	.00	.00	4,415.83	$ 4,415.83	$ 415,364	$ -
		IPC2017SR09 - Ewart Street Rebuild - Phased Approach	.00	.00	116,275.67	$ 116,275.67	$ 105,000	$ 155,000
	Note 5	IPC2017SR02 - Substandard Transformer Rehab	69,079.81	.00	49,365.77	$ 118,445.58	$ 85,000	$ 85,000
	Note 5	IPC2017SR10 - Transformers	303,991.10	.00	.00	$ 303,991.10	$ 100,000	$ 100,000
		IPC2017SR11 - Reliability Rebuild: Subtransmission	81,664.93	.00	45,568.10	$ 127,233.03	$ 245,650	$ 520,650
		IPC2017SR12 - Reliability Rebuild: Distribution	.00	.00	31,665.65	$ 31,665.65	$ 95,000	$ 112,500
	Note 5	IPC2017SS01 - Distribution SCADA Controlled Load Interrupting Gang Switch	.00	.00	.00	$ -	$ 75,000	$ 75,000
	Note 7	IPC2017SS02 - Repoling:Big Bay Pt Rd - Friday Harbour DS to Friday Harbour De	.00	.00	.00	$ -	$ -	$ -
	Note 8	IPC2017SS03 - Repoling:Lockhart Rd - Huronia Rd to Stroud DS	.00	.00	162,589.02	$ 162,589.02	$ 618,933	$ 170,000
	Note 5	IPC2017SS04 - Sandy Cove DS Automation	.00	.00	7,249.24	$ 7,249.24	$ 125,000	$ 125,000
	Note 9	IPC2017SS05 - Line Extension: Mapleview Drive Prince William to Yonge St	.00	.00	.00	$ -	$ 837,831	$ -
	Note 9	IPC2017SS06 - Repoling:5 SR - McKay Road to Salem Rd	.00	.00	.00	$ -	$ 635,999	$ -
	Note 5	IPC2017SS07 - DS Transformer Oil Containment	.00	.00	77.39	$ 77.39	$ 45,000	$ 45,000
	Note 9	IPC2017SS08 - Repoling:McKay Rd - 5 SR to 10 SR	.00	.00	.00	$ -	$ 400,041	$ -
		IPC2017GP01 - IT Hardware	20,601.45	.00	.00	$ 20,601.45	$ 165,000	$ 130,000
		IPC2017GP02 - IT Software	27,327.15	.00	5,585.00	$ 32,912.15	$ 95,000	$ 72,500
		IPC2017GP03 - Furniture and Equipment	.00	.00	.00	$ -	$ 15,000	$ 5,000
		IPC2017GP04 - Buildings and Fixtures	7,953.73	.00	.00	$ 7,953.73	$ 15,000	$ 43,000
		IPC2017GP05 - Finance IT	17,723.77	.00	16,659.44	$ 34,383.21	$ 77,000	$ 77,000
		IPC2017GP06 - Engineering IT	.00	.00	1,622.01	$ 1,622.01	$ 167,325	$ 62,325
		IPC2017GP07 - Measuring Tools & Equipment & Meter	.00	.00	.00	$ -	$ 23,000	$ 27,195
		IPC2017GP08 - Fleet Tools	5,360.20	.00	.00	$ 5,360.20	$ 15,750	$ 15,750
		IPC2017GP09 - Stores Equipment	.00	.00	.00	$ -	$ 5,250	$ 5,250
		IPC2017GP10 - Tools, Shop and Garage Equipment	4,356.78	.00	-686.42	$ 3,670.36	$ 24,150	$ 24,150
		IPC2017GP11 - Measurement and Testing Equipment	.00	.00	.00	$ -	$ 28,000	$ 28,000
		IPC2017GP12 - Replacement Double Bucket Truck - 1993 Altec	.00	.00	153,000.00	$ 153,000.00	$ 373,500	$ -
		IPC2017GP13 - Fleet Vehicle Replacement 1-2006 Ford 1/2 Ton	.00	.00	.00	$ -	$ 45,000	$ -
		IPC2017GP14 - Tech & Locator Vehicles (x4)	.00	.00	.00	$ -	$ 87,000	$ -
		IPC2017GP15 - DIstribution Fault Current Indicators	.00	.00	.00	$ -	$ 18,760	$ 18,760
		IPC2017GP16 - System Supervisory	2,963.04	.00	.00	$ 2,963.04	$ 32,400	$ 32,400
							$ 6,711,162.56	$ 5,097,855.21
CAR Subtotal			663,777.18	.00	720,186.32	$ 1,383,963.50		
Subtotal			1,083,747.68	-401,505.51	1,711,005.66			
Grand Total Excluding WIP						$ 682,242.17		
Grand Total Including 2017 WIP Expenditures						$ 1,693,945.16		
Grand Total Including Cumulative WIP Expenditures						$ 2,418,725.65		

Work in Progress (incl. contributions)	Actual Cost YTD
Opening Balance	724,780.49
Change for the Year	1,011,702.99
Current Month Ending Balance	1,736,483.48

Table JT1.5B Capital Expenditures YTD to July 30th 2016

July 30, 2016 YTD					
Budget Indicator	**Project**	**Actual Cost YTD**	**Actual Contribution**	**WIP**	**Net ytd Actual Cost with WIP**
BASE	IPC2017Base1 - IPC2017SA01 50%, IPC2017SR01 50%	130,743.38	.00	.00	$ 130,743.38
	IPC2017Base2 - IPC2017SA02	.00	.00	.00	$ -
	IPC2017Base3 - IPC2017SA03	234,158.98	-265,412.12	.00	-$ 31,253.14
	IPC2017Base4 - IPC2017SA04	198,317.19	-196,557.41	.00	$ 1,759.78
BASE Total		**563,219.55**	**-461,969.53**	**.00**	**$ 101,250.02**
CAR	IPC2017SA05 - Meters	57,798.76	.00	.00	$ 57,798.76
	IPC2016DO001 - Substandard Infrastructure Replacement	23,644.45	.00	.00	$ 23,644.45
	IPC2017SR03 - Pole Replacement Program	102,163.17	.00	.00	$ 102,163.17
	IPC2017SR04 - Infrastructure Replacements and Betterments	92,081.31	.00	.00	$ 92,081.31
	IPC2017SR05 - Line Reclosure Refurbishments - 4 Year Cycle	1,906.99	.00	.00	$ 1,906.99
	IPC2017SR06 - DS Oil Re-inhibit Treatment	10,863.02	.00	.00	$ 10,863.02
	IPC2017SR07 - Padmounted Transformer and Switchgear Rep	32,194.61	.00	.00	$ 32,194.61
	IPC2016DO007 - McKay Rd Rebuild from 5th SR to 10th SR	.00	.00	.00	$ -
	IPC2016DO008 - Cedar Point DS Transformer Upgrade	.00	.00	.00	$ -
	IPC2016DO010 - IBR & 5 SR	.00	.00	.00	$ -
	IPC2016DO012 - Station Reliability Upgrade	.00	.00	.00	$ -
	IPC2016DO013 - Stroud DS Automation	.00	.00	.00	$ -
	IPC2016DO014 - BBP DS-Friday Harbour North Entrance	.00	.00	.00	$ -
	IPC2016DO015 - Ewart Street Rebuild	.00	.00	.00	$ -
	IPC2016DO016 - Transformers	.00	.00	.00	$ -
	IPC2017SS02 - Repoling:Big Bay Pt Rd - Friday Harbour DS to	.00	.00	.00	$ -
	IPC2017SS03 - Repoling:Lockhart Rd - Huronia Rd to Stroud D	.00	.00	.00	$ -
	IPC2017SS04 - Sandy Cove DS Automation	.00	.00	.00	$ -
	IPC2017SS05 - Line Extension: Mapleview Drive Prince Willia	.00	.00	.00	$ -
	IPC2017SS06 - Repoling:5 SR - McKay Road to Salem Rd	.00	.00	.00	$ -
	IPC2017SS07 - DS Transformer Oil Containment	.00	.00	.00	$ -
	IPC2017SS08 - Repoling:McKay Rd - 5 SR to 10 SR	.00	.00	.00	$ -
	IPC2017GP01 - IT Hardware	72,532.94	.00	.00	$ 72,532.94
	IPC2017GP02 - IT Software	10,040.00	.00	.00	$ 10,040.00
	IPC2017GP03 - Furniture and Equipment	.00	.00	.00	$ -
	IPC2017GP04 - Buildings and Fixtures	.00	-30,160.00	.00	-$ 30,160.00
	IPC2017GP05 - Finance IT	4,775.45	.00	.00	$ 4,775.45
	IPC2017GP06 - Engineering IT	1,963.81	.00	.00	$ 1,963.81
	IPC2017GP08 - Fleet Tools	4,809.47	-10,499.00	.00	-$ 5,689.53
	IPC2017GP09 - Stores Equipment	.00	.00	.00	$ -
	IPC2017GP10 - Tools, Shop and Garage Equipment	.00	.00	.00	$ -
	IPC2017GP11 - Measurement and Testing Equipment	.00	.00	.00	$ -
	IPC2017GP12 - Replacement Double Bucket Truck - 1993 Alte	.00	.00	.00	$ -
	IPC2017GP13 - Fleet Vehicle Replacement 1-2006 Ford 1/2 T	.00	.00	.00	$ -
	IPC2017GP14 - Tech & Locator Vehicles (x4)	.00	.00	.00	$ -
	IPC2017GP15 - DIstribution Fault Current Indicators	7,510.34	.00	.00	$ 7,510.34
	IPC2017GP16 - System Supervisory	412.66	.00	.00	$ 412.66
CAR Subtotal		**422,696.98**	**-40,659.00**	**.00**	**$ 382,037.98**
Subtotal		**985,916.53**	**-502,628.53**	**1,590,815.02**	
Grand Total Excluding WIP					**$ 483,288.00**
Grand Total Including 2016 WIP Expenditures					**$ 1,276,376.41**
Grand Total Including Cumulative WIP Expenditures					**$ 2,074,103.02**

Work in Progress (incl. contributions)	**Actual Cost YTD**
Opening Balance	797,726.61

Notes

Note 1 - Base 1 - Upon comparison of 2017 July costs to 2016, the projected year end cost is in line and on track for 2017.

Note 2 - Base 2 - 2016 we had no expenses incurred on unbudgeted regional or municipal county works projects that are partially contributed, however for 2017 we are projecting gross capital of approximately $200,000 and a net capital of $133,000 for year-end costs.

Note 3 - Base 3 - We expect the net costs of 2017 to be similar to 2016.

Note 4 - Base 4 - The projected increase in capital investment related to subdivision developments is expected to be considerably higher for 2017 as compared to 2016 with the multiple subdivision projects expected to be energized by year end. As shown below in the table the net capital increase of roughly $2,000,000.

	Base 4 - Budget to Forecasted 2017		
Subdivisions energized August 2017 as Base 4	Transfer price	Contribution	Net Investment
Alcona	684,055	476,305	
Ballymore Phase 2&3	234,644	187,198	
Friday Harbour Phase 2	790,899	643,113	
Top Hills	128,909	109,468	
Churchill Downs	181,459	153,520	
Cookshill North	194,790	154,193	
San Diego Phase 2B	210,169	164,007	
Subtotal	2,424,925	1,887,804	
Additional Base 4 projects on track to be completed in 2017			
Friday Harbour Phase 1	13,131,775	11,462,620	
Revised FH Ph 1 (w/o stn)	7,831,775	6,265,420	
TOTAL	**10,256,700**	**8,153,224**	**2,103,476**
2017 Budget	641,280	513,024	128,256
Increase in Budget to Forecasted of Capital Investment 2017			**1,975,220**

Note 5 - Projects are typically completed in second half of the year.

Note 6 - Pending County confirmation to proceed.

TAB 4

Gross Assets – and Accumulated Depreciation

InnPower Corporation elected to break down and explain variances in three categories; Distribution Assets, General Plant, and Capital Contributions.

- Distribution Plant Asset Accounts - includes assets such as Sub Stations, poles, wires, transformers and meters.
- General Plant Asset Accounts – includes assets such as buildings, transportation equipment, computer software and hardware.
- Contributions and Grants - includes all contributions in aid of capital that InnPower Corporation has received or are forecasted to be received as allowed under the Distribution System Code ("DSC"), as well as forecasted capital contributions paid.

Table 2.8A Summary of Gross Assets (Original Application)

	2013 Board Approved	2013 Actual	2014 Actual	2014 Actual	2015 Actual	2016 Bridge	2017 Test
	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS
Distribution Assets	$ 64,782,208	$ 65,221,160	$ 70,575,916	$ 41,734,840	$ 47,645,865	$ 55,290,932	$ 62,477,969
General Plant	$ 6,396,781	$ 6,033,623	$ 6,335,568	$ 3,010,694	$ 16,201,524	$ 16,862,026	$ 18,049,161
Capital Contribution	-$ 9,919,516	-$ 9,792,874	-$ 11,205,471	-$ 9,168,614	-$ 11,358,938	-$ 15,345,014	-$ 17,214,268
Total	$ 61,259,473	$ 61,461,909	$ 65,706,013	$ 35,576,920	$ 52,488,451	$ 56,807,944	$ 63,312,862

Table 2.8A Summary of Gross Assets (Amended Application)

	2013 Board Approved	2013 Actual	2014 Actual	2014 Actual	2015 Actual	2016 Bridge	2017 Test
	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS
Distribution Assets	$ 64,782,208	$ 65,221,160	$ 70,575,916	$ 41,734,840	$ 47,645,865	$ 53,193,381	$ 60,380,418
General Plant	$ 6,396,781	$ 6,033,623	$ 6,335,568	$ 3,010,694	$ 13,851,524	$ 15,085,878	$ 16,273,013
Capital Contribution	-$ 9,919,516	-$ 9,792,874	-$ 11,205,471	-$ 9,168,614	-$ 11,358,938	-$ 13,624,079	-$ 15,493,333
Total	$ 61,259,473	$ 61,461,909	$ 65,706,013	$ 35,576,920	$ 50,138,451	$ 54,655,180	$ 61,160,098

2.0-VECC-5

Ref: Exhibit 2

a) Please provide a variance analysis for Appendix 2-AA as between the 2016 original filing (Nov 28) and the amended filing (May 8).

InnPower Corporation Response:

a) Please refer to IPC's IRR to 1-SEC-2.

2.0-VECC-6

Ref: E2/Appendix B/DSP/pg 19

a) Using Table 2-1 (amended for updates as necessary) please provide the actual and forecast capital contributions by category.
b) Please explain how the 2017 capital contribution forecast was calculated.
c) Please clarify if Table 2-1 shows capital expenditures net of capital contributions or is showing the gross amount.

InnPower Corporation Response:

a) Actual and Forecast Capital Contributions by Category

2-VECC-6 a)

	Historical ($)					Forecast ($ '000)				
Category	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
System Access (Gross)	3,394,108.25	1,467,999.26	2,679,332.00	3,121,681.44	5,070,516.40	3,054,950.60	$11,610,445	$11,270,662	$11,607,926	$12,679,390
- Contributions	-1,643,538.33	-494,092.00	-1,416,471.00	-2,225,540.64	-3,986,075.40	-1,869,253.50	-$ 9,626,225	-$ 9,675,905	-$10,009,484	-$10,666,010
System Access (Net)	1,750,569.92	973,907.26	1,262,861.00	896,140.80	1,084,441.00	1,185,697.10	$ 1,984,220	$ 1,594,757	$ 1,598,442	$ 2,013,380
System Renewal (Gross)	654,297.86	986,944.88	697,048.00	487,480.79	999,243.80	1,215,739.00	$ 1,140,219	$ 2,919,105	$ 2,399,973	$ 2,109,321
- Contributions	0.00	0.00	0.00	0.00	0.00	0.00	$ -	$ -	$ -	$ -
System Renewal (Net)	654,297.86	986,944.88	697,048.00	487,480.79	999,243.80	1,215,739.00	$ 1,140,219	$ 2,919,105	$ 2,399,973	$ 2,109,321
System Service (Gross)	585,976.27	1,376,601.06	2,818,776.00	2,944,097.33	1,742,606.00	3,100,374.00	$ 2,828,750	$ 1,275,800	$ 1,556,279	$ 1,402,122
- Contributions	0.00	0.00	0.00	0.00	0.00	0.00	$ -	$ -	$ -	$ -
System Service (Net)	585,976.27	1,376,601.06	2,818,776.00	2,944,097.33	1,742,606.00	3,100,374.00	$ 2,828,750	$ 1,275,800	$ 1,556,279	$ 1,402,122
General Plant (Gross)	827,534.34	1,348,453.00	252,698.00	13,249,984.28	660,502.40	1,187,135.00	$ 1,423,156	$ 896,813	$ 680,317	$ 706,287
- Contributions	0.00	0.00	0.00	-40,536.75	0.00	0.00	$ -	$ -	$ -	$ -
General Plant (Net)	827,534.34	1,348,453.00	252,698.00	13,209,447.53	660,502.40	1,187,135.00	$ 1,423,156	$ 896,813	$ 680,317	$ 706,287
Gross Capital	5,461,916.72	5,179,998.20	6,447,854.00	19,803,243.84	8,472,868.60	8,558,198.60	$17,002,570	$16,362,380	$16,244,495	$16,897,120
- Total Contributions	-1,643,538.33	-494,092.00	-1,416,471.00	-2,266,077.39	-3,986,075.40	-1,869,253.50	-$ 9,626,225	-$ 9,675,905	-$10,009,484	-$10,666,010
Net Capital	3,818,378.39	4,685,906.20	5,031,383.00	17,537,166.45	4,486,793.20	6,688,945.10	$ 7,376,345	$ 6,686,475	$ 6,235,011	$ 6,231,110

b) Base 2: 50% of labour, vehicles, and subcontractor costs (33% total)
Base 3: 100% recoverable as per Conditions of Service
Base 4: 80% recoverable based on expected results of the Economic Evaluation
Intersection Widening: IBR & Yonge St: 50% of labour, vehicles, and subcontractor costs
Intersection Widening: IBR & 5th Side Road: 50% of labour, vehicles, and subcontractor costs
No other 2017 projects/programs have capital contributions

c) Table 2-1 shows capital expenditures net of capital contributions.

UNDERTAKING JT1.6

Undertaking:

TO UPDATE THE FORECASTED CONTRIBUTIONS IN THE TABLE IN 2 VECC 6.

Reference: Transcript dated September 12, 2017 page 37, lines 10-26.

Response:

Table JT1.6 Updated Table from 2 VECC 6

Summary						
	2017	2018	2019	2020	2021	TOTAL
System Access - Before Contributions	$ 5,910,324	$14,360,445	$ 11,585,662	$ 12,158,616	$ 13,257,615	$ 57,272,661
Contributions	-$ 4,153,553	-$ 11,826,225	-$ 9,927,905	-$ 10,450,036	-$ 11,128,590	-$ 47,486,308
System Access - Net of Contributions	$ 1,756,771	$ 2,534,220	$ 1,657,757	$ 1,708,580	$ 2,129,025	$ 9,786,353
System Renewal - Before Contributions	$ 1,215,739	$ 1,140,219	$ 2,919,105	$ 2,399,973	$ 2,109,321	$ 9,784,357
Contributions (None)	0	0	0	0	0	$ -
System Renewal - Net of Contributions	$ 1,215,739	$ 1,140,219	$ 2,919,105	$ 2,399,973	$ 2,109,321	$ 9,784,357
System service - Before Contributions	$ 245,000	$ 78,750	$ 960,800	$ 1,005,589	$ 823,897	$ 3,114,036
Contributions (None)	0	0	0	0	0	$ -
System Service - Net of Contributions	$ 245,000	$ 78,750	$ 960,800	$ 1,005,589	$ 823,897	$ 3,114,036
General Plant - Before Contributions	$ 1,187,135	$ 1,423,156	$ 896,813	$ 680,317	$ 706,287	$ 4,893,708
Contributions (None)	0	0	0	0	0	$ -
General Plant - Net of Contributions	$ 1,187,135	$ 1,423,156	$ 896,813	$ 680,317	$ 706,287	$ 4,893,708
TOTAL - BEFORE CONTRIBUTIONS	$ 8,558,198	$17,002,570	$ 16,362,380	$ 16,244,495	$ 16,897,120	$ 75,064,763
CONTRIBUTIONS - TOTAL	-$ 4,153,553	-$ 11,826,225	-$ 9,927,905	-$ 10,450,036	-$ 11,128,590	-$ 47,486,308
TOTAL - NET OF CONTRIBUTIONS	$ 4,404,645	$ 5,176,345	$ 6,434,475	$ 5,794,459	$ 5,768,530	$ 27,578,454

Witness: Michael Davison

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TAB 5

Figure 1-3: Summary of Residential Development 2016 - 2084

			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Alcona			243	153	272	298	250	322	246	265	265	245	260	260	260	260	260	260	260	260	260
Total Alcona South (Sleeping Lion)			0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total Churchill			0	12	12	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Gilford			0	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cookstown			51	30	48	17	0	0	30	23	0	0	5	5	5	5	5	5	5	5	0
Total Stroud			10	10	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Friday Harbour			250	150	150	150	150	100	100	100	100	100	100	100	50	0	0	0	0	0	0
Total Lefroy			120	120	120	91	70	140	175	167	65	65	50	50	50	50	50	50	50	50	0
Total Growth per year			674	580	717	668	581	662	651	655	530	510	515	515	465	415	415	415	415	415	360
Alliston Total (includes Friday Harbour)			613	440	559	549	481	562	521	532	430	410	410	410	360	310	310	310	310	310	260
Alliston Total (without Friday Harbour)			363	290	409	399	331	462	421	432	330	310	310	310	310	310	310	310	310	310	260
Barrie TS Total (without Friday Harbour)			10	10	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barrie TS Total (includes Friday Harbour)			613	440	559	549	481	562	521	532	430	410	410	410	360	310	310	310	310	310	260
Everett TS Total			51	30	48	17	0	0	30	23	0	0	5	5	5	5	5	5	5	5	0

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1.0-Staff-11

Ref: Exhibit 1, pgs 6-7
Exhibit 2, Appendix B, pg 12

InnPower describes the challenges it faces as a result of forecast growth in the area from 2011 to 2031.

a) Please explain the discrepancy in projections between the Innisfil Official Plan, the Simcoe Official Plan and the Provincial Plan.

b) Please provide the growth numbers for each of the plans by year.

c) Please explain any discrepancies between the three growth plans and the forecast customer counts in the DSP.

d) Please provide status updates for the Friday Harbour, Sleeping Lion, South Barrie and Lefroy developments.

e) Please provide the individual capital budget amounts for each of the above developments and the proposed timing of the expenditures.

f) OEB staff notes that the commercial development sites referenced in point 3 of the DSP at pg 12 were approved in 1990, 1991 and 1993. Please provide a status update for these developments.

g) Please provide the individual capital budget amounts for the sites in part e) above and the proposed timing of the expenditures. If these sites attracted historical spending, please provide the amounts spent and the years in which spending occurred.

InnPower Corporation Response:

a) The projections contained in the Innisfil Official Plan, the Simcoe Official Plan and the Provincial Plan were not authored by InnPower. The utilization of all the reports primarily provide third party support that Innisfil will be experiencing significant growth for the 2017 – 2031 timeframe.

b) InnPower has reviewed the referenced growth plans and they do not provide year over year growth numbers.

c) InnPower's growth forecast is primarily based on planned subdivision development figures obtained directly from the Developers. We have further reduced the forecast using a conservative absorption rate to account for a modest slowing of the economy/reduction in home sales. Although the various reports show differing forecasts these reports were included as evidence of the general growth projection of the service area.

d) Following is the summary status update for the Friday Harbour, Sleeping Lion, South Barrie and Lefroy developments. All of InnPower's data is gathered from subdivision developers, load growth projections and actual applications from commercial/industrial load forecasts. This data presented was updated in June 2017 and no absorption rate has been applied. For a further breakdown please refer to Attachment # 1.0-Staff-11(d) Friday Harbour_Lefroy_Updated Forecast for the details.

Development	Total Occupancy to Date	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Friday Harbour	0	342	395	400	34	433	433									2,037
Lefroy	120	120	120	91	70	140	175	167	65	65						1,013
Sleeping Lion	0	120	80	100	100	100	100	100	100	100						900
South Barrie	0	-	739	2,704	2,159	1,264	978	895	400	300	300	200	145		8,688	18,772
	120	582	1,334	3,295	2,363	1,937	1,686	1,162	565	465	300	200	145	-	8,688	22,722

e) Following is a breakdown of the aforementioned projects with estimated capital costs and timing. The table represents the 2016 Q4 approved budget by InnPower's Board of Directors.

Spend in Lefroy will commence in 2020 as InnPower currently has sufficient capacity to serve the forecasted loads up until this timeframe.

For Friday Harbour InnPower has sufficient capacity to service the 2017 forecast however will require the distribution station in 2018.

For Sleeping Lion InnPower currently has sufficient capacity to the service the lands.

Projects	Area Services	2017	2018	2019	2020	2021	Total
Friday Harbour DS	Friday Harbour		$ 2,750,000				$ 2,750,000
Repoling: 20 SDRD 5th Line to 4th Line	Lefroy				$ 219,940	$ 230,937	$ 450,877
Repoling: 5 SDRD - 5th line to IBR	South Barrie (primary) plus backup for InnPower's 44kV			$ 315,000	$ 330,750	$ 347,288	$ 993,038
Repoling: 5 SDRD - McKay RD to Salem RD	South Barrie	$ 636,000					$ 636,000
Repoling:BBP - Friday Harbour DS to development	Friday Harbour	$ 362,570					$ 362,570
Repoling:Lockhart Rd -Huronia RD to Stroud DS	South Barrie	$ 618,932					$ 618,932
Repoling:Mapleview DR - Prince William Way	South Barrie	$ 837,831					$ 837,831
Repoling: McKay RD - 5 SDRD to 10 SDRD	South Barrie	$ 400,041					$ 400,041

f) The Town of Innisfil is working on servicing these lands with water and waste water services. This project is ongoing.

g) The following tables provide the historical and future planned spend for the sites mentioned in e).

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TAB 6

2 Distribution System Plan (5.2)

2.1 Distribution System Plan Overview (5.2.1)

InnPower's DSP has been crafted to address its dynamic business conditions in order to continue to provide customers with reliable electricity service.

- Investments into a new substation, line extensions, and re-poling to carry more circuits have been planned in the system service category in response to on-going development in the Town of Innisfil and the City of Barrie.
- New customer connections and Economic Evaluation payments have been forecast commensurately with the load growth.
- New vehicles, tools, and equipment will be purchased for a new line crew to serve the growing customer base.
- Renewal of distribution system and substation assets has been planned based on InnPower's Asset Condition Assessment ("**ACA**").
- Renewal of fleet vehicles has been planned based on InnPower's Fleet Management Policy.
- Hardware and software investments are planned to improve operational efficiencies, maintain software licenses, and replace end-of-life equipment.
- Smart grid investments have been planned in substation and distribution automation to avoid costs of manual switching and improve system reliability.
- Other noteworthy investments planned include over the forecast period include oil containment installed at substations, voltage conversions in two areas, and non-discretionary pole line relocations to accommodate County road widenings.

2.1.1 Key Elements of the DSP (5.2.1a)

key elements of the DS Plan that affect its rates proposal, especially prospective business conditions driving the size and mix of capital investments needed to achieve planning objectives

Table 2-1 presents the capital expenditures by investment category and the system operations and maintenance ("**O&M**") costs for both the historical and forecast period.

Table 2-1: Historical and forecast capital expenditures and system O&M

Category	Historical ($ '000)					Forecast ($ '000)				
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
System Access	1,751	1,039	1,263	896	1,084	1,186	1,984	1,595	1,598	2,013
System Renewal	654	987	697	487	999	1,216	1,140	2,919	2,400	2,109
System Service	586	1,377	2,819	2,944	1,743	3,100	2,829	1,276	1,556	1,402
General Plant	828	1,348	253	13,250	661	1,187	1,423	897	680	706
Net Capital Expenses	3,818	4,751	5,031	17,578	4,487	6,689	7,376	6,687	6,234	6,230
System O&M	1,761	1,787	1,814	1,805	1,986	2,246	2,245	2,246	2,246	2,246

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UNDERTAKING JT1.2

Undertaking:

TO FILE AN UPDATE TO TABLE 2.1.

Reference: Transcript dated September 12, 2017 from page 10, line 25 to page 12, line 5.

Response:

Table 2.1 from the DSP has been updated in Table JT1.2 below to reflect the error in contributions explained at the start of the technical conference.

Table JT1.2 Historical and Forecast Capital Expenditure and System O & M

	Historical					Forecast				
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Category	$ '000	$ '000	$ '000	$ '000	$ '000	$ '000	$ '000	$ '000	$ '000	$ '000
System Access	1,750	1,039	1,263	896	1,084	1,757	2,534	1,658	1,709	2,129
System Renewal	654	987	697	487	999	1,216	1,140	2,919	2,400	2,109
System Service	586	1,377	2,819	2,944	1,743	245	79	961	1,006	824
General Plant	828	1,348	253	13,250	661	1,187	1,423	897	680	706
Total	3,818	4,751	5,031	17,578	4,487	4,405	5,176	6,434	5,794	5,769
System O&M	1,761	1,787	1,814	1,805	1,986	2,246	2,245	2,246	2,246	2,246
*0 months of actual data included in 2016.										

Witness: Daryn Thompson/Michael Davison

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Table 4-1: System access material capital expenditures over the forecast period

Project	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
Base and Metering					
Base 1 (50%)	$116,880	$122,725	$134,998	$148,497	$163,346
Base 2	$34,254	$35,970	$39,567	$43,523	$47,876
- contributions	-$11,486	-$10,175	-$11,193	-$12,311	-$13,542
Base 3	$945,557	$1,087,390	$1,359,237	$1,699,046	$2,123,808
- contributions	-$945,557	-$1,087,390	-$1,359,237	-$1,699,046	-$2,123,808
Base 4	$641,820	$9,349,360	$9,349,360	$9,349,360	$9,349,360
- contributions	-$513,024	-$8,254,960	-$8,254,960	-$8,254,960	-$8,254,960
Metering	$230,000	$270,000	$250,000	$250,000	$250,000
County Road Widening					
Intersection Widening: IBR & Yonge St	$430,000				
- contributions	-$157,570				
Intersection Widening: IBR & 5th Side Road	$656,981				
- contributions	-$241,617				
Road Widening IBR between Yonge St & 20th Side Road		$745,000			
- contributions		-$273,700			
Road Widening IBR between Yonge St & 10th Side Road			$137,500		
- contributions			-$50,515		
Road Widening IBR between Hwy 400 & 10th Side Road				$117,500	
- contributions				-$43,167	
Road Widening IBR between Hwy 27 & 5th Side Road					$745,000
- contributions					-$273,700

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Table 4-2: System renewal material capital expenditures over the forecast period

Project	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
Base and Annual Reliability Programs					
Base 1 (50%)	$116,885	$122,725	$128,861	$135,304	$148,834
Substandard Transformer Rehab	$85,000	$30,000	$31,500	$33,075	
Pole Replacement Program	$126,470	$148,500	$155,925	$163,721	$171,907
Infrastructure Replacements and Betterments	$150,253	$157,766	$165,654	$173,936	$182,633
DS Oil Re-inhibit Treatment	$27,527	$57,806	$60,696	$30,000	
Padmounted Transformer & Switchgear Replacements & Painting	$43,710	$45,895	$48,190	$50,599	$53,129
Station Rehab	$104,300	$109,853	$115,346	$242,226	$115,680
Transformers	$100,000	$110,000	$121,000	$133,100	$146,410
Overhead and Underground Rebuilds					
Ewart Street Rebuild	$105,000	$50,000	$52,500	$56,700	$131,274
Reliability Rebuild – Subtransmission: Lockhart Road	$170,650	$89,933	$294,429	$203,060	$213,214
Reliability Rebuild – Subtransmission: 5th Side Road	$75,000		$550,000	$225,000	$225,000
Reliability Rebuild – Distribution: Cookstown	$50,000	$52,500	$55,125	$200,880	$156,000
Reliability Rebuild – Distribution: Lefroy	$22,500	$47,250	$49,613	$52,093	$54,697
Reliability Rebuild – Distribution: Alcona	$22,500	$47,250	$49,613	$52,093	$54,697
Reliability Rebuild – Distribution: 400 Crossing		$22,500		$75,000	
Everton Back Lot Conversion			$155,000	$135,000	
Sandy Cove - U/G cable replacement			$700,000	$250,000	$250,000
Parkview rear lot 1 phase relocate to street front			$135,000	$135,000	
Degrassi Cove U/G conversion					$150,000

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Table 4-3: System service material capital expenditures over the forecast period

Project	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
SCADA and Stations Upgrades					
Sandy Cove DS automation	$125,000				
DS Transformer Oil Containment	$45,000		$49,613	$52,093	$54,698
Distribution SCADA controlled load interrupting gang switch	$75,000	$78,750	$82,688	$86,821	$91,162
Subtransmission SCADA controlled switches			$148,500	$155,925	
SCADA PME motorized switchgear			$165,000	$173,250	$181,913
Capacitor IntelliLink to SCADA			$65,000	$65,000	
Load Growth					
Re-poling: Big Bay Point Road – Friday Harbour DS to Friday Harbour Development (North)	$362,570				
Re-poling: Lockhart Road – Huronia Road to Stroud DS	$618,932				
Re-poling: Mapleview Drive – Prince William Way to Seline Crescent	$837,831				
Re-poling: 5th Side Road – McKay Road to Salem Road	$636,000				
Re-poling: McKay Road – 5th Side Road to 10th Side Road	$400,041				
Friday Harbour DS		$2,750,000			
New Subtransmission Feeder: Line upgrade 5 SR from 5th Line to IBR			$315,000	$330,750	$347,288
Line Rebuild for new developments south of Belle Ewart DS				$219,940	$230,937
Voltage Conversion					
400 Corridor Voltage Conversion & Servicing			$250,000	$262,500	$275,625
Alcona South Voltage Conversion			$200,000	$210,000	$220,500

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4.1.4.4 *General Plant*

Table 4-4 lists the general plant material capital expenditures over the forecast period.

IT general hardware and software requirements are budgeted each year, as well as finance IT, engineering IT, and system supervisory requirements to support day to day business and operations activities.

In 2017, the replacement of a 1993 double-bucket truck will be necessary as this truck was purchased second hand from another power company in 2010 and will be at the end of its useful life. Existing vehicles have been scheduled for replacement based upon InnPower's Fleet Management Policy (see Section 3.3.1.11). In 2019, two (2) technician vehicles will need to be replaced. In 2020, one (1) half-ton truck is scheduled for replacement; and in 2021, one (1) half-ton truck and one (1) one-ton truck are scheduled for replacement.

The increase in lines work and subdivision work resulting from the load growth has created the need to add a new line crew in 2018. In 2018, a new double-bucket truck and tooling will be purchased. A new tension machine will be purchased in 2019, again to spread out the investment.

Table 4-4: General plant material capital expenditures over the forecast period

Project	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
IT Hardware and Software					
IT Hardware	$165,000	$150,000	$150,000	$150,000	$150,000
IT Software	$95,000	$95,000	$95,000	$95,000	$95,000
Finance IT	$77,000	$50,000	$60,000	$50,000	$50,000
Engineering IT	$167,325	$145,516	$119,000	$100,000	$105,000
System Supervisory	$32,400	$47,408	$49,778	$52,266	$54,880
Vehicles and Tooling					
Replacement Double Bucket Truck - 1993 Altec	$373,500				
65' Double Bucket-new crew		$400,000			
Tooling for Bucket Truck		$150,000			
Tension Machines			$200,000		
Tech Vehicle - Ford Escape 2009 & 2010 Replacement (#88 & 95)			$95,918		
Fleet vehicle replacement 2005 1/2 ton (#87)				$51,750	
Fleet vehicle replacement 2011 1/2 ton (#96)					$54,337
Fleet vehicle replacement 2011 1 ton (#101)					$60,000

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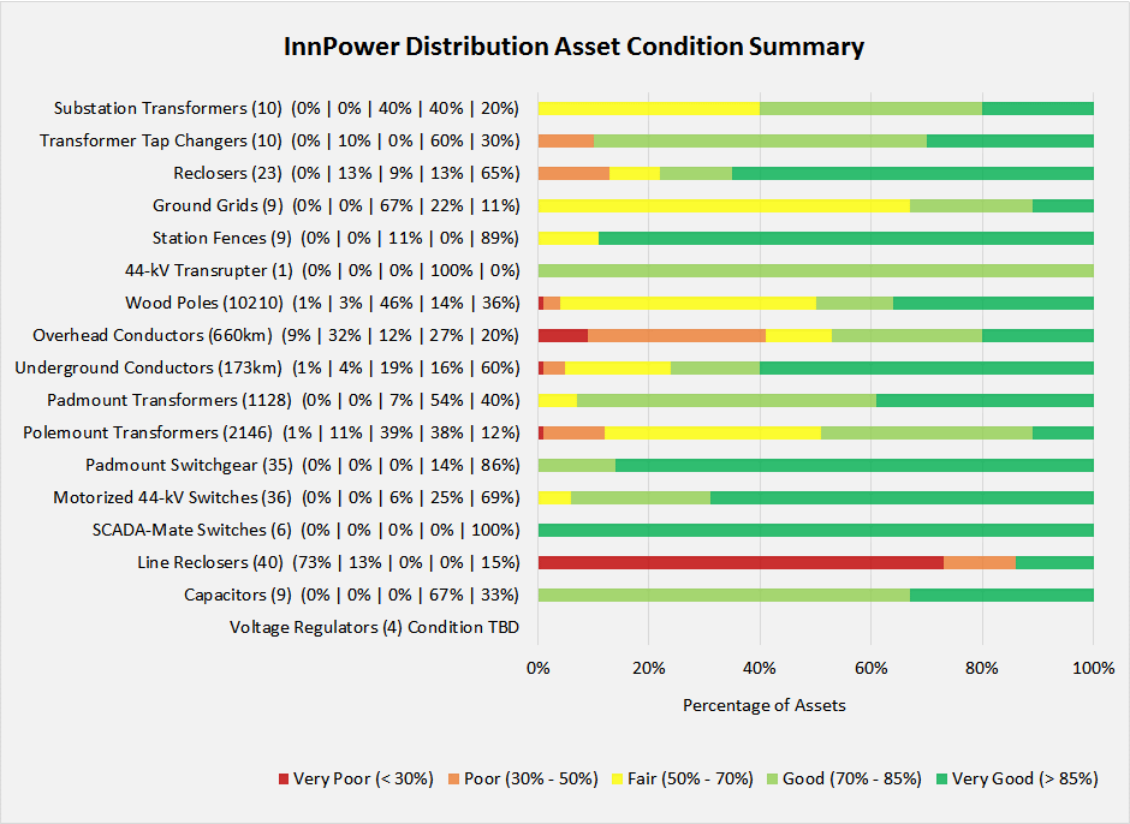
TAB 7

Table 3-4: Summary of major assets owned by InnPower

Asset Class	Asset Count
Substation Transformers	11
Substation Transformer Tap Changers	11
Substation Reclosers	25
Substation Ground Grids	10
Substation Fences	10
44-kV Transrupters	2
Distribution Line Support Poles	10,202
Overhead Primary Conductors	660 km
Underground Primary Conductors	173 km
Distribution Transformers	3,304
Distribution Devices	126
-Distribution Switchgear	35
-Motorized and SCADA-Mate Switches	42
-Line Reclosers	40
-Polemounted Capacitor Banks	9
-Voltage Regulators	4

Figure 3-5: Summary of asset condition



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2 Summary of Results

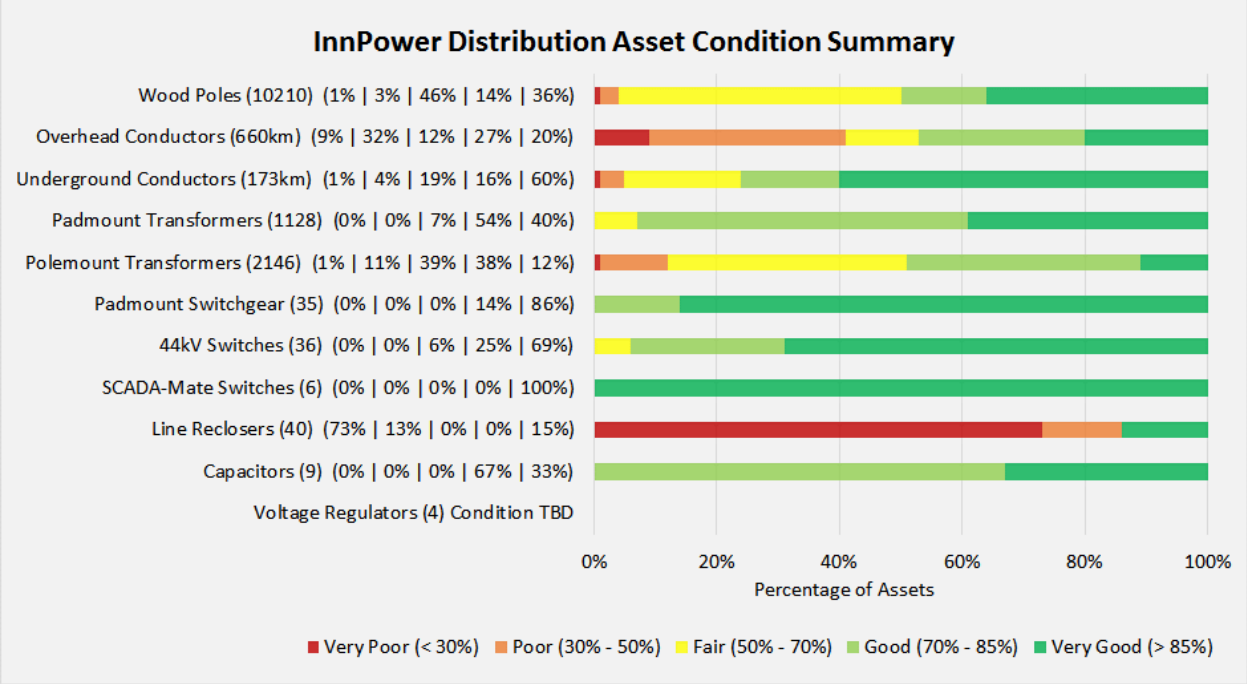

Figure 1 Distribution Asset Condition Summary

Table 1 Summary of Asset Condition Results

		Condition Results				
Asset Class	**Quantity**	**Very Good**	**Good**	**Fair**	**Poor**	**Very Poor**
		%	**%**	**%**	**%**	**%**
Distribution Wood Poles	10,210	35.91%	13.63%	46.21%	3.21%	1.04%
Overhead Conductors (km)	660	20.4%	26.7%	11.8%	31.9%	9.3%
Underground Conductors (km)	173	59.5%	16.3%	19.0%	4.1%	1.0%
Padmount Transformers	1,128	39.7%	53.7%	6.6%	0.0%	0.0%
Polemount Transformers	2,146	11.7%	37.9%	38.8%	10.7%	1.0%
Padmounted Switchgear	35	85.7%	14.3%	0.0%	0.0%	0.0%
Motorized 44-kV Switches	36	69.4%	25.0%	5.6%	0.0%	0.0%
SCADA-Mate Switches	6	100.0%	0.0%	0.0%	0.0%	0.0%
Line Reclosers	40	15.0%	0.0%	0.0%	12.5%	72.5%
Capacitors	9	33.3%	66.7%	0.0%	0.0%	0.0%
Voltage Regulators	4	Condition to be determined				

Table 2 Asset Replacement Plan 2017-2021

Asset	ACA Figure Reference	2017	2018	2019	2020	2021
Distribution Wood Poles	Figure 6	434	304	304	304	304
Overhead Conductors (km)	Figure 8	22.75	22.75	22.75	22.75	22.75
Underground Conductors (km)	Figure 10	1.06	1.06	1.06	1.06	1.06
Padmounted Transformers	Figure 12	9	9	9	8	8
Polemounted Transformers	Figure 12	50	50	50	50	50
Padmounted Switchgear	Figure 14	0	0	0	0	0
Motorized 44-kV Switches	Figure 14	0	0	0	0	0
SCADA-Mate Switches	Figure 14	0	0	0	0	0
Line Reclosers	Figure 14	11	6	6	6	6
Capacitors	Figure 14	0	0	0	0	0
Voltage Regulators	Condition TBD	0	0	0	0	0

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3 Asset Condition Assessment Methodology

3.1 List of Distribution Assets

- Overhead Pole Line Assets
  - Wood Poles
  - Overhead Conductors
- Underground Distribution System
  - Underground Cables
- Distribution Transformers
  - Padmount Transformers
  - Polemount Transformers
- Distribution Devices
  - Padmount Switchgear
  - Motorized 44kV Switches
  - SCADA-Mate Switches
  - Line Reclosers
  - Capacitors
  - Voltage Regulators

3.2 Methodology

The Asset Condition Assessment methodology was applied for different categories of fixed assets that are employed on InnPower's distribution system. Adoption of this methodology would require periodic asset inspections and recording of their condition to identify the assets most at risk, requiring focused investments into risk mitigation.

Computing the Health Index for distribution assets requires developing end-of-life criteria for various components associated with each individual asset type. Each criterion represents a factor that is critical in determining the component's condition relative to potential failure. These components and tests shown in the tables are weighted based on their importance in determining the assets end-of-life.

For the purpose of scoring the condition assessment, the letter condition ratings are assigned the following numbers shown as "factors":

- A = 4
- B = 3
- C = 2
- D = 1
- E = 0

These condition rating numbers (i.e., A = 4, B = 3, etc.) are multiplied by the assigned weights to compute weighted scores for each component and test. The weighted scores are totaled for each asset.

Totaled scores are used in calculating final Health Indices for each asset. For each component, the Health Index calculation involves dividing its total condition score by its maximum condition score, then multiplying by 100. This step normalizes scores by producing a number from 0-100 for each asset. For example, a transformer in perfect condition would have a Health Index of 100 while a completely degraded transformer would have a Health Index of 0.

3.2.1 Overhead Pole Line Assets

Condition assessment methodologies for the following components employed on overhead lines are discussed below:

- Wood Poles
- Overhead Conductors

3.2.1.1 Wood Poles

As wood is a natural material, its degradation processes are different from other assets on distribution systems. The most critical degradation process for wood poles involves biological and environmental mechanisms such as fungal decay, wildlife damage and effects of weather. Fungi attack both external surfaces and the internal heartwood of wood poles. The process of fungal decay requires the presence of fungus spores in the presence of water and oxygen. For this reason, the area of the pole most susceptible to fungal decay is at and around the ground line, although pole rot is also known to begin at the top of the pole. To prevent the decay of wood poles, utilities treat them with preservatives before installation. Wood preservatives have two basic functions:

- keep out moisture that supports fungi by sealing the surfaces; and
- kill off the fungal spores.

Most power companies install only fully treated wood poles these days, however this was not always the case and the lines constructed over 40 years ago may not have been constructed with fully treated poles but only butt treated poles may have been used. Typically, fully treated poles are expected to provide a longer service life in relation to butt treated poles.

The following factors represent some of the more critical factors affecting wood pole strength as poles age:

- Original type and class of wood pole;
- Original defects in wood (e.g. knots, cracks or rot);
- Rate of decay in service life which depends on type of treatment and environmental conditions;
- Pole damage by woodpeckers, insects, and other wildlife; and
- Wood burns.

Several types of damage can also deform bolt holes in poles. Generally, such deformities do not present immediate problems. However, in some cases deformed holes can result in both failure of the structure and failure of other components attached to the pole. Bolts also can become loose, elongated, bent, cracked, sheared/broken and lost.

designs to incorporate metal foil barriers and water migration control have further reduced the rate of deterioration due to treeing.

Distribution underground cables are one of the more challenging assets on electricity systems from a condition assessment and asset management viewpoint. Although a number of test techniques, such as partial discharge (PD) testing have become available over the recent years, it is still very difficult and expensive to obtain accurate condition information for buried cables. The standard approach to managing cable systems has been monitoring of cable failure rates and the impacts of in-service failures on reliability and operating costs and when the costs associated with in-service failures, including the cost of repeated emergency repairs and customer outage costs become higher than the annualized cost of cable replacement, the cables are replaced.

3.2.2.2 Cable Splices and Terminations

Cable splices and terminations are subject to the same type of insulation degradation and aging as the cables themselves. Improperly made splices may be susceptible to moisture ingress and as a result may experience higher failure rates compared to cables.

Computing the Health Index for an underground cable section requires developing end-of-life criteria for its various components. The condition assessment process includes scoring based on multiple parameter criteria as described below:

Table 17 Underground Cables – Age Condition Grading

Condition Rating	Age
A	0 to 10 years
B	10 to 20 years
C	20 to 30 years
D	30 to 40 years
E	> 40 years

In order to tailor to the format of InnPower's asset data, the condition for age rating is slightly modified, as specified in the table below.

Table 18 Underground Cables – (InnPower Adjusted) Age Condition Grading

Condition Rating	Age
A	0 to 15 years
B	16 to 25 years
C	26 to 35 years
D	36 to 45 years
E	> 45 years

Table 19 Underground Cables – Design Related Condition Grading

Condition Rating	Type of Design
A	PILC Cables
B	Tree Retardant XLPE
E	Earlier vintages of XLPE

Table 20 Underground Cables – Loading Condition Grading

Condition Rating	Loading Condition
A	Circuit loaded less than 25% of its rating
B	Circuit loading of 25% to 50% of its rating
C	Circuit loading of 50% to 75% of its rating
D	Circuit loading of 75% to 100% of its rating
E	Circuit loading of greater than 100% of its rating

Table 21 Underground Cables – Failure Rate Condition Grading

Condition Rating	Failure Rates
A	Less than 0.5 Failures per 10 km in the last 5 years
B	0.5 to 1.0 Failures per 10 km in the last 5 years
C	1.0 to 1.5 Failures per 10 km in the last 5 years
D	1.5 to 2.5 Failures per 10 km in the last 5 years
E	2.5 or more Failures per 10 km in the last 5 years

Table 22 Underground Cables – Splice or Stress Cone Condition Grading

Condition Rating	Splice or Stress Cone Condition
A	Splice or Stress Cone appears in good condition, no indication of moisture ingress
C	Normal wear, no apparent damage, no evidence of moisture ingress
E	Poor condition, potential moisture ingress or IR indicates hot spot

Table 23 provides a summarized health index formulation for underground cables:

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Table 23 Underground Cables – Health Index

Asset Class	Condition	Weight	Ranking	Max Grade
Underground Cables	Age of Cable Circuit	3	A,B,C,D,E	12
	Type/Design of Cable	3	A,B,C,D,E	12
	Loading of Cable Circuit	5	A,B,C,D,E	20
	Historic Failure rates	8	A,B,C,D,E	32
	Visual inspection of splices or stress cones	1	A,B,C,D,E	4
Total Score				**80**

3.2.3 Distribution Transformers

Three main types of distribution transformers are employed on InnPower's distribution system:

- Pole mounted transformer
- Pad mounted transformer
- Platform transformer

Aside from the different design and construction standards employed in their manufacture and installation, each type of transformer serves the same functions and the same asset management strategy can be employed for these assets as described below:

Distribution transformers step down to the medium voltage distribution power to final utilization voltage of either: 120/240V, 120/208V, 240/416 V or 347/600 V. Both single phase and three phase transformers are in use. In pole top applications, three single phase transformers are commonly employed to create a three phase bank, however for pad mounted applications, three phase transformers are used for three phase applications.

The key components of a distribution transformer are:

- primary and secondary coils, made of copper or aluminium conductors
- magnetic core made of iron laminations
- insulation system, commonly consisting of paper and mineral oil
- sealed transformer tank
- primary and secondary bushings or bushing wells to accommodate elbows
- auxiliary devices

The most critical component in transformer aging consideration is the insulation system, consisting of mineral oil and paper. Transformer oil consists of hydrocarbon compounds that degrade with time due to oxidation, resulting in formation of moisture, organic acids and sludge. The oil oxidation rate is a function of operating temperature. Increased acidity and moisture content in insulating oil causes accelerated degradation of insulation paper. Formation of sludge adversely impacts the cooling efficiency of the transformer, resulting in higher operating temperatures and further increasing the rate of oxidation of both the oil and the paper. Distribution transformers commonly fail when the age weakened insulation system is subjected to a voltage surge during lightning.

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TAB 8

4.1.1.2 HI Calculation

InnPower tests a random sample (approximately one sixth of the total number) of wood poles to determine when the poles should be retested or require replacement. Over the past three years, 5321 poles were tested and rated. Recently, InnPower launched an additional pole inspection program to effectively manage pole line assets. Last year, approximately 470 wood poles were selected from 6 different areas for inspection. To calculate the health index for poles, visual inspection data were extracted from both the test report of 5321 poles as well as the inspection results of 470 poles. Data correlated to the remaining parameters in the health index formulation came from the test report.

4.1.1.3 Results

The health index score for the sampled 5321 poles is illustrated in **Figure 4**. It is observed that the overall pole condition is much better than what would be expected from the age profile. This is mainly due to the fact that a great number of old poles, that have reached more than 45 years of service, received "fair" rating. It should be noted that these poles, constituting over 85% of the fair poles, are expected to significantly deteriorate to poor condition or worse if the corresponding remaining strength drops below 80% or they start to reveal severe damage on the civil structure. Poles under this scenario are illustrated in a red box in **Figure 5**. Thus, these poles would require more frequent diagnostic testing and possible remedial work or replacement depending on criticality. Based on the health index score for the 5321 poles, the health index score for all wood poles is projected and presented in **Figure 6**.

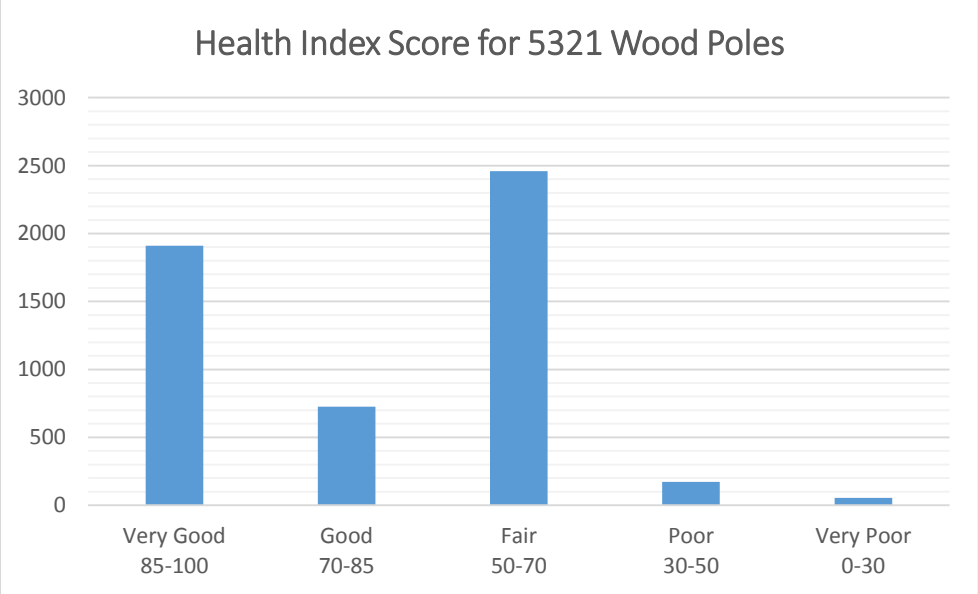

Figure 4 Wood Poles Health Index Score for Poles Tested in 2013-2015

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4.1.2 Overhead Conductors

4.1.2.1 Demographics

The overhead distribution system owned by InnPower employs approximately 660 kilometers of overhead distribution lines. The overall age profile for primary conductors employed on all voltage levels is presented by phase in **Figure 7**. Approximately 41% of the conductors in service have reached a service age of greater than 45 years.

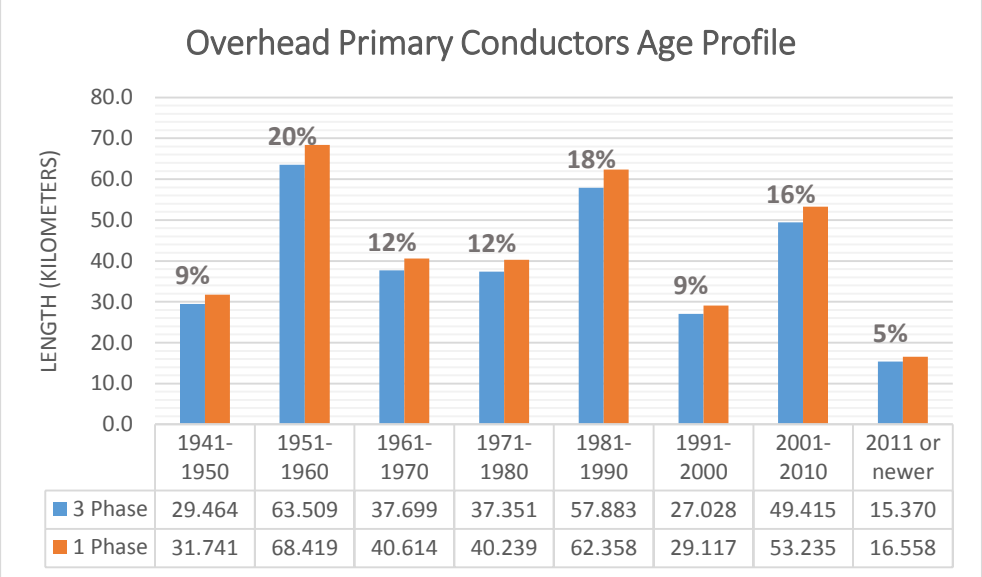

Figure 7 Age Profile for All Overhead Primary Conductors

4.1.2.2 HI Calculation

Due to data availability, the health index score for overhead primary conductors were calculated using age information only. Also, the condition for age rating is slightly modified to tailor to the format of InnPower's asset data, as specified in **Table 15**.

4.1.2.3 Results

The overall health index for all overhead primary conductors is summarized in **Figure 8**. It is determined that all the conductors in poor and very poor condition constitute 41% of the entire population. 20.4% of the lines are in very good condition and 26.7% are in good condition.

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4.2.1.2 HI Calculation

Due to data availability, the health index score for underground primary conductors were calculated using age information only. Also, the condition for age rating is slightly modified to tailor to the format of InnPower's asset data, as specified in **Table 18**.

4.2.1.3 Results

The overall health index for all underground primary conductors is summarized in **Figure 10**. It is determined that all the conductors in poor and very poor condition only constitute 5% of the entire population. 59.5% of the cables are in very good condition and 16.3% are in good condition.

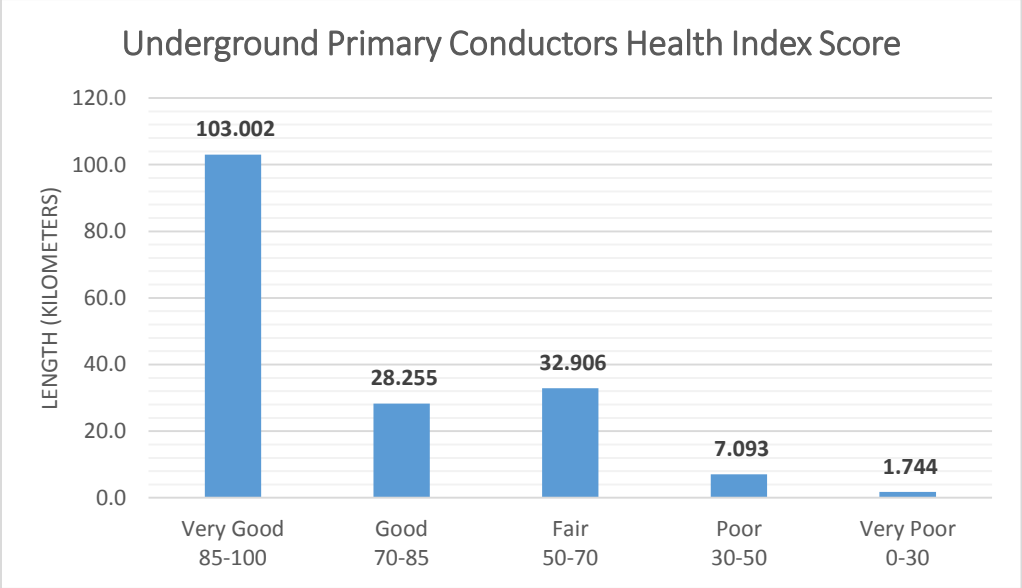

Figure 10 Underground Primary Conductors Health Index Score

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Unknown - 5kVA	120/240V	2	0	0	0	0	2	0	0
Unknown - 10kVA	120/240V	4	0	0	3	1	0	0	0
Unknown - 15kVA	120/240V	1	0	0	0	0	1	0	0
Unknown - 25kVA	120/240V	9	0	0	3	3	3	0	0
Unknown - 37.5kVA	120/240V	1	0	0	0	0	1	0	0
Unknown - 50kVA	120/240V	3	0	0	1	2	0	0	0
Unknown - 75kVA	120/240V	2	0	1	0	1	0	0	0
Unknown - 100kVA	120/240V	4	0	0	4	0	0	0	0
Unknown - 500kVA	600V	1	1	0	0	0	0	0	0
Subtotal (Unknown)		**27**	**1**	**1**	**11**	**7**	**7**	**0**	**0**
Total		**3304**	**575**	**550**	**986**	**579**	**423**	**121**	**70**

4.3.2 HI Calculation

For polemounted transformers, health index for a sample of transformers was formulated using visual inspection data extracted from InnPower`s pole inspection forms. Then, the health index for all transformers was extrapolated from the sample`s results.

For padmounted transformers, health index was first computed for a relatively large sample based on age demographics and condition data, i.e. peak loading and IR scan results. Condition of the entire population was then projected using the health index for the sampled padmounted transformers.

4.3.3 Results

The health index score for both mounting types of transformers is summarized in **Figure 12**.

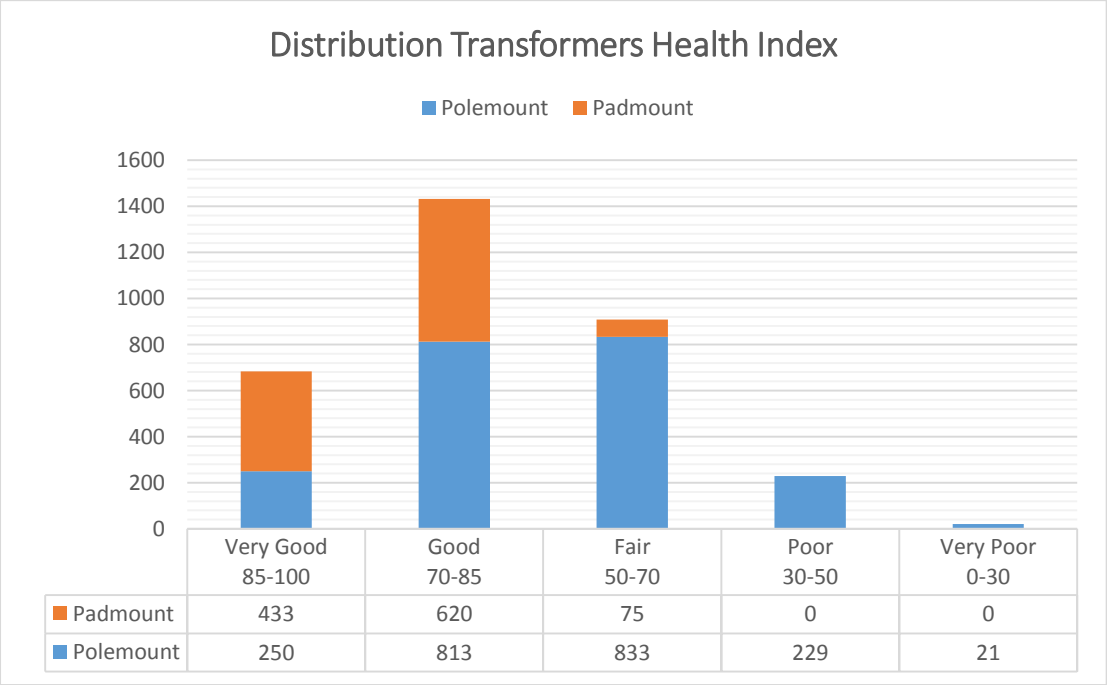

Figure 12 Distribution Transformers Health Index Score

TAB 9

3 Asset Condition Assessment

3.1 Summary Table of Condition Assessment

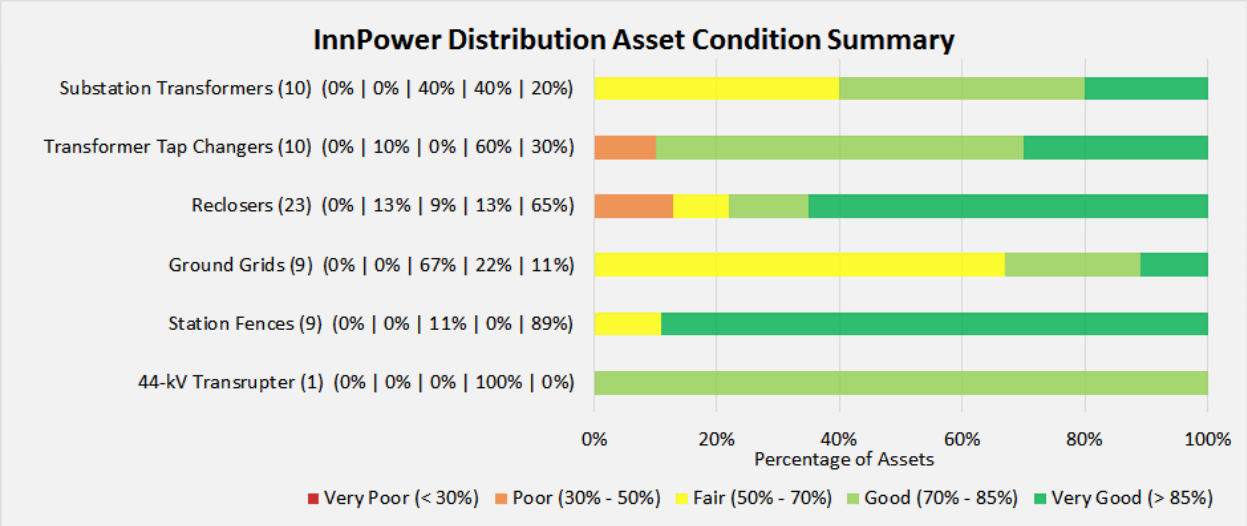

Figure 1 Station Asset Condition Summary

The table below correlates the HI score with typical forecast period for asset replacement:

Table 1 Replacement Planning Based on Asset Condition

Risk Assessment Philosophy		
Very Poor (< 30%)	**Poor (30% - 50%)**	**Fair (50% - 70%)**
Intervention recommended	Intervention recommended over the next 2-5 years	Plan for intervention over the next 5-10 years

3.2 List of Station Assets

The Tier 1 (major) assets are power transformers, transformer tap changers, reclosers, fences, ground grids, and 44-kV Transrupters. The Tier 2 (minor) assets include switches, fuses, station service transformers, and lightning arrestors.

3.3 Asset Assessment

3.3.1 Methodology

The Asset Condition Assessment methodology was applied for different categories of fixed assets that are employed in InnPower's distribution stations. Only 9 of the 10 distribution stations owned by InnPower were assessed, since Belle Ewart DS was constructed at the end of 2014 and was therefore not assessed. Adoption of this methodology would require periodic asset inspections and recording of their condition to identify the assets most at risk, requiring focused investments into risk mitigation.

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TAB 10

Ontario Energy Board
Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2016-0105

THUNDER BAY HYDRO ELECTRICITY DISTRIBUTION INC.

Application for electricity distribution rates beginning May 1, 2017

BEFORE: Allison Duff
Presiding Member

Paul Pastirik
Member

September 21, 2017

Table 5: Data Assessment by Asset Category

Asset Category		Average DAI	Data Gap
Station Transformers	All	93%	Low-Medium
	4 kV	92%	
	12 kV	93%	
Breakers	Breakers	61%	Low-Medium
Wood Poles	All	100%	Medium-High
	4 kV	100%	
	25 kV	100%	
Distribution Transformers	Pad Mounted Transformers	85%	Low-Medium
	Pole Mounted Transformers	100%	Medium-High
	Vault Transformers	100%	Medium-High
OH Switches	All	42%	High
	4kV In-Line	46%	
	4kV Manual Air Break	29%	
	12 and 25kV In-Line	37%	
	12 and 25kV Manual Air Break	40%	
	12 and 25kV Motorized Load Break	26%	
Underground Switches	25kV Underground Load Break Switches	38%	High
Underground Cables	All	48%	High
	4kV	65%	
	12 and 25kV	47%	

Thunder Bay Hydro also filed its prioritized list of material capital projects and programs. The projects and programs often combine various asset categories[7]:

[7] Application, Exhibit 2, *Distribution System Plan,* p. 143

2017 without cancelling the project entirely. Thunder Bay Hydro also emphasized the inter-dependencies of its capital expenditure plans and the expertise of its electrical engineering staff. Thunder Bay Hydro questioned the expertise of intervenors to recommend that the OEB reduce its proposed budget and prioritized capital projects.

Findings

The OEB disagrees with Thunder Bay Hydro's reply submission that intervenors, or those without electrical engineering expertise, are not qualified to comment on its capital budget. Thunder Bay Hydro is a natural monopoly. The intervenors in this proceeding represent customer groups that Thunder Bay Hydro serves - customers that will pay for the approved capital expenditures.

The OEB wants to hear from customers, especially regarding significant increases such as the proposed capital budget increase of 11% or $1.3 million from 2016 to 2017. Intervenors were particularly concerned with the proposed increase of $1.2 million in the System Renewal budget from 2016 to 2017 and the cumulative $2.1 million or 29% increase from 2016 to 2021. Again, the OEB was unable to rely on the customer survey responses as it was unable to reconcile these 11% or 29% increases with the 3.5% System Renewal increase, year-over-year for the next five years, indicated in the Decision Partners survey question[8].

Although Thunder Bay Hydro reduced its proposed System Renewal budget by $0.4 million to $8.0 million in its reply submission, this reduction was less than the reductions recommended by intervenors and OEB staff.

The OEB regards 2017 as an important year, as Thunder Bay Hydro indicated that its System Renewal budget was influenced by a change in investment strategy prompted by the ACA Report. The OEB supports Thunder Bay Hydro's move toward a more condition based asset management strategy and enhanced outage reporting.

This is the first five-year DSP that Thunder Bay Hydro has filed and it was driven by the ACA Report. It is a good start. However, the OEB is concerned with the data gaps in the ACA Report and the inherent risk of increased investment without better information. Three asset categories have high data gaps or low data availability indicators. Underground switches, underground cables and overhead switches all have average availability indicators of less than 50%. Yet the proposed project budget for underground replacements is $376,868 and for transformer and switch replacements is

[8] Exhibit 1, Mental Models DSP Survey, Decision Partners, page 25

$756,484. Asset categories with medium-high data gaps were wood poles, pole-mounted and vault distribution transformers.

Thunder Bay Hydro acknowledges these data gaps and plans to acquire more complete and reliable data where economically feasible. Thunder Bay Hydro characterized its investment strategy as "conservative" as it plans a shift in expenditures over a three-year period to align with the levelized Flagged for Action plan suggested by Kinectrics.

The OEB does not find the proposed three-year alignment period to be conservative. It is expensive. It is expensive because Thunder Bay Hydro wants to respond to the ACA Report and replace assets in poor condition, yet is unable to sufficiently decrease expenditures in other asset categories or defer its work-in-progress on assets in better condition that previously assumed.

The OEB finds that the three-year adjustment period should be extended further. An extended alignment period would allow for data acquisition in outage causes and asset condition to inform investment decisions. The OEB agrees with VECC's submission that an increase in capital spending of this magnitude, with a consequent increase in customer rates, requires robust and accurate asset information.

Further, the evidence suggests that reliability is not an issue. Thunder Bay Hydro's reliability has been improving overall. The OEB found no evidence in the application of an imminent risk of significant service disruption associated with asset condition. The OEB agrees with SEC's and OEB staff's submissions that Thunder Bay Hydro has not demonstrated the customer benefit of the significant proposed increase in capital expenditures in the System Renewal category.

Mr. Tsimberg testified that Thunder Bay Hydro's prioritization process could be improved to be less subjective[9]. The OEB recommends Thunder Bay Hydro continue to review its 2017 project prioritization beyond the $0.4 million reduction identified in the reply submission. For example, Thunder Bay Hydro submitted that its lowest priority project, Grid Modernization, would be eliminated in 2017 if the proposed capital budget was not approved. The OEB questions Thunder Bay Hydro's weighting of customer preferences when this project, added in response to customer preferences to improve service reliability for small business and large-use customers, is prioritized last.

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[9] Tr. Vol. 3, p. 127

infrastructure, I would be right in saying that underground is a significantly costly infrastructure to put in than overhead.

Perhaps somebody at InnPower can tell us again sort of a rule of thumb for you, per kilometre, what's the incremental type of spend that underground incurs versus overhead?

(Witnesses confer).

MR. DAVISON: I agree, underground is more expensive than overhead typically. But to give an accurate number, you are best to put the numbers together to figure that out. But if typically, it is a five times the cost expense.

MR. GARNER: Okay, thank you. That's -- I'm not looking for any scientific exactitude. I want to get a sense of what the difference is.

I don't know this Degrassi Cove, I know this sort of area. Is this the same area that serves a resort and marina type of thing; is that the area that sits along the lake?

MR. BROWN: No, Degrassi Cove is along Lake Simcoe. It's at the south end.

MR. GARNER: Okay. So --

MR. BROWN: You are referencing Friday Harbour Resort, which is --

MR. GARNER: Right.

MR. BROWN: -- in the north end.

MR. GARNER: That's the north end --

MR. BROWN: Correct.

MR. GARNER: -- okay, so can you -- and I don't have a map in front of me. What's -- can you give us some sense of what this community looks like? Is this a number of houses along the lake? What is Degrassi Cove that needs this underground infrastructure?

MR. BROWN: I could shed some light on that. Degrassi Cove is -- it's not really a community; it is a section. I'd almost want to say like a private lane area right along the lake, very heavily treed, and historically we have spent a lot of time rolling trucks to there when we have storms.

MR. GARNER: Describe to me a typical residence in this area.

MR. BROWN: I can't say to all of the residents in there. Some would be cottagers. Like, it is kind of along the lake cottage-type area, and some would be around residential customers, but all residential.

MR. GARNER: So it is basically residential homes, many of them sitting along the lake in cottage areas, sort of.

MR. BROWN: That's correct.

MR. GARNER: And is this the only area that you have a heavily-wooded section inside of InnPower that you've been looking at that needs underground?

MR. DAVISON: This is the only one currently that we have under review, but we are continually monitoring our maintenance on the system, and if further developments need

to be done.

MR. GARNER: Okay, thank you.

How many homes --

MR. SHEPHERD: Can I ask a follow-up there?

MR. GARNER: Well --

MR. VELLONE: I may jump in as well --

MR. SHEPHERD: Okay. Sorry. Go ahead.

MR. VELLONE: -- just briefly to clarify context.

I hear a lot of questions about this, and I do see the expenditure planned for '20, '21; the witnesses can confirm this if they like, but my understanding is there is no undergrounding work being done from 2007, 2018, 2019, and 2020 for this area.

MR. DAVISON: That is correct.

MR. VELLONE: So I am just pushing on relevance a little bit just --

MR. GARNER: Yeah, point --

MR. VELLONE: -- so we don't take too much time on --

MR. GARNER: -- point taken. Yeah, no, and I -- point taken. So I'll just --

MR. SHEPHERD: Sorry, is the DSP filed in this proceeding?

MR. VELLONE: We will entertain questions. I just want to keep it kind of scoped --

MR. GARNER: I understand, Mr. Vellone. I only have one more -- maybe Mr. Shepherd has some more and you can take up that argument with him.

My only last question on this would be: How many

residences are going to get served by this plan if it ever comes to fruition?

MR. SHEPHERD: I can assist. I'm looking at it on Google. It's 13.

MR. GARNER: Well, and if you could -- you know, if that's the -- roughly the number, if it's 13 or 14, I'm not looking for any sort of exactitude.

MR. SHEPHERD: Can you confirm that that's right?

MR. VELLONE: Mr. Brown, are you able to speak to that? Or if you can't, maybe -- does this merit an undertaking? They might not know off the top of their head.

MR. SHEPHERD: I'm looking at it.

MR. GARNER: If they don't have any --

MR. BROWN: I cannot say for certain how many customers this would affect. We could find out that information if it's required, but at this time I don't know.

MR. GARNER: Let me think upon that for a minute. Does anybody on this panel know anybody who lives in that cove? So it wouldn't be easy to find out from someone you know.

MR. BROWN: It's testing my memory. I have been with the company for a long time, and in customer service. I do believe I know residents in Degrassi Cove area. That's just from --

MR. GARNER: But you just don't remember how many places along that thing? Mr. Shepherd is saying there is

roughly 13 sort of in that area.

MR. BROWN: Again, I can't -- I'm not privy to the sections of line that engineering are planning to replace in there. I'm speaking from a customer service and an outage perspective and also the geographical area.

MR. GARNER: Right. Thank you. I'm -- I understand what Mr. Vellone said, and I have no need for an undertaking. I'll let Mr. Shepherd decide if he does. Thank you.

MR. SHEPHERD: Can I do my follow-up?

MR. GARNER: Yeah, absolutely.

MR. SHEPHERD: So I'm looking at it. This looks like they are very large houses right on the lake; is that right?

MR. BROWN: I don't know. I've not been down there myself.

MR. SHEPHERD: Well, so, this is a project in your DSP. Has anybody actually seen this street? Because it looks like where the rich people live to me, sorry.

MR. VELLONE: So one of the challenges we are grappling with is that the vice-president of engineering was unable to join us as a witness to speak to the DSP, so we have his manager here to speak. His manager did start his position in March of this year. So what he's done is reviewed the materials and familiarized himself with it as best he can, but he may not --

MR. SHEPHERD: Well, hasn't Mr. Davison been with the company for a long time?

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MR. SHEPHERD: Well, hasn't Mr. Davison been with the company for a long time?

MR. VELLONE: Michael, when did you start, Mr. Davison?

MR. DAVISON: I started March of 2017.

MR. SHEPHERD: With the company?

MR. DAVISON: That's correct.

MR. SHEPHERD: Oh, sorry.

MR. DAVISON: So I've only been here for six months --

MR. SHEPHERD: Oh, sorry, I --

MR. DAVISON: -- to clarify.

MR. SHEPHERD: -- I thought you had been there ten years or something.

MR. VELLONE: So we are doing the best we can in the circumstances.

MR. SHEPHERD: The reason why I ask this is because, following up on Mr. Garner's questions, these look like large houses to me. It is one street right beside the marina and right on the lake.

And I am wondering whether, for example, are any of the exec -- do any of the executives of Innisfil or InnServices live there? Do any of the town councillors live there?

MR. MALCOLM: None of the InnPower executive live in this Degrassi Cove. I am not aware of where the councillors of the Town of Innisfil live.

MR. SHEPHERD: All right. There are a number of areas in your service area that need attention, and I am trying to figure out whether this street of rich people needs attention because it's a street of rich people. Can you

help me with that?

MR. BROWN: I can try and help with that. Again, I don't do the engineering piece of the planning and engineering.

What I can speak to is that over time this area has been addressed for outages on several occasions. We can almost bank on when bad weather comes, due to the trees in this area, that we are rolling trucks out to this area.

Big Bay Point is another area as well that is -- the heavily-treed areas we are rolling trucks out to. I can only interpret that engineering would want to put this at underground to save the outages and rollouts and reliability.

MR. SHEPHERD: And the local residents are unwilling to accept more aggressive tree-trimming to solve the problem. I think you've said that; is that right?

MR. BROWN: I believe that's our response, yes.

MR. SHEPHERD: Okay. Thank you.

MR. GARNER: Thank you. I'm going to move on from the lovely Degrassi Cove and on to something else. I think my next question actually is in Exhibit 4, so moving on to OM&A, and I just want -- excuse me, I just want -- 4 Staff 46 is where I was, and this is about the loss carry-forwards on the returns of the utility. And I guess I have two questions. And one is I think clearly answered in the interrogatory, but just to be totally clear, there is no impact for this test year of any loss carry-forwards, is there? This appears to say everything was finished and