Renewable Energy Plan Holland Board of Public Works U-16617 JUNE 2015

This filing by the Holland Board of Public Works (HBPW) complies with Public Act 295 of 2008 (the Act) and the related December 4, 2008 Michigan Public Service Commission Order (MPSC Case No. U-15800).

Part 2, Section 25, of the Act requires municipal utilities to file a twenty year plan to achieve renewable energy credit portfolio standards that are specified in Section 27. The plan must be filed with the MPSC within 120 days of the MPSC's temporary order, issued pursuant to Section 191. Each electric providers plan must do the following:

Describe how the provider will meet the RPS standards;

Specify whether the number of megawatt hours used in the calculation of the RPS requirement will be weather normalized or based on the average number of megawatt hours of electricity sold by the provider annually during the previous 3 years;

Provide expected incremental cost of compliance with the RPS requirement; Describe the manner in which the provider will allocate costs.

This document and its attachments satisfy all of the requirements of Section 25 (2) for the REP planning period 2015 to 2029.

Background

HBPW had a renewable energy plan prior to the enactment of PA 295. This pre-PA 295 plan provides for all of the Renewable Energy Credits (RECs) required by HBPW for the 2012-2029 time period. Part of this plan called for the collection of a fee from its customers to help pay for the renewable power. Therefore, there are no incremental costs associated with the renewable sources planned for since HBPW is already collecting from its customers and a plan was in place. If RECs were to be required at some point in the future because the pre-PA 295 planned RECs were insufficient to meet requirements, then there would be an incremental cost of RECs for the additional RECs required.

The City may have excess RECs to sell during the REP planning period. Selling of RECs represents a source of income to the City which will reduce overall power supply costs. The cost per REC will be determined to a large extent by market forces in the Michigan REC market. Holland has some renewable energy facilities in the PJM market that can qualify for both GATS credits and MIRECS (see Attachment A below). In the event there is an arbitrage opportunity between the MIRECS and GATS REC markets , the City will use any gains realized to reduce overall power supply costs for it's customers.

The financial impact of this REP is expected to be minimized for the City's customers and the City will comply with Section 45 of PA 295 which refers to methods of notification to customers charges, if any, for costs associated with its REP.

Section 25 (2) (a) "Describe how the provider will meet the renewable energy standards"

The HBPW developed a two phase approach to meeting the standards. Phase I addresses the compliance years 2012 through 2015 and Phase II addresses the years running from 2016 to 2029.

<u>Phase I</u> – Phase I renewable energy sources include generation derived from a biomass fueled power plant, several landfill gas facilities and one wind project. "Banked" Renewable Energy Credits (REC) from these renewable energy sources for the years 2010-2015 (in accordance with Section 29 (3) (c) of PA 295), when combined with their expected generation during the Phase I years of 2012-2015 provides the HBPW with an inventory of RECs sufficient to allow the HBPW to meet the PA 295 standards through 2015. See *Attachment A – Renewable Energy Facilities* for further details on the specific sites and Holland's REP spreadsheet for REP details.

<u>Phase II</u> – The HBPW, through the Michigan Public Power Agency, has completed an agreement with Beebe 1B in Ithaca Michigan for wind energy and associated RECs. Beebe 1B came online in December 2014. This facility, in combination with the facilities listed on Attachment A, will provide the HBPW with the renewable energy generation required on a go forward basis to meet the PA 295 standards.

Section 25 (2) (b) "Specify whether the number of megawatt hours of electricity used in the calculation of the renewable energy credit portfolio will be weather-normalized or based on the average number of megawatt hours of electricity sold by the electric provider annually during the previous 3 years to retail customers I this state."

The HBPW will be calculating its renewable energy credit portfolio requirements based on the average number of megawatt hours of electricity sold by the HBPW annually during the previous 3 years to its retail customers in the state.

Section 25 (2) (c) "Include the expected incremental cost of compliance with the renewable energy standards."

Following the Filing Requirements and Instructions for Renewable Energy Plans for Municipally-Owned Electric Utilities provided in Attachment C of the MPSC Order to implement PA 295, the HBPW has provided Attachment C – Renewable Energy Plan Summary as well as a "RECS" sheet in Holland's REP spreadsheet providing the accounting of expected RECs. Please see this attachment for further details. In summary, there will be no incremental cost of compliance as Holland's plan and rate structure to support this plan were in place prior to the passage of PA 295.

Section 25 (2) (d) "Describe the manner in which the provider will allocate costs"

Based on the response above, there are no incremental costs of compliance under this REP.

Attachment A – Renewable Energy Facilities

Grayling Generating Station – Grayling Generation Station Limited Partnership entered into a contract to provide up to 1.8 MW of power, around the clock, for the HBPW through 2014. This power is provided by a biomass fueled power plant located at 4400 Four Mile Road in Grayling, MI. The facility is expected to produce approximately 13,240 megawatt hours annually. The agreement with CMS Grayling ended in December 2014 and was not renewed.

Granger and North American Natural Resources Landfill Energy – The HBPW, through the Michigan Public Power Agency (MPPA), has entered into a long term contract with Granger and North American Natural Resources (NANR) to provide 16.26% of the power generated at several projects owned by Granger and NANR. Ownership will increase from 488 KW in 2010 to approximately 3.480 MW in 2014.

North American Natural Resources Landfill Energy – The HBPW has entered into a long term contract with NANR to provide energy from the SE Berrien landfill gas project. The project began with 3.8 MW in 2010 with an expected final capacity of approximately 6 MW in 2020. This project will provide approximately 34,000 megawatt hours of energy annually from 2020 through 2029. The renewable energy credits from this project qualify for both GATS and MIRECS.

EON Windfarm - The HBPW has entered into a long term contract with EON to provide energy from Wildcat Wind farm. The project began in January 2013 and the HBPW's portion of this project is 15 MW. This project will provide approximately 50,000 megawatt hours of energy annually from 2013 through 2022. The renewable energy credits from this project qualify for both GATS and MIRECS.

Beebe 1B Wind Farm – MPPA has entered into a long term purchased power agreement (PPA) with Beebe 1B Renewable Energy LLC. The project has a total capacity of 26.4 MW and the HBPW is entitled to 16.8 MW. Expected energy output is 55, 188 MWHs for Holland's share. Beebe 1B began commercial operations in December 2014. Attachment B – Renewable Energy Facilities Under Development

No facilities currently under development.

HOLLAND		ATTACHM	ENT C - KE	ENEWABL	EENERG	Y PLAN SU	RCHARGE	ATTACHMENT C - RENEWABLE ENERGY PLAN SURCHARGE SUMMARY FOR MUNICIP	Y FOR MUN	IICIPAL UT	AL UTILITIES					
	Units	2015	<u>2016</u>	2017	<u>2018</u>	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Saes Horecast- 3 yr running average 10% Compliance Factor RPS Requirement	MWH	1,041,000	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100
RECS - RPS Required	RECS	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100
RECS - IPRE-REP (BASELINE) RECS - Incremental Ofference	RECS	104,100	- 104,100	- 104,100	- 104,100	- 104,100	- 104,100	- 104,100	- 104,100	- 104,100	- 104,100	104,100	104,100	104,100	104,100	- 104,100
FACTOR Required New RECS	RECS	1.00	1.00	1.00	1.00 104,100	1.00 104,100	1.00	1.00 104,100	1.00	1.00	1.00	1.00 104,100	1.00 104,100	1.00	1.00	1.00
RPS RENEWABLE ENERGY CREDIT COMPLIANCE																
	RECS	99,449	63,242	32,637	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346
RECS OBTAINED (NEW)	RECS	67,893	73,495	72,396	72,396	71,947	72,144	71,947	71,947	71,947	71,947	71,947	71,947	71,947	71,947	71,947
REC PURCHASES / (SALES) FROM OTHER SOURCES TOTAL RECS SOURCES	RECS	167.342	- 136,737	413	31,704	32,153	31,956	32,153	32,153	32,153	32,153	32,153	32,153	32,153	32,153	32,153
		101	100,101	100,7770	UU1	100,1110	100,1110	100,7770	100,1110	100,770	100,110	100,110	100,7770	100,770	100,1110	1001
RECUIRED RECS (BASELINE PLUS NEM) RECS USED FOR COMPLIANCE	RECS	104,100	104,100	104,100	104,100	104,100	104,100	104,100	104,100 104,100	104,100	104,100 104,100	104,100 104,100	104,100	104,100	104,100 104,100	104,100
EXPIRED RECS	RECS									•						
RECS CUMULATIVE BALANCE	RECS	63,242	32,637	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346	1,346
Incremental Compliance with New RECs Compliance % with Cumulative REC Balance	% %	65% 161%	71% 131%	70% 101%	70% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%	69% 101%
Revenue Requirements for New Renewables Build (see project sheets for information)	\$						s									
REC Purchases (Sales)	w w	\$ 4,039,817 \$ -	\$ 4,524,462 \$ \$ - \$	4,606,926 \$	4,702,026 \$	39,040 S	4,896,960 \$ 39,771 \$	4,997,277 \$ 41,017 \$	5,099,351 \$ 42,042 \$	5 5,203,656 \$ 43,093 \$	5 5,309,270 \$ 44,171 \$	5,417,134 \$ 45,275 \$	5,527,258 \$ 46,407 \$	5,639,185 \$ 47,567 \$	5,753,392 \$ 48,756 \$	5,869,423
Total	ŝ	4,039,817	\$ 4,524,462 \$	4,607,404 \$	4,739,582 \$	4,837,897		5,038,294	5,141,393	5,246,750	5,353,441	5,462,409	5,573,665	5,686,752	5,802,148	
RECs Obtained Generation Based																
Build (see project sheets for information)	MWH	6F 100		-				-					-			8.
Subtotal	MWH	65,122	69,727	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553	69,553
Purchase (Sold) From New RECS Incentive (SB 213 Sec 39 (2))	RECS	- 2,883	3,548	413 2,823	31,704 2,617	32,153 2,412	31,956 2,412	32,153 2,412	32,153 2,412	32,153	32,153 2,412	32,153 2,412	32,153 2,412	32,153 2,412	32,153 2,412	32,15
Total	RECS	68,005	73,275	72,789	103,875	104,119	103,922	104,119	104,119	104,119	104,119	104,119	104,119	104,119	104,119	104,11
Forecasted Transfer Price per MWH	SWWH															
Amount recovered through PSCR Transfer price x volume of energy (see INCR COST sheet)	\$															
Incramental Cost of Compliance Jess INCO COST should	0					0	0								0	
Incremental Cost of Compliance (see INCR COST sheet) Additional investment above PA 295 requirements	s s	\$	· ·	, , ,		دە				· ·					· ·	
Non-Volumetric Surcharge																
Meter (or customer) Forecast (Number)	:					:	:	;		:		:				
Commercial	<u>8</u> 8	24,384 4,548	24,830 4,631	25,286 4,716	25,749 4,802	26,216 4,889	26,689 4,977	27,166 5,066	27,649 5,156	28,136 5,247	28,628 5,339	29,126 5,432	29,628 5,526	30,136 5,620	30,649 5,716	31,167 5,813
Industrial	<u>s</u>	180	183	186	190	193	197	200	204	207	211	215	218	222	226	23
Streetlights	No.															
Total	N.	29,111	29,644	30,188	30,740	31,299	31,863	32,433	33,009	33,591	34,179	34,772	35,373	35,979	36,591	37,210
Maximum Surcharge (all rate classes at caps)	•				•	•										
Commercial	w w	904,790				943,787 \$ 972.775 \$	960,801 \$ 990,312 \$	1.008.029 S	995,353 \$ 1.025.926 \$		1,030,621 S			1,084,900 \$ 1,118,223 \$		
Industrial	· ~ ~		\$ 411,912 \$	419,477	427,149	434,908 \$		450,670 \$	458,671	466,755 \$	474,923	483,175 \$	491,513	499,935	508,447	517,044
Streetlights	~ ~ ~	, , ,	· ·			 							 	 	 	
Total	60 6	2,187,130	\$ 2,227,132 \$	\$ 2,268,035 \$	2,309,515 \$	2,351,470 \$	2,393,862 \$	2,436,689 \$	2,479,950 \$	\$ 2,523,657 \$	\$ 2,567,821 \$	2,612,439 \$	2,657,521	2,703,059 \$	2,749,081	2,795,560
Planned Surcharge																
Residential	~ ~ ~															
Industrial	s 0	s o 	· · ·			 s o	 	 s u						 s u	 	
Streetlights	so so					 										. .
Total															. s	