

EXHIBIT 6 - REVENUE DEFICIENCY/SUFFICIENCY
EB-2014-0080

Table of Contents

1	I.	Calculation of Revenue Requirement	2
		Ex.6/Tab 1/Sch.1 - Determination of Net Utility Income	
		Ex.6/Tab 1/Sch.2 - Proposed Revenue Requirement	
		Ex.6/Tab 1/Sch.3 - Statement of Rate Base	
		Ex.6/Tab 1/Sch.4 - Actual Utility Return on Rate Base;	
		Ex.6/Tab 1/Sch.5 - Requested and Indicated Rate of Return;	
		Ex.6/Tab 1/Sch.6 - Utility Income at Proposed Revenue Requirement	
		Ex.6/Tab 1/Sch.7 - Revenue Requirement Trend	
2	II.	Deficiency or Surplus	8
		Ex.6/Tab 2/Sch.1 - Calculation of Revenue Deficiency or Surplus	
		Ex.6/Tab 2/Sch.2 - Causes of Revenue Deficiency or Surplus	
		Ex.6/Tab 2/Sch.3 - Impact of implementation of MIFRS on Revenue Deficiency or Surplus	

1 Calculation of Revenue Requirement

2 Ex.6/Tab 1/Sch.1 - Determination of Net Utility Income

3 The current rates are based on Board approved rates effective May 1, 2013 through an IRM
4 proceeding (EB-2013-0135). Existing revenues based on existing Board approved rates, which
5 are used in calculating utility income, are comprised of distribution revenue and exclude pass-
6 thru charges such as LV Charges and Transmission Charges.

7 Details on existing and projected distribution revenue at existing rates are presented in Exhibit
8 3, Tab 1 and replicated below. Other revenues are presented in Ex.3/Tab 4 shows distribution
9 revenues at Bridge and Test Year volumes. Table 6.1 below shows distribution revenues at
10 proposed 2015 volumes.

Table 6.1 - Distribution Revenues at Current Rates – 2015 Volumes

Test Year

Customer Class Name	Test Year Projected Revenue from Existing Variable Charges							
	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance \$'s	Net Variable Revenue
Residential	\$0.0160	kWh	24,257,123	388,114	(\$0.45)		0	388,114
General Service < 50 kW	\$0.0067	kWh	10,891,433	72,973	(\$0.45)		0	72,973
General Service > 50 to 1499 kW	\$2.3213	kW	63,249	146,821	(\$0.45)	17,580	-7,911	138,909
Intermediate	\$1.0215	kW	60,563	61,865	(\$0.45)	61,760	-27,792	34,073
Sentinel Lighting	\$3.1198	kW	50	155	(\$0.45)		0	155
Street Lighting	\$2.2937	kW	4,451	10,209	(\$0.45)		0	10,209
Total Variable Revenue			35,276,869	680,136		79,340	-35,703	644,433

Test Year

Customer Class Name	Test Year Projected Revenue from Existing Fixed Charges							
	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential	\$9.1900	2,273	250,673	388,114	638,787	39.24%	60.76%	56.63%
General Service < 50 kW	\$19.7600	467	110,798	72,973	183,771	60.29%	39.71%	16.29%
General Service > 50 to 1499 kW	\$54.8200	40	26,241	138,909	165,150	15.89%	84.11%	14.64%
Intermediate	\$223.0100	2	4,891	34,073	38,964	12.55%	87.45%	3.45%
Sentinel Lighting	\$7.0900	13	1,106	155	1,261	87.70%	12.30%	0.11%
Street Lighting	\$7.8800	951	89,933	10,209	100,142	89.81%	10.19%	8.88%
Total Fixed Revenue		3,746	483,643	644,433	1,128,076			

Variance Analysis

Customer Class Name	Bridge Year to Test Year Variance			
	2014	2015	Variance	% change
Residential	\$650,065.43	\$638,787.29	-11,278	-1.73%
General Service < 50 kW	\$184,063.27	\$183,771.01	-292	-0.16%
General Service > 50 to 1499 kW	\$170,775.04	\$165,150.40	-5,625	-3.29%
Intermediate	\$40,768.48	\$38,963.81	-1,805	-4.43%
Sentinel Lighting	\$1,457.15	\$1,261.19	-196	-13.45%
Street Lighting	\$115,489.40	\$100,142.25	-15,347	-13.29%
Total Fixed Revenue	1,162,619	1,128,076	-34,543	-2.97%

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- 2 Ex.6/Tab 1/Sch.2 at the next section provide details and derivation of the revenue requirement
- 3 and its particulars.

4

Ex.6/Tab 1/Sch.2 - Proposed Revenue Requirement

HPDC's revenue requirement represents the amount of money that a utility must receive from its customers to cover its costs, operating expenses, taxes, interest paid on debts owed to investors and, if applicable, a deemed return (profit).

The proposed Base Revenue Requirement, representing the revenue to be recovered from base distribution rates, is equal to the total Service Revenue Requirement, less Revenue Offsets derived from other revenue sources in 2014. Table 6.2 below presents HDPCL's proposed 2015 Revenue Requirement

Table 6.2 - Test Year Revenue Requirement

Particular	2015
OM&A Expenses	\$1,087,287
Amortization Expense	\$136,509
Total Distribution Expenses	\$1,223,796
Regulated Return On Capital	\$178,737
Grossed up PILs	\$3,329
Service Revenue Requirement	\$1,405,862
Less: Revenue Offsets	-\$218,986
Base Revenue Requirement	\$1,186,876

Ex.6/Tab 1/Sch.3 - Statement of Rate Base

Table 6.3 - Statement of Rate Base

Debt					
Long-term Debt	56.00%	\$1,545,574	4.77%	\$73,724	
Short-term Debt	4.00%	\$110,398	2.16%	\$2,385	
Total Debt	60.0%	\$1,655,972	4.60%	\$76,108	
Equity					
Common Equity	40.00%	\$1,103,981	9.30%	\$102,670	
Preferred Shares		\$ -		\$ -	
Total Equity	40.0%	\$1,103,981	9.30%	\$102,670	
Total	100.0%	\$2,759,953	6.48%	\$178,779	

Ex.6/Tab 1/Sch.4 - Actual Utility Return on Rate Base;

Table 6.4 - Return on Rate Base

Return	
Deemed Interest Expense	\$76,108
Return on Deemed Equity	\$102,670
Total	\$178,779

Ex.6/Tab 1/Sch.5 - Requested and Indicated Rate of Return;

The requested rate of return is **6.48%** as per the OEB prescribed Cost of Capital Parameters.
The Indicated Rate of Return is calculated as **6.56%**. Details of the calculation can be found at
Tab 2 of this exhibit in Table 6.7 - Calculation of Revenue Deficiency or Surplus.

Ex.6/Tab 1/Sch.6 - Utility Income at Proposed Revenue Requirement

Table 6.5 - Utility Income under proposed Revenue Requirement

Particulars	Initial Application
<u>Operating Revenues:</u>	
Distribution Revenue (at Proposed Rates)	\$1,186,876
Other Revenue	\$218,986
Total Operating Revenues	\$1,405,862
<u>Operating Expenses:</u>	
OM+A Expenses	\$1,087,287
Depreciation/Amortization	\$136,509
Property taxes	\$ -
Capital taxes	\$ -
Other expense	\$ -
Total Operating Expenses	\$1,223,796
Deemed Interest Expense	\$76,091
Total Expenses (lines 9 to 10)	\$1,229,887
Utility income before income taxes	\$105,975
Income taxes (grossed-up)	\$ 3329
Utility net income	\$102,646

Ex.6/Tab 1/Sch.7 - Revenue Requirement Trend

Table 6.6 below presents HDPCL's Revenue Requirement trend starting from the 2010 Board Approved all the way to the 2015 proposed Revenue Requirement.

Table 6.6 – Trend in Revenue Requirement

Particular	2010BA	2010	2011	2012	2013	2014	2015
OM&A Expenses	\$923,677	\$868,380	\$864,798	\$819,055	\$854,139	\$994,894	\$1,087,287
Amortization Expense	\$108,336	\$99,904	\$95,574	\$112,512	\$76,739	\$81,837	\$87,497
Total Distribution Expenses	\$1,032,013	\$968,283	\$960,372	\$931,567	\$930,878	\$1,076,731	\$1,174,784
Regulated Return On Capital	\$145,674	\$137,078	\$140,918	\$150,893	\$167,599	\$162,392	\$176,566
Grossed up PILs *	\$11,106	\$12,953	\$12,953	\$12,953	\$12,953	\$225	\$0
Service Revenue Requirement	\$1,177,687	\$1,105,362	\$1,101,290	\$1,082,459	\$1,098,477	\$1,239,123	\$1,351,350
Less: Revenue Offsets	-\$68,907	-\$193,636	-\$171,809	-\$214,890	-\$212,002	-\$217,036	-\$218,986
Base Revenue Requirement	\$1,108,780	\$911,725	\$929,480	\$867,569	\$886,475	\$1,022,086	\$1,132,364

As can be seen from the table above, the proposed revenue requirement for the test year is only marginally higher than the 2010 Cost of Service approved Revenue Requirement. The lower revenue requirement between 2010 and 2013 is mostly due to underspending on the capital side all of which is explained in detail in the distribution system plan in Exhibit 2. Year over year variances in OM&A are explained throughout Exhibit 4 and Revenue Offsets and explained in detail at Exhibit 3.

Note that since the utility does not calculate PILs on yearly basis, the utility used the Historical, Bridge and Test year results from the PILs model submitted in conjunction with this application.

Deficiency or Surplus

Ex.6/Tab 2/Sch.1 - Calculation of Revenue Deficiency or Surplus

HPDC's net revenue deficiency under the proposed rates is \$-2,212. This deficiency is calculated as the difference between the 2015 Test Year Revenue Requirement and the Forecast 2014 Test Year Revenue Requirement at the Applicant's 2013 approved distribution rates.

The Revenue Deficiency sheet presented at the next page is an excerpt from the Revenue Requirement Work Form. The drivers of the revenue deficiency are detailed in the section following the table.

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Table 6.7 - Revenue Deficiency (RRWF)

Particulars	At Current Approved Rates	At Proposed Rates
Revenue Deficiency from Below		\$72,976
Distribution Revenue	\$1,128,070	\$1,113,900
Other Operating Revenue Offsets - net	\$218,986	\$218,986
Total Revenue	\$1,347,056	\$1,405,862
Operating Expenses	\$1,223,796	\$1,223,796
Deemed Interest Expense	\$76,091	\$76,091
Total Cost and Expenses	\$1,299,887	\$1,299,887
Utility Income Before Income Taxes	\$47,169	\$105,975
Tax Adjustments to Accounting Income per 2013 PILs model	(\$7,250)	(\$7,250)
Taxable Income	\$39,919	\$98,725
Income Tax Rate	15.50%	15.50%
Income Tax on Taxable Income	\$6,187	\$15,302
Income Tax Credits	\$ -	\$ -
Utility Net Income	\$40,981	\$102,646
Utility Rate Base	\$2,759,303	\$2,759,303
Deemed Equity Portion of Rate Base	\$1,103,721	\$1,103,721
Income/(Equity Portion of Rate Base)	3.71%	9.30%
Target Return - Equity on Rate Base	9.30%	9.30%
Deficiency/Sufficiency in Return on Equity	-5.59%	0.00%
Indicated Rate of Return	4.24%	6.48%
Requested Rate of Return on Rate Base	6.48%	6.48%
Deficiency/Sufficiency in Rate of Return	-2.23%	0.00%
Target Return on Equity	\$102,646	\$102,646
Revenue Deficiency/(Sufficiency)	\$61,665	\$0
Gross Revenue Deficiency/(Sufficiency)	\$72,976	

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Ex.6/Tab 2/Sch.2 - Causes of Revenue Deficiency or Surplus

HPDC's existing rates are based on the Board-approved rates in 2010 following a cost of service rate application, and adjustments to its base distribution rates in 2011-2014 under the Board's third Generation Incentive Regulation Mechanism.

As shown in Table of Revenue Deficit at the previous section, the Revenue Deficiency is determined to be \$72,976. The deficiency is due to the increase in the rate base and OM&A.

The proposed rate base for 2015 is \$732K higher than the 2010 Board-approved amount, an increase of 0%. Based on a 5.98% overall cost of capital, the increase in the rate base drives an increase to the revenue requirement. The factors contributing to the change in the rate base are discussed in detail at Exhibit 2 but for the most part, are due to investments in the distribution system to follow the distribution system plan and the inclusion to smart meters into rate base.

The increased expense for Operations, Maintenance and Administration (OM&A) is another reason for the revenue deficiency. Projected OM&A for 2015 is \$163K higher than the 2010 Board-approved amount, which represents an increase of 18%. The cost drivers underlying this increase are explained in Exhibit 4.

The major contributors of the deficiency are and a table comparing the specifics from 2010 Board Approved to 2015 Test Year is presented following the contributor below.

- Increase in OM&A of \$163K from \$923K in 2010 Board Approved to \$1,087K in 2015.
- An increase in Average Net Fixed Assets of \$623K from \$819K in 2010 Board Approved to \$1,442K in 2015.
- An increase in Working Capital of \$143 from \$1,173K in 2010 Board approved to \$1,316K in 2015.
- A decrease in the Weighted Average Cost of Capital from 7.31% of 2010 Board approved to 6.48% in 2015.
- An increase in Depreciation Expenses of \$28K from \$108 of 2010 Board approved to \$136K in 2015.
- A decrease in deemed PILs expense of \$10K from 11K in the 2010 Board Approved value to \$3K in 2015.

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Table 6.8 – Comparison of Revenue Deficiency (RRWF)

Particulars (taken from RRWF- 8.Rev_Def_Suff)	2010 Board approved	2015 Proposed Rates	Difference
Revenue Deficiency from Below	\$358,673	\$72,976	-\$285,696
Distribution Revenue	\$754,171	\$1,113,900	\$359,728
Other Operating Revenue Offsets - net	\$68,907	\$218,986	\$150,079
Total Revenue	\$1,181,751	\$1,405,862	\$224,111
Operating Expenses	\$1,032,013	\$1,223,796	\$191,783
Deemed Interest Expense	\$67,158	\$76,091	\$8,933
Total Cost and Expenses	\$1,099,171	\$1,299,887	\$200,716
Utility Income Before Income Taxes	\$82,580	\$105,975	\$23,395
			\$0
Tax Adjustments to Accounting Income per 2013 PILs model	-\$20,214	-\$7,250	\$12,964
Taxable Income	\$62,366	\$98,725	\$36,359
Income Tax Rate	16.00%	15.50%	-0.50%
Income Tax on Taxable Income	\$9,979	\$15,302	\$5,324
Income Tax Credits	-\$7,041	\$0	\$7,041
Utility Net Income	\$71,474	\$102,646	\$31,172
			\$0
Utility Rate Base	\$1,992,810	\$2,759,303	\$766,493
			\$0
Deemed Equity Portion of Rate Base	\$797,124	\$1,103,721	\$306,597
Income/(Equity Portion of Rate Base)	8.97%	9.30%	0.33%
Target Return - Equity on Rate Base	9.85%	9.30%	-0.55%
Deficiency/Sufficiency in Return on Equity	-0.88%	0.00%	0.88%
Indicated Rate of Return	6.96%	6.48%	-0.48%
Requested Rate of Return on Rate Base	7.31%	6.48%	-0.83%
Deficiency/Sufficiency in Rate of Return	-0.35%	0.00%	0.35%
Target Return on Equity	\$78,517	\$102,646	\$24,129

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Ex.6/Tab 2/Sch.3 - Impact of implementation of MIFRS on Revenue Deficiency or Surplus

The adoption of newly prescribed accounting policies has had a marginal impact on the allocation of the revenue requirement and determination of the rate base. The extension of the typical useful lives of HPDC's assets has caused the depreciation expense to decrease resulting in an increase in the value of the net fixed assets of the utility and ultimately an increase to the utility's rate base.

HPDC's OM&A has not been impacted by the policy which states that burdens which are longer eligible for capitalization have been removed from rate base and included as an operating expense since the utility has never capitalized administrative burdens on capital projects.

The decrease in depreciation and increase in operational costs have also had an impact on the PILs expense, reducing the amount by 80%.