



**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**PUBLIC UTILITIES BOARD**

Ex. #	<a href="#">PUB-1</a>	PUB to Manitoba Hydro and Intervenors of Record re Manitoba Hydro's Cost of Service Filing dated December 8, 2015
Ex. #	<a href="#">PUB-2</a>	Notice of a Public Review of the Cost of Service Study Methodology Utilized by Manitoba Hydro and Other related matters dated January 18, 2016
Ex. #	<a href="#">PUB-3</a>	PUB to All Parties re Process Matters - Manitoba Hydro's Cost of Service Study Methodology Review dated January 22, 2016
Ex. #	<a href="#">PUB-4</a>	PUB to MH re Access to Electronic Model dated February 18, 2016
Ex. #	<a href="#">PUB-5</a>	PUB Order 26/16 dated February 26, 2016 - Procedural Order in Respect of Manitoba Hydro's COSS Methodology Review
Ex. #	<a href="#">PUB-6</a>	PUB Rules of Practice and Procedure
Ex. #	<a href="#">PUB-7</a>	Daymark to Manitoba Hydro email re Update on Modeling Discussions dated March 9, 2016
Ex. #	<a href="#">PUB-8-1</a>	<a href="#">Public Utilities Board (PUB) to Manitoba Hydro (MH) - 1st Round Information Requests</a> Marginal Costs - Marginal Energy Weighting - 12 SEP Weighting
Ex. #	<a href="#">PUB-8-2</a>	" " " " " PCOSS08 - March 2009
Ex. #	<a href="#">PUB-8-3</a>	" " " " " DSM Cost Allocation
Ex. #	<a href="#">PUB-8-4</a>	" " " " " DSM Savings Allocation

Ex. #	<a href="#">PUB-8-5</a>	"	"	"	"	"	Demand Allocation - Coincident & Non-Coincident Peak Load Forecast
Ex. #	<a href="#">PUB-8-6</a>	"	"	"	"	"	IFRS Impact on PCOSS
Ex. #	<a href="#">PUB-8-7</a>	"	"	"	"	"	Net Export Revenue - Allocation of Costs to Export Class
Ex. #	<a href="#">PUB-8-8</a>	"	"	"	"	"	Recommendations from Christensen Associates - Impact of Different Changes
Ex. #	<a href="#">PUB-8-9</a>	"	"	"	"	"	Electricity Export Class - Basis for Investment Decisions
Ex. #	<a href="#">PUB-8-10</a>	"	"	"	"	"	Assignment of Costs to Export Class - variable costs to opportunity costs
Ex. #	<a href="#">PUB-8-11</a>	"	"	"	"	"	Assignment of Costs to Export Class
Ex. #	<a href="#">PUB-8-12</a>	"	"	"	"	"	Net Export Revenue - Assignment of Costs to Export Class
Ex. #	PUB-8-13	"	"	"	"	"	Costs of Export Class Assignment - Assignment of Thermal & Coal Costs to Export Class
Ex. #	PUB-8-14	"	"	"	"	"	Trading Desk - MISO Cost Assignment
Ex. #	PUB-8-15	"	"	"	"	"	Progression of Revenue Costs Coverage (RCC) Ratios
Ex. #	PUB-8-16	"	"	"	"	"	Assignment of DSM Costs to Export Class
Ex. #	PUB-8-17	"	"	"	"	"	Transmission and Distribution Marginal Costs
Ex. #	PUB-8-18	"	"	"	"	"	Allocation of Net Export Revenue to Customer Classes
Ex. #	PUB-8-19	"	"	"	"	"	Complete Version of PCOSS14 Amended
Ex. #	PUB-8-20	"	"	"	"	"	Domestic & Export Energy Profiles 2014/15
Ex. #	PUB-8-21	"	"	"	"	"	Domestic & Export Peak Demand Profiles

Ex. #	PUB-8-22	"	"	"	"	"	MISO Sales History & Forecasts
Ex. #	PUB-8-23	"	"	"	"	"	HVDC & HVAC Systems - Actual System Utilization
Ex. #	PUB-8-24	"	"	"	"	"	Functionalization of HVDC - Functionalization of Transmission facilities as Generation
Ex. #	PUB-8-25	"	"	"	"	"	Hydraulic Generation/Non-Hydraulic Generation Resources - Fixed Costs to Opportunity Sales
Ex. #	PUB-8-26	"	"	"	"	"	Diversity Sales/Purchases - MISO Benefits vs MH Benefits
Ex. #	PUB-8-27	"	"	"	"	"	PCOSS14 116-08, PCOSS 14 Amended - DSM Add-Back to Domestic Load
Ex. #	PUB-8-28	"	"	"	"	"	Cost Assignment to Dependable & Opportunity Export Sales
Ex. #	PUB-8-29	"	"	"	"	"	Keeyask Capital Cost - Marginal Cost/Benefit of Additional Units
Ex. #	PUB-8-30	"	"	"	"	"	Transmission Cost Allocation - Seasonal 2CP at Generation
Ex. #	PUB-8-31	"	"	"	"	"	Average Monthly Demand - Marginal Cost Weighting of Energy/Demand
Ex. #	PUB-8-32	"	"	"	"	"	Market price of Power in extraprovincial jurisdictions
Ex. #	PUB-8-33	"	"	"	"	"	Service Extension Policy
Ex. #	PUB-8-34	"	"	"	"	"	Rate Design - Basic Charges, Demand Charges, & Energy Charges
Ex. #	PUB-8-35	"	"	"	"	"	Rate Design Principles - Lowering of the Basic Charge
Ex. #	PUB-8-36	"	"	"	"	"	MISO Imports & Wind Purchases
Ex. #	PUB-8-37	"	"	"	"	"	2013/14, 2014/15 and 2015/16 NEB Data

Ex. #	PUB-8-38	"	"	"	"	"	Future G&T Assests
Ex. #	PUB-8-39	"	"	"	"	"	Generation/Transmission/Distribution Costs
Ex. #	PUB-8-40	"	"	"	"	"	Non Hydraulic Resources - Cost Effective Use of Resources
Ex. #	PUB-8-41	"	"	"	"	"	Generation and Transmission in Cost Sharing - 7x16 Opportunity Sales
Ex. #	PUB-8-42	"	"	"	"	"	Generation and Transmission in Cost Sharing - 7x16 Opportunity Sales
Ex. #	PUB-8-43	"	"	"	"	"	Allocation of Net Export Revenue - Basis of Allocation
Ex. #	PUB-8-44	"	"	"	"	"	Classification of Generation Costs
Ex. #	PUB-8-45	"	"	"	"	"	Functionalization of Communications Equipment
Ex. #	PUB-8-46	"	"	"	"	"	Functionalization of Buildings & Equipment
Ex. #	PUB-8-47	"	"	"	"	"	Functionalization of Communications Equipment
Ex. #	PUB-8-48	"	"	"	"	"	Classification of Distribution Costs
Ex. #	PUB-8-49	"	"	"	"	"	Primary/SecondarySplit Distribution Costs
Ex. #	PUB-8-50	"	"	"	"	"	Assignment to Dependable & Opportunity Sales - Hybrid Sales
Ex. #	PUB-8-51	"	"	"	"	"	Capacity Value - Demand-based Allocation of Generation
Ex. #	PUB-8-52	"	"	"	"	"	Marginal Cost Weights - Impact of Transmission Constraints on Marginal Cost
Ex. #	PUB-8-53	"	"	"	"	"	External Allocators - Data Sources
Ex. #	PUB-8-54	"	"	"	"	"	Peak Load Data - NCP Allocation

Ex. #	PUB-8-55	"	"	"	"	"	Functionalization of HVDC - Bipole III - Impact on COS
Ex. #	PUB-8-56	"	"	"	"	"	Generation costs - Costs of individual hydro dams
Ex. #	PUB-8-57	"	"	"	"	"	Customer Allocators - Vintage of Analysis
Ex. #	PUB-8-58	"	"	"	"	"	Customer Allocators - Service Drops per Customer
Ex. #	PUB-8-59	"	"	"	"	"	Allocation of DSM Costs
Ex. #	PUB-8-60	"	"	"	"	"	Allocation of Net Export Revenue and Net Income
Ex. #	PUB-8-61	"	"	"	"	"	Allocation of costs associated with the US Interconnections
Ex. #	PUB-8-62	"	"	"	"	"	Allocation of Net Export Revenue
Ex. #	PUB-8-63	"	"	"	"	"	Hydraulic Generation Cost Sharing
Ex. #	PUB-8-64	"	"	"	"	"	HVDC cost implications
Ex. #	PUB-8-65	"	"	"	"	"	Exports into MISO 2013/14, 2014/15 & 2015/16
Ex. #	PUB-8-66	"	"	"	"	"	Hydraulic Generation Resources - Planning Assumption vs Utilization
Ex. #	PUB-8-67	"	"	"	"	"	Keeyask Business Case - Anticipated Firm Sales
Ex. #	PUB-8-68	"	"	"	"	"	HVDC Demand Allocation - 2CP vs Weighted Energy
Ex. #	PUB-8-69	"	"	"	"	"	Functionalization of Rate Base - Changes in Rate Base – Impact on COSS
Ex. #	PUB-8-70	"	"	"	"	"	Allocation of Revenue Requirement
Ex. #	PUB-8-71	"	"	"	"	"	Export and Domestic Revenue

Ex. #	PUB-8-72	" " " " " Distribution Plant – Service Voltage
Ex. #	PUB-8-73	" " " " " 2CP & NCP
Ex. #	<a href="#">PUB-9</a>	PUB to MH and Registered Interveners re Intervener Cost of Service Model Runs letter dated March 29, 2016
Ex. #	<a href="#">PUB-10</a>	PUB to Interveners letter re Budgets dated April 4, 2016
Ex. #	<a href="#">PUB-11</a>	PUB to Interveners letter re Interim Invoices April 8, 2016
Ex. #	<a href="#">PUB-12</a>	PUB Follow-up Questions to Manitoba Hydro for May 2016 Workshop - May 10, 2016
Ex. #	<a href="#">PUB-13</a>	Pre Hearing Conference 1 - February 12, 2016 - Transcripts
Ex. #	<a href="#">PUB-14</a>	Outline of Procedures - PHC 2 - June 24, 2016
Ex. #	<a href="#">PUB-15</a>	Pre Hearing Conference 2 - June 24, 2016 - Transcripts
Ex. #	<a href="#">PUB-16</a>	PUB Order 84/16 dated July 12, 2016 - Second Procedural Order
Ex. #	<a href="#">PUB-17</a>	PUB email seeking comments re MH's request to amend timetable in Order 84/16 - July 19, 2016
Ex. #	<a href="#">PUB-18</a>	PUB Letter re MH's request for amendment of timetable dated July 21, 2016
Ex. #	<a href="#">PUB-19</a>	Email to GSS/GSM re request for Extension - August 5, 2016
Ex. #	<a href="#">PUB-20</a>	PUB Letter to MIPUG requesting comments to Manitoba Hydro's Letter of August 5, 2016 re Expert Witness Qualifications - August 10, 2016
Ex. #	<a href="#">PUB-21</a>	PUB re Qualification of Expert Witnesses - August 25, 2016
Ex. #	<a href="#">PUB-22</a>	PUB to All parties re Scope of "Key Issues" for Oral Hearing - August 31, 2016
Ex. #	PUB-23	Board Counsel Book of Documents

Ex. #	PUB-24	PUB to MH and Registered Interveners re Proposed Budget Revisions - September 20 2016
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**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**MANITOBA HYDRO**

Ex. #	<a href="#">MH-1</a>	Manitoba Hydro to PUB re Cost of Service Study Review Submission - Cover letter dated December 4, 2015
Ex. #	<a href="#">MH-2</a>	Cost of Service Study Review Submission
Ex. #	<a href="#">MH-3</a>	Manitoba Hydro to PUB re Cost of Service Study Review Submission - Cover letter dated December 18, 2015
Ex. #	<a href="#">MH-4</a>	Manitoba Hydro to PUB re Cost of Service Review Process dated February 5, 2016
Ex. #	<a href="#">MH-5</a>	Manitoba Hydro's Pre Hearing Conference Presentation - February 12, 2016
Ex. #	<a href="#">MH-6</a>	Manitoba Hydro's Proposed Scope of Issues - 2016 Cost of Service Review
Ex. #	<a href="#">MH-7</a>	MH to PUB Letter re 2016 COS Review - Model dated February 22, 2016
Ex. #	<a href="#">MH-8</a>	MH to PUB Letter re Model (response to Interveners' Comments) dated February 24, 2016
Ex. #	<a href="#">MH-9</a>	MH to PUB re COSS Review - Minimum Filing Requirements & Other Matters dated February 26, 2016
Ex. #	<a href="#">MH-10</a>	MH to PUB re MFRs and Other Matters - Cover Letter dated March 2, 2016
Ex. #	<a href="#">MH-11</a>	MH to Daymark Letter re Cost of Service Model dated March 11, 2016 in response to Daymark's letter of March 9, 2016



Ex. #	<a href="#">MH-12</a>	MHt to Daymark Letter re Cost of Service Model dated March 16, 2016 - follow-up to March 11, 2016 response
Ex. #	<a href="#">MH-13</a>	MH to Daymark Letter re Cost of Service Model dated March 22, 2016 - follow-up to March 11, 2016 response
Ex. #	<a href="#">MH-14</a>	MH to PUB letter re Filing of Responses to Information Requests dated April 21, 2016
Ex. #	<a href="#">MH-15</a>	MH to PUB letter re Filing of Responses to Information Requests dated April 22, 2016
Ex. #	<a href="#">MH-16</a>	MH to PUB letter re Filing of Responses to Information Requests dated April 25, 2016
Ex. #	<a href="#">MH-17</a>	MH to PUB letter re Filing of Responses to Information Requests dated April 27, 2016
Ex. #	<a href="#">MH-18</a>	MH to PUB letter re Filing of Responses to Information Requests dated April 30, 2016
Ex. #	<a href="#">MH-19</a>	MH to PUB Letter re Workshop dated May 10, 2016
Ex. #	<a href="#">MH-20</a>	MH Presentation - Cost of Service Methodology Workshop - May 11, 2016
Ex. #	<a href="#">MH-21</a>	MH CEC Report - Bipole III Project Needs and Alternatives
Ex. #	<a href="#">MH-22</a>	MH Exhibit #41 from Manitoba Hydro's 2012/2013 & 2013/14 General Rate Application
Ex. #	<a href="#">MH-23</a>	MH to PUB Letter re Workshop Undertakings dated May 30, 2016
Ex. #	<a href="#">MH-24</a>	Response to Undertaking #1 PCOSS Schedules (incl. Schedule B2 & B3 without net Export Revenue and D1 & D2) - marginal weighted energy "capacity adder" added only the winter peak period
Ex. #	<a href="#">MH-25</a>	Response to Undertaking #2 PCOSS Schedules with the scenario provide on slide 20 of MH-20 & Schedules B2 & B3 without deducting the Net Export Revenue
Ex. #	<a href="#">MH-26</a>	Response to Undertaking #3 Monthly MISO Voluntary Capacity Auction prices for the period of 2009 to 2013

Ex. #	<a href="#">MH-27</a>	Response to Undertaking #4	MH to Confirm whether all the times that were given in the discovery responses are for hour ending
Ex. #	<a href="#">MH-28</a>	Response to Undertaking #5 - <i>Revised</i>	Schedule of historic export sales from 2005 to 2014 year for all hours
Ex. #	<a href="#">MH-29</a>	Response to Undertaking #6	Allocation Basis for Indirect Costs
Ex. #	<a href="#">MH-30</a>	Response to Undertaking #7	RCCs and percentages underpinning Slide 39 of MH-20
Ex. #	<a href="#">MH-31</a>	Response to Undertaking #8	Hourly load profile data for exports
Ex. #	<a href="#">MH-32</a>	Response to Undertaking #9	PUB/MH I-22b with MISO Financial Sales Data
Ex. #	<a href="#">MH-33</a>	Response to Undertaking #10	WPS NEB Permit 379 Sales (GWh)
Ex. #	<a href="#">MH-34</a>	Response to Undertaking #11	Cost difference among the three (3) types of poles
Ex. #	<a href="#">MH-35</a>	Response to Undertaking #12	Length of secondary cable
Ex. #	<a href="#">MH-36</a>	Response to Undertaking #13	Conductor Length for overhead distribution
Ex. #	<a href="#">MH-37</a>	Response to Undertaking #14	Night time hours to determine coincident peak and non-coincident peak (for streetlights)
Ex. #	<a href="#">MH-38</a>	Response to Undertaking #15	Excel file with annual average load profiles by customer class for years 2012/2013 and 2013/2014
Ex. #	<a href="#">MH-39</a>	Response to Undertaking #16	Schedules B2 and B3 without the net (export) revenue being deducted
Ex. #	<a href="#">MH-40</a>	Response to Undertaking #17	Planned Orders by SCC
Ex. #	<a href="#">MH-41</a>	Response to Undertaking #21	List of Assets moved out of Subtransmission to Distribution

Ex. #	<a href="#">MH-42</a>	Response to Undertaking #22	Website link to schedule of additional charges
Ex. #	<a href="#">MH-43</a>	Response to Undertaking #23	Monthly Capacity Factor data for Kettle, Long Spruce & Limestone GS for 2002/03, 2003/04, 2013/14, 2014/15 and 2015/16
Ex. #	<a href="#">MH-44</a>	Response to Undertaking #24a	Excel file - Attachment to PUB/MH I-5a-d
Ex. #	<a href="#">MH-45</a>	Response to Undertaking #24b	Excel file - PUB/MH I-30c
Ex. #	<a href="#">MH-46</a>	Response to Undertaking #24c	Excel file - PUB/MH I-60d
Ex. #	<a href="#">MH-47</a>	Response to Undertaking #24d	Excel file - PUB/MH I-65a
Ex. #	<a href="#">MH-48</a>	Response to Undertaking #24e	Excel file - PUB/MH I-70
Ex. #	<a href="#">MH-49</a>	Response to Undertaking #25	Schedules C6 and C8 - basis for distribution & operating costs being refunctionalized from subtransmission to distribution
Ex. #	<a href="#">MH-50</a>	Response to Undertaking #26	Net regulated/intangible costs that are funtionalized to distribution
Ex. #	<a href="#">MH-51</a>	Response to Undertaking #27	Breakdown of underground cable plan investment between primary and secondary
Ex. #	<a href="#">MH-52</a>	Response to Undertaking #28	GAC/MH I-21, table on page 3 of the response
Ex. #	<a href="#">MH-53</a>	Response to Undertaking #29	Line Extension Policies
Ex. #	<a href="#">MH-54</a>	Response to Undertaking #30	Motor vehicle rate base
Ex. #	<a href="#">MH-55</a>	Response to Undertaking - Transcript Page #254	GAC/MH I-57 and GAC/MH I-8
Ex. #	<a href="#">MH-56</a>	Response to Undertaking - Transcript Page #255	GAC/MH I-57 - Common Bus

Ex. #	<a href="#">MH-57</a>	Response to Undertaking - Transcript Page #602	Top 50 Hours (Summer and Winter) at the Common Bus
Ex. #	<a href="#">MH-58</a>	Response to Undertaking - Transcript Page 603	Monthly peak loads for Domestic Load only, Domestic loads & Dependable Exports and Domestic Load & Dependable & Opportunity Exports
Ex. #	<a href="#">MH-59</a>	Response to Undertaking - Transcript Page 791	C10 Allocator
Ex. #	<a href="#">MH-60</a>	MH to PUB cover Letter re Undertaking #19 dated May 31, 2016	
Ex. #	<a href="#">MH-61</a>	Undertaking #19	Calculation of direct, indirect and incremental costs
Ex. #	<a href="#">MH-62</a>	MH to PUB cover Letter re Undertaking #5 dated June 8, 2016	
Ex. #	<a href="#">MH-63</a>	MH Issues List for Pre Hearing Conference 2	
Ex. #	<a href="#">MH-64</a>	MH to PUB letter on PHC reply of Manitoba Hydro dated June 28, 2016	
Ex. #	<a href="#">MH-65</a>	MH to PUB re Order 84/16 Timetable dated July 19, 2016	
Ex. #	<a href="#">MH-66</a>	MH to PUB Letter re CV's of Experts dated July 29, 2016	
Ex. #	<a href="#">MH-66-1</a>	<i>Curriculum Vitae</i> of Michael T. O'Sheasy	
Ex. #	<a href="#">MH-66-2</a>	<i>Curriculum Vitae</i> of Robert Camfield	
Ex. #	<a href="#">MH-66-3</a>	<i>Curriculum Vitae</i> of Bruce Chapman	
Ex. #	<a href="#">MH-67</a>	MH's Rebuttal on Interveners' Experts Evidences - July 29, 2016	
Ex. #	<a href="#">MH-68</a>	Email from Manitoba Hydro re Qualification of Witnesses - July 29, 2016	
Ex. #	<a href="#">MH-69</a>	MH to PUB - Written Challenges to Scope of Expert Witness Qualifications - August 5, 2016	

Ex. #	<a href="#">MH-70</a>	MH's Written Submission to Issues not Subject to Oral Hearing - August 12, 2016
Ex. #	<a href="#">MH-71</a>	MH's Reply Submission with respect to Issues not Subject to Oral Hearing - August 19, 2016
Ex. #	<a href="#">MH-72</a>	MH to PUB re Clarification of Scope of Oral Hearing Issues - August 25, 2016
Ex. #	MH-73	Manitoba Hydro's CVs of COSS Panel
Ex. #	MH-74	Manitoba Hydro COSS Opening Presentation
Ex. #	MH-75	MH Comments on MIPUG and GSS_GSM Budget Revisions
Ex. #	MH-76	Review of Cost of Service Methods - Christensen Associates Presentation
Ex. #	MH-77	NFAT Wuskwatim - August 8 2003
Ex. #	MH-78	MH to PUB re GAC Revised Budget - September 9 2016
Ex. #	MH-79	MH's Response to Undertaking 1 - Net Book Value of the Generating Facilities
Ex. #	MH-80	MH's Response to Undertaking 2 - Weighted Energy Allocator and Demand Costs



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MANITOBA HYDRO  
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September 27, 2016

**CONSUMER ASSOCIATION OF CANADA (MANITOBA) and WINNIPEG HARVEST (COALITION)**

Ex. #	<a href="#">Coalition-1</a>	Consumer Coalition's response to PUB's December 8, 2015 letter re Additional Minimum Filing Requirements dated December 15, 2015
Ex. #	<a href="#">Coalition-2</a>	Consumer Coalition - Intervener Application
Ex. #	<a href="#">Coalition-2-1</a>	Consumer Coalition - Preliminary Issue Summary
Ex. #	<a href="#">Coalition-2-2</a>	Consumer Coalition - Appendix B - William Harper's COSS and Rate Design Qualifications
Ex. #	<a href="#">Coalition-3</a>	MH COSS Review - Evidence of William Harper - March 16, 2006
Ex. #	<a href="#">Coalition-4</a>	Consumer Coalition - Written Submission in response to PUB's letter of January 22, 2016 - dated February 10, 2016
Ex. #	<a href="#">Coalition-5</a>	Pre Hearing Conference Presentation - February 12 2016
Ex. #	<a href="#">Coalition-6</a>	Consumer Coalition's Presentation - Appendix 1 - COSS Process and Timelines
Ex. #	<a href="#">Coalition-7</a>	Consumer Coalition letter to PUB re Model dated February 23, 2016
Ex. #	<a href="#">Coalition-8</a>	Consumer Coalition's Budget Estimates for Hydro Cost of Service Proceeding dated March 1, 2016
Ex. #	<a href="#">Coalition-9</a>	Proposed Schedule dated March 1, 2016
Ex. #	<a href="#">Coalition-10</a>	Coalition's Preliminary Comments with Regard to the Hydro COS Model - March 4, 2016 Revised

Ex. #	Coalition-11-1	<a href="#">Consumers' Association of Canada (Manitoba) and Winnipeg Harvest (COALITION) to Manitoba Hydro - 1st Round Information Requests</a>	Proof of Revenue Calculations
Ex. #	Coalition-11-2	" " " " "	Financial Forecast Reconciliation - Other Revenue
Ex. #	Coalition-11-3	" " " " "	Financial Forecast Reconciliation - Revenue - Miscellaneous - Non Energy
Ex. #	Coalition-11-4	" " " " "	Financial Forecast Reconciliation - Revenue - Late Payment Charges & Customer Adjustment
Ex. #	Coalition-11-5	" " " " "	Financial Forecast Reconciliation - O&A Costs - Assignment of Cost Centres
Ex. #	Coalition-11-6	" " " " "	Financial Forecast Reconciliation - Depreciation - Capital Contributions
Ex. #	Coalition-11-7	" " " " "	Financial Forecast Reconciliation - Depreciation - Capital Contributions
Ex. #	Coalition-11-8	" " " " "	Financial Forecast Reconciliation - Depreciation - Diesel Contributions
Ex. #	Coalition-11-9	" " " " "	Financial Forecast Reconciliation - Interest & Reserve Contribution - Capital Tax
Ex. #	Coalition-11-10	" " " " "	Financial Forecast Reconciliation - Interest & Reserve Contribution - Corporate Allocation
Ex. #	Coalition-11-11	" " " " "	Financial Forecast Reconciliation - Interest & Reserve Contributions and Capital Tax
Ex. #	Coalition-11-12	" " " " "	Financial Forecast Reconciliation - Rate Base - COSS Adjustments
Ex. #	Coalition-11-13	" " " " "	Functionalization - Fixed Assets - Assignment to Asset Classes
Ex. #	Coalition-11-14	" " " " "	Functionalization - Rate Base - Regulated Assets/Intangibles
Ex. #	Coalition-11-15	" " " " "	Reconciliation of Financial Forecast - Revenue Requirement Components - Changes in Values

Ex. #	Coalition-11-16	"	"	"	"	"	Direct Assignment - Generation Exports - Nature of Directly Assigned Costs
Ex. #	Coalition-11-17	"	"	"	"	"	Direct Assignment - Generation Exports - PCOSS14 - Amended Changes
Ex. #	Coalition-11-18	"	"	"	"	"	Direct Assignment - DSM - Apportionment to Customer Classes
Ex. #	Coalition-11-19	"	"	"	"	"	Direct Assignment - DSM - Benefits of DSM
Ex. #	Coalition-11-20	"	"	"	"	"	Direct Assignment - SEP - Basis for Costs Assigned
Ex. #	Coalition-11-21	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Basis for Dependable/Export Split
Ex. #	Coalition-11-22	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Types of Long Term Contracts
Ex. #	Coalition-11-23	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Hybrid Sales
Ex. #	Coalition-11-24	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Transmission Service Requirements
Ex. #	Coalition-11-25	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Impact on Investment
Ex. #	Coalition-11-26	"	"	"	"	"	Functionalization - Operating Costs - Generation Facilities and Costs
Ex. #	Coalition-11-27	"	"	"	"	"	Functionalization - Operating Costs - Transmission Facilities and Costs
Ex. #	Coalition-11-28	"	"	"	"	"	Functionalization - Operating Costs - Communications and Control Systems
Ex. #	Coalition-11-29	"	"	"	"	"	Functionalization - Operating Costs - Treatment of Specific Facilities' Costs
Ex. #	Coalition-11-30	"	"	"	"	"	Functionalization - Depreciation - Generation Facilities and Costs
Ex. #	Coalition-11-31	"	"	"	"	"	Functionalization - Depreciation - Transmission Facilities and Costs



Ex. #	Coalition-11-32	"	"	"	"	"	Functionalization - Depreciation - Communications & Control Systems
Ex. #	Coalition-11-33	"	"	"	"	"	Functionalization - Depreciation Costs - Treatment of Specific Facilities' Costs
Ex. #	Coalition-11-34	"	"	"	"	"	Functionalization - Assets and Investments - Assignment to Functions - General
Ex. #	Coalition-11-35	"	"	"	"	"	Functionalization - Assets and Investments - Assignment to Functions - Buildings, Communication and General Equipment
Ex. #	Coalition-11-36	"	"	"	"	"	Functionalization - Assets and Investments - Assignment to Functions - Buildings, Communication and General Equipment
Ex. #	Coalition-11-37	"	"	"	"	"	Functionalization - Non-Tariffable Transmission - MISO Requirements
Ex. #	Coalition-11-38	"	"	"	"	"	Functionalization - Non-Tariffable Transmission - Radial Lines
Ex. #	Coalition-11-39	"	"	"	"	"	Functionalization - Non-Tariffable Transmission - Radial Lines
Ex. #	Coalition-11-40	"	"	"	"	"	Functionalization - Northern Collector Circuits
Ex. #	Coalition-11-41	"	"	"	"	"	Functionalization - Bipole I & II - Treatment as Generation
Ex. #	Coalition-11-42	"	"	"	"	"	Functionalization - Bipole I & II - Proposed Treatment as Generation
Ex. #	Coalition-11-43	"	"	"	"	"	Functionalization - Bipole III - Transmission Facilities - Proposed Future Treatment as Generation
Ex. #	Coalition-11-44	"	"	"	"	"	Functionalization - Bipole III - Transmission Facilities - Proposed Future Treatment as Generation
Ex. #	Coalition-11-45	"	"	"	"	"	Functionalization - Dorsey - Treatment as Generation
Ex. #	Coalition-11-46	"	"	"	"	"	Functionalization - Dorsey - Treatment as Generation

Ex. #	Coalition-11-47	"	"	"	"	"	Functionalization - Riel - Treatment as Generation
Ex. #	Coalition-11-48	"	"	"	"	"	Functionalization - Riel - Treatment as Generation
Ex. #	Coalition-11-49	"	"	"	"	"	Functionalization - Distribution - Sub Functionalization of Distribution Plant
Ex. #	Coalition-11-50	"	"	"	"	"	Functionalization - Distribution - Primary vs. Secondary Distribution
Ex. #	Coalition-11-51	"	"	"	"	"	Functionalization - Distribution Services - Cost Assignment to Sub-Functions
Ex. #	Coalition-11-52	"	"	"	"	"	Classification/Allocation - Generation - Christensen Associates' 2012 Recommendations
Ex. #	Coalition-11-53	"	"	"	"	"	Classification/Allocation - Generation - Determination of Marginal Cost Weightings
Ex. #	Coalition-11-54	"	"	"	"	"	Classification/Allocation - Generation - Christensen Associates' 2015 Recommendations
Ex. #	Coalition-11-55	"	"	"	"	"	Classification/Allocation - Generation - Christensen Associates' 2015 Recommendations
Ex. #	Coalition-11-56	"	"	"	"	"	Classification/Allocation - Generation - Determination of Marginal Cost Weightings
Ex. #	Coalition-11-57	"	"	"	"	"	Classification/Allocation - Generation - Determination of Marginal Cost Weightings
Ex. #	Coalition-11-58	"	"	"	"	"	Classification/Allocation - Generation - Determination of Marginal Cost Weightings
Ex. #	Coalition-11-59	"	"	"	"	"	Classification/Allocation - Generation - Wind
Ex. #	Coalition-11-60	"	"	"	"	"	Classification/Allocation - Generation - Purchased Power
Ex. #	Coalition-11-61	"	"	"	"	"	Classification/Allocation - Generation - Purchased Power

Ex. #	Coalition-11-62	"	"	"	"	"	Classification/Allocation - Generation - Thermal Generation
Ex. #	Coalition-11-63	"	"	"	"	"	Classification/Allocation - Generation - Coal Fired Thermal Generation
Ex. #	Coalition-11-64	"	"	"	"	"	Classification/Allocation - Generation - Trading Desks and MISO/MAPP Fees
Ex. #	Coalition-11-65	"	"	"	"	"	Classification/Allocation - Generation - Domestic Lines
Ex. #	Coalition-11-66	"	"	"	"	"	Classification/Allocation - Transmission - Determination of 2CP Allocator
Ex. #	Coalition-11-67	"	"	"	"	"	Classification/Allocation - Transmission - Interconnections - Definitions
Ex. #	Coalition-11-68	"	"	"	"	"	Classification/Allocation - Transmission - Interconnections - Definitions
Ex. #	Coalition-11-69	"	"	"	"	"	Classification/Allocation - Distribution Plant - Classification of Distribution Facilities
Ex. #	Coalition-11-70	"	"	"	"	"	Classification/Allocation - Distribution Plant - Classification of Distribution Facilities
Ex. #	Coalition-11-71	"	"	"	"	"	Classification/Allocation - Distribution Plant - Distribution Lines & Poles - Secondary Adjustment
Ex. #	Coalition-11-72	"	"	"	"	"	Classification/Allocation - Distribution Plant - Treatment of GSL 0-30 kV Rate Class
Ex. #	Coalition-11-73	"	"	"	"	"	Classification/Allocation - Distribution Plant - Treatment of ARL
Ex. #	Coalition-11-74	"	"	"	"	"	Classification/Allocation - Distribution Plant - Weightings for Services, Meters & Meter Maintenance
Ex. #	Coalition-11-75	"	"	"	"	"	Classification/Allocation - Distribution Service - Customer Weighting Factors
Ex. #	Coalition-11-76	"	"	"	"	"	Net Export Revenue - Allocation - Determination of Allocation Factors
Ex. #	Coalition-11-77	"	"	"	"	"	Terms and Conditions of Service - Service Agreement - Payments Required

Ex. #	Coalition-11-78	"	"	"	"	"	Terms and Conditions of Service - Service Agreement - New versus Existing Services
Ex. #	Coalition-11-79	"	"	"	"	"	Terms and Conditions of Service - Service Agreement - Payment and Notice Periods
Ex. #	Coalition-11-80	"	"	"	"	"	Service Extension Policy - Capital Contributions - Residential Service Customers
Ex. #	Coalition-11-81	"	"	"	"	"	Service Extension Policy - Capital Contributions -General Service (Small & Medium) Customers
Ex. #	Coalition-11-82	"	"	"	"	"	Service Extension Policy - Capital Contributions -Customers <30 kV
Ex. #	Coalition-11-83	"	"	"	"	"	Service Extension Policy - Capital Contributions -Customers <30 kV - with Customer Owned Transformation
Ex. #	Coalition-11-84	"	"	"	"	"	Service Extension Policy - Capital Contributions -Customers <30 kV or >5MW
Ex. #	Coalition-11-85	"	"	"	"	"	Cost of Service Study - PCOSS14-Amended - Compliance with Board Directives (117/06 & 116/08)
Ex. #	Coalition-11-86	"	"	"	"	"	Cost of Service Study - PCOSS14-Amended - Impact of Compliance with Board Directives
Ex. #	Coalition-11-87	"	"	"	"	"	Allocation - Transmission - Use of 2CP Allocator
Ex. #	Coalition-11-88	"	"	"	"	"	Reconciliation of Financial Forecast - O&A Costs - DSM
Ex. #	Coalition-11-89	"	"	"	"	"	Export Class - Dependable versus Opportunity Exports - Basis for Dependable/Export Split
Ex. #	Coalition-11-90	"	"	"	"	"	Cost of Service Study - PCOSS14-Amended - Comparative Results
Ex. #	Coalition-11-91	"	"	"	"	"	Functionalization - Export Costs - Treatment of Transmission Service Costs
Ex. #	Coalition-11-92	"	"	"	"	"	Classification/Allocation - Transmission - Interconnections - Costs

Ex. #	Coalition-11-93	" " " " " Allocation - GSS Classes - Customer Counts Used
Ex. #	Coalition-11-94	" " " " " Functionalization - Ancillary Services - Generation & Transmission Assets Included
Ex. #	Coalition-11-95	" " " " " Cost of Service Study - Goals - Approach to Cost Causation
Ex. #	Coalition-11-96	" " " " " Cost of Service Study - Goals - Approach to Cost Causation
Ex. #	Coalition-11-97	" " " " " Cost of Service Study - Use of Results - Comparison of Unit Costs and Rates
Ex. #	Coalition-11-98	" " " " " Cost of Service Study - Transmission and Substations - Reconciliation of Data
Ex. #	Coalition-12	Coalition's Priority Questions - May Workshop
Ex. #	Coalition-13	Coalition letter to PUB re COSS Methodology Workshop dated May 10, 2016
Ex. #	<a href="#">Coalition-14</a>	Coalition letter to PUB re COSS Evidence dated June 10, 2016
Ex. #	<a href="#">Coalition-15</a>	Manitoba Hydro Cost of Service Methodology Review - Evidence Prepared by William Harper of Econalysis Consulting Services for Consumers' Association of Canada (Manitoba Branch) and Winnipeg Harvest (The Consumers Coalition)
Ex. #	<a href="#">Coalition-16</a>	Acronyms used by William Harper
Ex. #	<a href="#">Coalition-17</a>	Presentation of William Harper on behalf of the Consumer Coalition - June 22, 2016
Ex. #	<a href="#">Coalition-18</a>	2nd Pre Hearing Conference Presentation - June 24, 2016
Ex. #	<a href="#">Coalition-19</a>	Ontario Energy Board Decision on Procedure for Oral Hearing - EB 2012-0031
Ex. #	<a href="#">Coalition-20</a>	Coalition letter to PUB re COSS Proceeding dated June 29, 2016
Ex. #	<a href="#">Coalition-21</a>	Coalition letter to PUB re Expert Witness Qualification dated July 29, 2016

Ex. #	<a href="#">Coalition-21-1</a>	<i>Curriculum vitae</i> of William Harper
Ex. #	<a href="#">Coalition-22</a>	Coalition's Rebuttal Evidence - August 5, 2016
Ex. #	<a href="#">Coalition-22-1</a>	Attachment A to Rebuttal Evidence - Final Report of Leidos Engineering from the 2013 COS Methodology Review in BC
Ex. #	<a href="#">Coalition-23</a>	Coalition to PUB - Commentary on Proposed Witness Qualifications - August 5, 2016
Ex. #	<a href="#">Coalition-23-1</a>	Attachment A to August 5, 2016 Letter re Proposed Witness Qualifications
Ex. #	<a href="#">Coalition-24</a>	Coalition's Written Submission on Issues not Subject to Oral Hearing - August 12, 2016
Ex. #	<a href="#">Coalition-24-1</a>	Appendix A - Areas Requiring Improvements
Ex. #	<a href="#">Coalition-24-2</a>	Appendix B - Summary of Coalition's Recommendations
Ex. #	<a href="#">Coalition-25</a>	Reply Submission of the Consumer's Coalition - August 19, 2016
Ex. #	<a href="#">Coalition-26</a>	Coalition re Manitoba Hydro's Letter on Clarification of Scope of Oral Hearing Issues - August 26, 2016
Ex. #	Coalition-27	CAC/MSOS/MH I-66
Ex. #	Coalition-28	Comparison of Marginal Costs and Average Revenue by Customer Class
Ex. #	Coalition-29	Cost of Service - Evolution in a Time of Material Change - Presentation
Ex. #	Coalition-30	Evidence of William Harper - Presentation
Ex. #	Coalition-31	Hansard Excerpts - June 18 2001
Ex. #	Coalition-32	NFAT Evidence of Mr. P. Bowman
Ex. #	Coalition-33	Closing Submission of the Consumers' Coalition - September 21, 2016

Ex. #	Coalition-33-1	Appendix A - Recommendations of Bill Harper
Ex. #	Coalition-34	Reply Submission of the Consumer's Coalition to September 21 2016 Submissions of Interveners



**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**CITY OF WINNIPEG**

Ex. #	<a href="#">CoW-1</a>	City of Winnipeg's response to PUB's December 8, 2015 letter regarding Minimum Filing Requirements dated December 16, 2015
Ex. #	<a href="#">CoW-2</a>	City of Winnipeg Intervener Application
Ex. #	<a href="#">CoW-3</a>	Written Argument of the City of Winnipeg for the Pre Hearing Conference - February 10, 2016
Ex. #	<a href="#">CoW-4</a>	City of Winnipeg Comments re COS Model dated February 23, 2016
Ex. #	<a href="#">CoW-5</a>	City of Winnipeg Intervenor Budget Estimate - March 1, 2016
Ex. #	CoW-6-1	<a href="#">City of Winnipeg (CoW) to Manitoba Hydro (MH) - 1st Round Information Requests</a> Direct Assignment - Lighting
Ex. #	CoW-6-2	" " " " " Allocation - Customer Service
Ex. #	CoW-6-3	" " " " " Allocation - Customer Acct - Billings
Ex. #	CoW-6-4	" " " " " Allocation - Dist Plant - Lines
Ex. #	CoW-6-5	" " " " " Allocation - CP Load Factor



Ex. #	CoW-6-6	" " " " " Class Coincident Factor
Ex. #	CoW-6-7	" " " " " Hour Weighted Average Price and Marginal Cost Weighting
Ex. #	CoW-6-8	" " " " " Allocation - Energy Consumption Information
Ex. #	CoW-6-9	" " " " " Load Forecast
Ex. #	CoW-6-10	" " " " " Load Forecast - Forecast Total kWh
Ex. #	<a href="#">CoW-7</a>	Ratio of Direct to Classified Costs Table - May 13, 2016
Ex. #	<a href="#">CoW-8</a>	Proposed Enhancements of Manitoba Hydro's Prospective Cost of Service Study (PCOSS) Methodology - Evidence prepared by John Todd, President of Elenchus Research Associates Inc. on behalf of the City of Winnipeg
Ex. #	<a href="#">CoW-9</a>	Presentation by John Todd on behalf of the City of Winnipeg - June 23, 2016
Ex. #	<a href="#">CoW-10</a>	CoW to PUB Letter re Pre Hearing Conference 2 dated June 24, 2016
Ex. #	<a href="#">CoW-11</a>	Email from City of Winnipeg re Expert Witness Qualification - July 28, 2016
Ex. #	<a href="#">CoW-11-1</a>	<i>Curriculum vitae</i> of John Todd
Ex. #	CoW-12	Email from City of Winnipeg re MH's Comments on Proposed Expert Qualifications
Ex. #	CoW-13	Written Submission of the City of Winnipeg on Issues not Subject to Oral Hearing
Ex. #	CoW-14	Email re Scope of Key Issues for Oral Hearing - August 25, 2016
Ex. #	CoW-15	Response to Time Requests/Estimates for Cross Examinations and Presentations - August 29, 2016
Ex. #	CoW-16	Manitoba Hydro Cost of Service Study - Treatment of Net Export - Presentation

Ex. #	CoW-17	Final Argument of the City of Winnipeg on Issues that were subject of Concurrent Evidence Session
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**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**GREEN ACTION CENTRE (GAC)**

Ex. #	<a href="#">GAC-1</a>	Green Action Centre - Intervener Application Form
Ex. #	<a href="#">GAC-2</a>	2004 PUB Testimony and Exhibits of Jim Lazar on behalf of Time to Respect Earth's Ecosystems (TREE) and Resource Conservation Manitoba (RCM)
Ex. #	<a href="#">GAC-3</a>	2006 Evidence of Jim Lazar on behalf of Time to Respect Earth's Ecosystems (TREE) and Resource Conservation Manitoba (RCM) for the Manitoba Hydro Cost of Service Methodology Review - March 15, 2006
Ex. #	<a href="#">GAC-4</a>	2008 Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems - November 17, 2008 - Manitoba Hydro Energy Intensive Industrial Rate Application
Ex. #	<a href="#">GAC-5</a>	2008 Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems - February 1, 2008 - Manitoba Hydro 2008/09 General Rate Application
Ex. #	<a href="#">GAC-6</a>	2010 Direct Testimony of Paul Chernick on Behalf of Resource Conservation Manitoba and Time to Respect Earth's Ecosystems - December 10, 2010 - 2010/11 & 2011/12 Manitoba Hydro General Rate Application
Ex. #	<a href="#">GAC-7</a>	2012 Direct Testimony of Paul Chernick on behalf of Green Action Centre - November 16, 2012 - Manitoba Hydro 2011/12 & 2012/13 General Rate Application
Ex. #	<a href="#">GAC-8</a>	Green Action Centre - Written Submission in response to PUB's letter of January 22, 2016 - dated February 10, 2016
Ex. #	<a href="#">GAC-9</a>	GAC Pre Hearing Conference Presentation

Ex. #	<a href="#">GAC-10</a>	GAC Letter to PUB re Model dated February 23, 2016
Ex. #	<a href="#">GAC-11</a>	GAC Proposed Budget for COSS - March 1, 2016
Ex. #	GAC-12-1	<a href="#">Green Action Centre (GAC) to Manitoba Hydro (MH) - 1st Round Information Requests</a> Map of MH's Transmission System
Ex. #	GAC-12-2	" " " " " Split of Transmission Costs into US interconnections & non-energy related transmission
Ex. #	GAC-12-3	" " " " " Functionalization of the Dorsey Converter Station
Ex. #	GAC-12-4	" " " " " Transmission - Sub-functionalization & allocation of transmission
Ex. #	GAC-12-5	" " " " " Transmission - Sub-functionalization & allocation of transmission
Ex. #	GAC-12-6	" " " " " Transmission - Sub-functionalization & allocation of transmission
Ex. #	GAC-12-7	" " " " " Allocation of transmission
Ex. #	GAC-12-8	" " " " " Allocation of transmission
Ex. #	GAC-12-9	" " " " " Subtransmission - Allocation of transmission stations
Ex. #	GAC-12-10	" " " " " Subtransmission - Allocation of transmission stations
Ex. #	GAC-12-11	" " " " " Functionalization of Transmission, Subtransmission & Distribution
Ex. #	GAC-12-12	" " " " " Functionalization of subtransmission

Ex. #	GAC-12-13	"	"	"	"	"	Substations - Allocation of substations
Ex. #	GAC-12-14	"	"	"	"	"	Distribution of substations
Ex. #	GAC-12-15	"	"	"	"	"	Allocation of distribution substations
Ex. #	GAC-12-16	"	"	"	"	"	Classification and allocation of distribution lines
Ex. #	GAC-12-17	"	"	"	"	"	Breakdown of Distribution plant cost components
Ex. #	GAC-12-18	"	"	"	"	"	Functionalization of distribution
Ex. #	GAC-12-19	"	"	"	"	"	Functionalization and allocation of distribution
Ex. #	GAC-12-20	"	"	"	"	"	Allocation of customer costs
Ex. #	GAC-12-21	"	"	"	"	"	Weighted customer allocators
Ex. #	GAC-12-22	"	"	"	"	"	Distribution
Ex. #	GAC-12-23	"	"	"	"	"	Classification of distribution
Ex. #	GAC-12-24	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-25	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-26	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-27	"	"	"	"	"	Classification of a portion of distribution as customer-related

Ex. #	GAC-12-28	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-29	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-30	"	"	"	"	"	Classification of a portion of distribution as customer-related
Ex. #	GAC-12-31	"	"	"	"	"	Distribution Equipment - Serialized Equipment
Ex. #	GAC-12-32	"	"	"	"	"	Allocation of distribution - Appropriateness of 30% discount to the GSL 0-30 kV class
Ex. #	GAC-12-33	"	"	"	"	"	Allocation of distribution - Appropriateness of 30% discount to the GSL 0-30 kV class
Ex. #	GAC-12-34	"	"	"	"	"	Allocation of distribution - Appropriateness of 30% discount to the GSL 0-30 kV class
Ex. #	GAC-12-35	"	"	"	"	"	Allocation of distribution - Appropriateness of 30% discount to the GSL 0-30 kV class
Ex. #	GAC-12-36	"	"	"	"	"	Allocation of distribution - Appropriateness of 30% discount to the GSL 0-30 kV class
Ex. #	GAC-12-37	"	"	"	"	"	Classification and allocation of distribution
Ex. #	GAC-12-38	"	"	"	"	"	Distribution functionalization, classification and allocation
Ex. #	GAC-12-39	"	"	"	"	"	Circuit maps for all MH distribution circuits
Ex. #	GAC-12-40	"	"	"	"	"	Distribution, classification and allocation
Ex. #	GAC-12-41	"	"	"	"	"	Distribution, classification and allocation
Ex. #	GAC-12-42	"	"	"	"	"	Distribution classification and allocation

Ex. #	GAC-12-43	"	"	"	"	"	Distribution classification and allocation
Ex. #	GAC-12-44	"	"	"	"	"	Allocation of line transformers
Ex. #	GAC-12-45	"	"	"	"	"	Diversity of load on line transformers
Ex. #	GAC-12-46	"	"	"	"	"	Diversity of load on line transformers
Ex. #	GAC-12-47	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-48	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-49	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-50	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-51	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-52	"	"	"	"	"	Weighted customer allocators for services
Ex. #	GAC-12-53	"	"	"	"	"	Weighted energy allocator
Ex. #	GAC-12-54	"	"	"	"	"	Weighted energy allocator
Ex. #	GAC-12-55	"	"	"	"	"	Weighted energy allocator
Ex. #	GAC-12-56	"	"	"	"	"	Weighted energy allocator

Ex. #	GAC-12-57	" " " " " Development of Class loads
Ex. #	GAC-12-58	" " " " " Development of Class loads
Ex. #	GAC-12-59	" " " " " Development of Class loads
Ex. #	GAC-12-60	" " " " " Development of NCP allocator
Ex. #	GAC-12-61	" " " " " Development of NCP allocator
Ex. #	<a href="#">GAC-13</a>	Evidence of Paul Chernick of Resource Insight Inc. on behalf of the Green Action Centre - June 10, 2016
Ex. #	<a href="#">GAC-14</a>	Presentation by Paul Chernick on behalf of the Green Action Centre - June 22, 2016
Ex. #	<a href="#">GAC-15</a>	Email in response to PUB's request for comments re MH's request to amend timetable - July 20, 2016
Ex. #	<a href="#">GAC-16</a>	GAC to PUB re Expert Witness Qualification - July 29, 2016
Ex. #	<a href="#">GAC-16-1</a>	<i>Curriculum Vitae</i> of Paul Chernick
Ex. #	<a href="#">GAC-17</a>	GAC Rebuttal Evidence - August 5, 2016
Ex. #	<a href="#">GAC-18</a>	Written Submission on Issues not Subject to Oral Hearing
Ex. #	<a href="#">GAC-19</a>	GAC Reply on Issues not Subject to Oral Evidence - August 19, 2016
Ex. #	<a href="#">GAC-20</a>	GAC Letter re Clarification of Scope of Oral Hearing Issues - August 29, 2016
Ex. #	GAC-21	GAC Budget Letter
Ex. #	GAC-22	GAC Cost of Service Issues - Presentations
Ex. #	GAC-23	GAC Presentation Clarification



Ex. #	GAC-24	GAC Submission on COSS Issues subject to Oral Hearing - September 21 2016
Ex. #	GAC-25	GAC Reply Submission on COSS Issues subject to Oral Hearing - September 26 2016



**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**General Service Small Customers and General Service Medium Customer Classes (GSS/GSM)**

Ex. #	<a href="#">GSS/GSM-1</a>	Intervener Request Form	
Ex. #	<a href="#">GSS/GSM-2</a>	GSS/GSM Budget Estimate - March 1, 2016	
Ex. #	<a href="#">GSS/GSM-3</a>	GSS/GSM to PUB re Pre-Asks dated May 9, 2016	
Ex. #	GSS/GSM-4-1	<a href="#">GSS/GSM Pre-Ask 1</a>	Treatment of Exports & Net Export Revenues
Ex. #	GSS/GSM-4-2	GSS/GSM Pre-Ask 2	Revenue Cost Coverage - Zone of Reasonableness
Ex. #	GSS/GSM-4-3	GSS/GSM Pre-Ask 3	Cost Allocation Amendments - Export and General Service Cost Allocation
Ex. #	GSS/GSM-4-4	GSS/GSM Pre-Ask 4	Cost Allocation -Appropriateness of cost coverage considering MH's Load Forecast
Ex. #	GSS/GSM-4-5	GSS/GSM Pre-Ask 5	Hourly Load profile
Ex. #	GSS/GSM-4-6	GSS/GSM Pre-Ask 6	Generation - Hourly Load profile

Ex. #	GSS/GSM-4-7	GSS/GSM Pre-Ask 7	Generalization - Funtionalization
Ex. #	GSS/GSM-4-8	GSS/GSM Pre-Ask 8	Exports - Historical & Forecast breakdown of exports
Ex. #	GSS/GSM-4-9	GSS/GSM Pre-Ask 9	Exports - Opportunity export Trading Desk and MISO membership Costs
Ex. #	GSS/GSM-4-10	GSS/GSM Pre-Ask 10	Treatment of exports and net export revenues - Opportunity export costs
Ex. #	GSS/GSM-4-11	GSS/GSM Pre-Ask 11	Distribution and any other issues
Ex. #	<a href="#">GSS/GSM-5</a>	GSS/GSM letter to PUB re Cost of Service Methodology Workshop - May 10, 2016	
Ex. #	<a href="#">GSS/GSM-6</a>	Evidence by London Economics prepared on behalf of the General Service Small and General Service Medium Customers dated June 10, 2016	
Ex. #	<a href="#">GSS/GSM-7</a>	Presentation by London Economics prepared on behalf of the General Service Small and General Service Medium Customers dated June 23, 2016	
Ex. #	<a href="#">GSS/GSM-8</a>	Response to Undertaking #34	
Ex. #	<a href="#">GSS/GSM-9</a>	Response to Undertaking #35	
Ex. #	<a href="#">GSS/GSM-10</a>	Response to Undertaking #36 - CV's of Expert Witnesses	
Ex. #	<a href="#">GSS/GSM-10-1</a>	<i>Curriculum vitae of</i> AJ Goulding	
Ex. #	<a href="#">GSS/GSM-10-2</a>	<i>Curriculum vitae of</i> Ian Chow	
Ex. #	<a href="#">GSS/GSM-10-3</a>	<i>Curriculum vitae of</i> Jarome Leslie	

Ex. #	<a href="#">GSS/GSM-11</a>	GSS/GSM to PUB re Expert Witness Qualification dated July 29, 2016
Ex. #	GSS/GSM-12	GSS/GSM Rebuttal Evidence - August 8, 2016
Ex. #	GSS/GSM-13	GSS/GSM Written Submission on Issues not Subject to Oral Hearing
Ex. #	GSS/GSM-14	GSS/GSM Budget Submission
Ex. #	GSS/GSM-15	Manitoba Hydro Cost of Service Methodology - Presentation
Ex. #	GSS/GSM-16	Written Submission of General Service Small and General Service Medium Customer Class on Key Issues of MH's Cost of Service Review



## EXHIBIT LIST FOR

### MANITOBA HYDRO Cost of Service Study Review

September 27, 2016

#### **MANITOBA INDUSTRIAL POWER USERS GROUP (MIPUG)**

Ex. #	<a href="#">MIPUG-1</a>	MIPUG to PUB Letter dated December 16, 2015 re Minimum Filing Requirements for Cost of Service Review
Ex. #	<a href="#">MIPUG-2</a>	MIPUG Intervener Application
Ex. #	<a href="#">MIPUG-3</a>	MIPUG's Previous COSS Evidence - Cover Letter dated February 5, 2016
Ex. #	<a href="#">MIPUG-4</a>	Pre-Filed Testimony of P. Bowman and A. McLaren on behalf of MIPUG in Regard to Manitoba Hydro 2006 Cost-of-Service Application
Ex. #	<a href="#">MIPUG-5</a>	Pre-Filed Testimony of P. Bowman and A. McLaren on behalf of MIPUG in Regard to Manitoba Hydro 2008 General Rate Application
Ex. #	<a href="#">MIPUG-6</a>	Pre-Filed Testimony of P. Bowman and A. McLaren on behalf of MIPUG in Regard to Manitoba Hydro 2010/11 and 2011/12 General Rate Application
Ex. #	<a href="#">MIPUG-7</a>	MIPUG's Written Submission in response to PUB's letter of January 22, 2016 - dated February 10, 2016
Ex. #	<a href="#">MIPUG-8</a>	MIPUG Comments on MH COS Model - dated February 23, 2016
Ex. #	<a href="#">MIPUG-9</a>	MIPUG's Budget Estimates for COSS
Ex. #	MIPUG-10-1	<a href="#">Manitoba Industrial Power Users Group (MIPUG) to Manitoba Hydro (MH) - 1st Round Information Requests</a> Order 116/08 Methodology

Ex. #	MIPUG-10-2	"	"	"	"	"	US Interface Cost Allocation - Transmission Cost Allocation
Ex. #	MIPUG-10-3	"	"	"	"	"	2 CP (Coincident Peak) Allocator – D14
Ex. #	MIPUG-10-4	"	"	"	"	"	Allocator C10 –Customer Service General
Ex. #	MIPUG-10-5	"	"	"	"	"	Tabular Progression for Prospective Cost of Service Study 2006 to 2014
Ex. #	MIPUG-10-6	"	"	"	"	"	Export NER
Ex. #	MIPUG-10-7	"	"	"	"	"	Calculation of Top 50 Hourly Peaks
Ex. #	MIPUG-10-8	"	"	"	"	"	Electronic models for MIPUG MFRs
Ex. #	MIPUG-10-9	"	"	"	"	"	Generation and Transmission Costs - Scope of costs included in each allocator
Ex. #	MIPUG-10-10	"	"	"	"	"	Allocation of Some Costs of Generation to Peak Usage
Ex. #	MIPUG-10-11	"	"	"	"	"	Uniform Rates
Ex. #	MIPUG-10-12	"	"	"	"	"	High customers weightings to industrial customers
Ex. #	MIPUG-10-13	"	"	"	"	"	System Extension - Charges to industrial customer expansions
Ex. #	MIPUG-10-14	"	"	"	"	"	PCOSS 13
Ex. #	MIPUG-10-15	"	"	"	"	"	Christensen Report 2012
Ex. #	MIPUG-10-16	"	"	"	"	"	Curtable Service Program Costs - DSM and Demand Allocators
Ex. #	MIPUG-10-17	"	"	"	"	"	2012 Load Research at Generation Peak for PCOSS14 Model

Ex. #	MIPUG-10-18	" " " " " Derivation of Energy Weights for PCOSS14
Ex. #	<a href="#">MIPUG-11</a>	Pre-filed Testimony of Patrick Bowman in regard to Manitoba Hydro 2016 Cost of Service Application submitted on behalf of Manitoba Industrial Power Users Group
Ex. #	<a href="#">MIPUG-12</a>	Email dated June 10, 2016 from MIPUG Counsel - Mr. Antoine Hacault
Ex. #	<a href="#">MIPUG-13</a>	Presentation of Patrick Bowman on behalf of MIPUG - June 22, 2016
Ex. #	<a href="#">MIPUG-14</a>	MIPUG Letter to PUB re PHC Reply of Manitoba Hydro dated June 30, 2016
Ex. #	<a href="#">MIPUG-15</a>	MIPUG response to Undertaking #31
Ex. #	<a href="#">MIPUG-16</a>	MIPUG response to Undertaking #32
Ex. #	<a href="#">MIPUG-17</a>	MIPUG response to Undertaking #33
Ex. #	<a href="#">MIPUG-18</a>	MIPUG to PUB letter re COSS Expert CV and Scope of Expert Qualification dated July 29, 2016
Ex. #	<a href="#">MIPUG-19</a>	MIPUG Rebuttal Evidence - August 5, 2016
Ex. #	<a href="#">MIPUG-20</a>	MIPUG's Written Submission on Issues not Subject to Oral Hearing
Ex. #	<a href="#">MIPUG-21</a>	MIPUG's response to PUB's August 10, 2016 Letter re Challenges to Mr. Bowman's Qualifications
Ex. #	<a href="#">MIPUG-22</a>	MIPUG Reply Submission on Issues not Subject to Oral Hearing - August 19, 2016
Ex. #	MIPUG-23	MIPUG Budget Request
Ex. #	MIPUG-24	MIPUG References
Ex. #	MIPUG-25	Review of Manitoba Hydro's Cost of Service Study - Presentation

Ex. #	MIPUG-26	Presentation Outline for COSS Review Concurrent Oral Evidence
Ex. #	MIPUG-27	NFAT Reference MH Exhibit #100
Ex. #	MIPUG-28	NARUC Manual - 1992
Ex. #	MIPUG-29	MIPUG's Written Submission on Issues Subject to Oral Hearing and Concurrent Evidence - September 21 2016
Ex. #	MIPUG-30	MIPUG's Reply Submission on Issues subject to Oral Hearing and Concurrent Evidence - September 26 2016





**MANITOBA HYDRO**  
Cost of Service Study Review

September 27, 2016

**MANITOBA KEEWATINOWI OKIMAKANAK (MKO)**

Ex. #	MKO -1	MKO Intervener Application
Ex. #	MKO -2	MKO Comments on COS Model dated February 23, 2016
Ex. #	MKO -3	MKO Budget for COSS - March 1, 2016
Ex. #	MKO -4	MKO Final Submission



**EXHIBIT LIST FOR**  
**MANITOBA HYDRO**  
**Cost of Service Study Review**

September 27, 2016

**MANITOBA METIS FEDERATION (MMF)**

Ex. #	MMF-1	Intervener Request Form
Ex. #	MMF-2	COSS MMF Budget - March 1, 2016
Ex. #	MMF-3	MMF Letter to PUB dated September 26, 2016
Ex. #	MMF-4	