



EXHIBIT LIST FOR  
**EFFICIENCY MANITOBA**  
 3-YEAR ENERGY EFFICIENCY PLAN (2020/21-2022/23)  
 January 29, 2020

**EFFICIENCY MANITOBA (EM) Exhibits**

Ex. #	EM-1	Efficiency Manitoba Application - October 25, 2019
Ex. #	EM-2	News Release re: EM files first three-year Efficiency Plan - October 25, 2019
Ex. #	EM-3	EM letter to PUB re: Comments on Timeline, Issues List and Intervener Applications - November 4, 2019
Ex. #	EM-4	EM letter response to CoC Intervener Application letter - November 5, 2019
Ex. #	EM-5	EM email response to CC Motion for Extension - December 6, 2019
Ex. #	EM-6	EM email response to MIPUG Request for Extension - December 6, 2019
Ex. #	EM-7	EM email response to DAY Request for Extension - December 6, 2019
Ex. #	EM-8	<b>EM-AMC Intervener Information Requests (1-4) - December 13, 2019</b>
Ex. #	EM-8-1	" " " " " " Flexibility to EM to make adjustments to program offerings
Ex. #	EM-8-2	" " " " " " Figure 5-15 worksheets and working papers
Ex. #	EM-8-3	" " " " " " Evaluation frameworks
Ex. #	EM-8-4	" " " " " " Data showing First Nation population is approx.. 80% of the LICO-125 population
Ex. #	EM-9	<b>EM-COALITION Intervener Information Requests (1-12) - December 13, 2019</b>
Ex. #	EM-9-1	<b>(J. Grevatt)</b> flexibility to EM to make adjustments to program offerings
Ex. #	EM-9-2	" " " " " " Project Management Plan
Ex. #	EM-9-3	" " " " " " residential and income-eligible program budget
Ex. #	EM-9-4	" " " " " " Measure level v. Portfolio level
Ex. #	EM-9-5	<b>(C. Neme)</b> Heat Pumps electric efficiency measure - Home Renovations Program

Ex. #	EM-9-6	"	"	"	"	"	"	Heat Pumps electric efficiency measure -Low-income customers in Income Qualified program
Ex. #	EM-9-7	"	"	"	"	"	"	"Power Smart" program directive
Ex. #	EM-9-8	"	"	"	"	"	"	Recommendation 5 - aligns with Mr. Dunsky
Ex. #	EM-9-9	<b>(P. Fitzpatrick)</b>						Public Engagement
Ex. #	EM-9-10	<b>(Harper) - December 18, 2019</b>						Integrated Resource Planning
Ex. #	EM-9-11	"	"	"	"	"	"	Weighting of Objectives to be considered
Ex. #	EM-9-12	"	"	"	"	"	"	Table 9 - transposed between electricity and natural gas
Ex. #	EM-10	<b>EM-DAY Intervener Information Requests (1-2) - December 13, 2019</b>						
Ex. #	EM-10-1	"	"	"	"	"	"	Load Displacement Energy Savings (Table 17, 34 and 40)
Ex. #	EM-10-2	"	"	"	"	"	"	Load Displacement Energy Savings (Table 42)
Ex. #	EM-11	<b>EM-MIPUG Intervener Information Requests (1-4) - December 13, 2019</b>						
Ex. #	EM-11-1	"	"	"	"	"	"	D. Friesen - flexibility to EM to make adjustments to program offerings
Ex. #	EM-11-2	"	"	"	"	"	"	P. Bowman - DSM Programing
Ex. #	EM-11-3	"	"	"	"	"	"	P. Bowman - relevant metrics used to evaluate inclusion of Income Qualified and Indigenous programs
Ex. #	EM-11-4	"	"	"	"	"	"	P. Bowman - Applicability of RIM test
Ex. #	EM-12	EM letter to PUB re: PUB-EM Round I Information Requests containing CSI - December 23, 2019						
Ex. #	EM-13	Rebuttal Evidence - January 2, 2020						
Ex. #	EM-14	CV of Colleen Kuruluk - January 6, 2020						
Ex. #	EM-15	CV of Michael Stocki - January 6, 2020						
Ex. #	EM-16	CV of Kyla Kramps - January 6, 2020						
Ex. #	EM-17	CV of Roberto Montanino - January 6, 2020						
Ex. #	EM-18	CV of Cheryl Pilek - January 6, 2020						
Ex. #	EM-19	CV of Amy Tuck - January 6, 2020						
Ex. #	EM-20	CV of Tracy Sterdan - January 6, 2020						

Ex. #	EM-21	Direct Evidence PowerPoint Presentation - January 6, 2020
Ex. #	EM-22	EM letter to PUB re: CSI Additional Information - January 9, 2020
Ex. #	EM-23	Undertaking #2&3 - Natural Gas Forecast - 2019/20 DSM plan - January 9, 2020
Ex. #	EM-24	Undertaking #4 - 3.9% increase for first 5 years- January 9, 2020
Ex. #	EM-25	Undertaking #1 - LED lighting Program interactive effects and saving measures January 10, 2020
Ex. #	EM-26	EM Book of Documents to Daymark - January 14, 2020
Ex. #	EM-27	Undertaking #5 - low income customers co-payments for heating equipment replacements in other jurisdictions - January 14, 2020
Ex. #	EM-28	Undertaking #6 -First Nation on Reserve v. Metis Housing in Table 5.1 from CC-EM I-102 - January 14, 2020 - <b>Revised January 21, 2020</b>
Ex. #	EM-29	Undertaking #8 - PUB-EM I-22a information from MH remains the same - January 14, 2020
Ex. #	EM-30	Undertaking #9 - Table 5.6 including 4.5 cents per kilowatt hour for 5 and 10 year period - January 14, 2020
Ex. #	EM-31	Undertaking #10 - Average annual energy savings per home - January 21, 2020
Ex. #	EM-32	Undertaking #7 - Variances in the budget during the plan will be addressed including step-by-step basis
Ex. #	EM-33	EM Final Argument - January 23, 2020
Ex. #	EM-34	EM Closing Submission Presentation - January 27, 2020
Ex. #	EM-35	Undertaking # 11 - Savings and Costs at program bundle and portfolio level- January 28, 2020
Ex. #	EM-36	EM Reply Submission - January 28, 2020



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**PUBLIC UTILITIES BOARD (PUB) Exhibits**

Ex. #	PUB-1-1	PUB letter to EM re Public Notice - September 10, 2019
Ex. #	PUB-1-2	" " " " " " " Public Notice re Efficiency Manitoba
Ex. #	PUB-2	Public Utilities Board Rules of Practise and Procedures
Ex. #	PUB-3	Board Order 162-19 - Procedural Order in Respect to Efficiency Manitoba's 2020/23 Efficiency Plan Submission - November 5, 2019
Ex. #	PUB-4	<b>PUB-EM Round I Information Requests - November 7, 2019</b>
Ex. #	PUB-4-1	" " " " " " " Programs and Initiatives considered - <b>Confidential</b>
Ex. #	PUB-4-2	" " " " " " " Optimizing Power Smart: Options to Achieve Manitoba's New Energy Savings Targets, 2017 - Dunsky Energy
Ex. #	PUB-4-3	" " " " " " " Hard to reach and First Nations customers
Ex. #	PUB-4-4	" " " " " " " Comparison of budget costs and savings per plan v. preliminary plan prior to adjustment based on Multi-Criteria
Ex. #	PUB-4-5	" " " " " " " Affordability of gas space heat compared to electric space heat for hard-to-reach and income qualified customers
Ex. #	PUB-4-6	" " " " " " " Community Driven Outcomes Contract model (CDOC) in Community Geothermal program
Ex. #	PUB-4-7	" " " " " " " Bill Affordability Collaborative Process Reports
Ex. #	PUB-4-8	" " " " " " " Cost-effective Savings targets of demand-side management
Ex. #	PUB-4-9	" " " " " " " Benchmarking of levelized costs with other jurisdictions
Ex. #	PUB-4-10	" " " " " " " Furnace Replacement Programs - <b>Confidential</b>
Ex. #	PUB-4-11	" " " " " " " Cost breakdowns for each initiative in the Plan
Ex. #	PUB-4-12	" " " " " " " Quantitative Screen
Ex. #	PUB-4-13	" " " " " " " Cost-Effectiveness Analysis

Ex. #	PUB-4-14	"	"	"	"	"	"	PACT energy benefits
Ex. #	PUB-4-15	"	"	"	"	"	"	Discount rates
Ex. #	PUB-4-16	"	"	"	"	"	"	Administration budget reasonableness compared to similar organizations
Ex. #	PUB-4-17	"	"	"	"	"	"	Payment Schedule with MH
Ex. #	PUB-4-18	"	"	"	"	"	"	Innovation and Research fund
Ex. #	PUB-4-19	"	"	"	"	"	"	Evaluation, Measurement and Verification activities annual budget
Ex. #	PUB-4-20	"	"	"	"	"	"	Revenue loss related to downstream costs - <b>Revised</b>
Ex. #	PUB-4-21	"	"	"	"	"	"	Impact of Plan on rates and average customer bill amounts - <b>Filed November 8, 2019</b>
Ex. #	PUB-4-22	"	"	"	"	"	"	Bill impact per portfolio/ Lifecycle Revenue Impact / EfficiencyOne Analysis - <b>Filed November 8, 2019</b>
Ex. #	PUB-4-23	"	"	"	"	"	"	Legislated Targets for Electric and Gas savings
Ex. #	PUB-4-24	"	"	"	"	"	"	Participation and Achieved Savings
Ex. #	PUB-4-25	"	"	"	"	"	"	Program achievements and reaching saving goals
Ex. #	PUB-4-26	"	"	"	"	"	"	MH DSM Plans (2015-current)
Ex. #	PUB-4-27	"	"	"	"	"	"	MH Power Smart Annual Review and DSM Reports (2015-current)
Ex. #	PUB-4-28	"	"	"	"	"	"	Tables showing Spending totals for programs - Electricity and Gas Programs by customer segment
Ex. #	PUB-4-29	"	"	"	"	"	"	Differences between Efficiency Plan and MH DMS 2015/16 Power Smart Plan
Ex. #	PUB-4-30	"	"	"	"	"	"	Summary of MH's Non-Utility Generation policy for connecting solar PV or generating systems
Ex. #	PUB-4-31	"	"	"	"	"	"	Details of load displacement and alternative energy projects <b>Confidential</b>
Ex. #	PUB-4-32	"	"	"	"	"	"	DAY-EM I-65-76 - details and formulas at individual initiative levels
Ex. #	PUB-4-33	"	"	"	"	"	"	New approaches or continuation of existing programs effective in Manitoba
Ex. #	PUB-4-34	"	"	"	"	"	"	Budget categories - breakdown of dollars and percentage of total budget
Ex. #	PUB-4-35	"	"	"	"	"	"	Emerging Technologies - solar thermal, cold climate air source heat pumps and variable frequency drivers
Ex. #	PUB-4-36	"	"	"	"	"	"	Independent Assessor
Ex. #	PUB-4-37	"	"	"	"	"	"	April 24, 2019 Mandate Letter from Minister

Ex. #	PUB-4-38	"	"	"	"	"	"	Appointed members of Energy Efficiency Advisory Group qualifications	
Ex. #	PUB-4-39	"	"	"	"	"	"	Code and Standards that savings will count from - <b>Revised</b>	
Ex. #	PUB-4-40	"	"	"	"	"	"	Interactive Effects from electrically heated homes and businesses	
Ex. #	PUB-4-41	"	"	"	"	"	"	Interactive Effects from Codes and Standards	
Ex. #	PUB-4-42	"	"	"	"	"	"	Definition of normal weather and weather normalization methodologies	
Ex. #	PUB-4-43	"	"	"	"	"	"	Date for filing Independent Assessor's Report to the Board	
Ex. #	PUB-4-44	"	"	"	"	"	"	Electric load growths impact on EM's savings targets	
Ex. #	PUB-4-45	"	"	"	"	"	"	Savings targets - <b>Revised November 8, 2019</b> - <b>Confidential</b>	
Ex. #	PUB-4-46	"	"	"	"	"	"	Removal of impact of Codes and Standards from load and volume forecasts - <b>Revised November 8, 2019</b>	
Ex. #	PUB-4-47	"	"	"	"	"	"	2018 Electric Load Forecast and Gas Volume Forecast - <b>Confidential</b>	
Ex. #	PUB-4-48	"	"	"	"	"	"	Natural gas savings under Indigenous Program	
Ex. #	PUB-5	Board Order 166-19 - An Order in Respect of the Review of Confidential Information in Efficiency Manitoba's 2020/23 Efficiency Submission - November 12, 2019							
Ex. #	PUB-6	PUB email response to CC Motion for Extension - December 6, 2019							
Ex. #	PUB-7	PUB email response to MIPUG Request for Extension - December 9, 2019							
Ex. #	PUB-8	PUB email response to DAY Request for Extension - December 9, 2019							
Ex. #	PUB-9	<b>PUB-AMC Intervener Information Requests (1-6) - December 13, 2019</b>							
Ex. #	PUB-9-1	"	"	"	"	"	"	First Nation reference includes on-reserve, or on-reserve and off-reserve account holders	
Ex. #	PUB-9-2	"	"	"	"	"	"	Residential per person energy savings	
Ex. #	PUB-9-3	"	"	"	"	"	"	First -Nations opportunities	
Ex. #	PUB-9-4	"	"	"	"	"	"	On-reserve dwellings compared to income-qualified dwelling	
Ex. #	PUB-9-5	"	"	"	"	"	"	LICO-125 dwellings	
Ex. #	PUB-9-6	"	"	"	"	"	"	Decline in participation in Insulation and Direct Install Programs	
Ex. #	PUB-10	<b>PUB-CC Intervener Information Requests (1-21) - December 13, 2019</b>							
Ex. #	PUB-10-1	<b>PUB-CC (Neme)</b>				GHG Emissions			
Ex. #	PUB-10-2	"	"	"	"	"	"	EM Mandate	

Ex. #	PUB-10-3	"	"	"	"	"	"	Cold climate air source heat pumps	
Ex. #	PUB-10-4	"	"	"	"	"	"	Counting savings by switching from gas to electricity	
Ex. #	PUB-10-5	"	"	"	"	"	"	PACT levelized cost of providing air source heat pumps	
Ex. #	PUB-10-6	<b>PUB-CC (Grevatt)</b>					Measure level detail		
Ex. #	PUB-10-7	"	"	"	"	"	"	Measure Level Data and program information	
Ex. #	PUB-10-8	"	"	"	"	"	"	Mitigating Risks	
Ex. #	PUB-10-9	"	"	"	"	"	"	Recommendations to mitigate risks	
Ex. #	PUB-10-10	"	"	"	"	"	"	Achieving Targets	
Ex. #	PUB-10-11	"	"	"	"	"	"	Codes of Standards	
Ex. #	PUB-10-12	"	"	"	"	"	"	Recommendations	
Ex. #	PUB-10-13	<b>PUB-CC (Fitzpatrick)</b>					EEAG Mandate - clarifications and recommendations		
Ex. #	PUB-10-14	"	"	"	"	"	"	Voluntary committee	
Ex. #	PUB-10-15	"	"	"	"	"	"	Limited interactions and best practices	
Ex. #	PUB-10-16	"	"	"	"	"	"	List of recommendations	
Ex. #	PUB-10-17	<b>PUB-CC (Harper)</b>					Savings Target		
Ex. #	PUB-10-18	"	"	"	"	"	"	Load Forecast	
Ex. #	PUB-10-19	"	"	"	"	"	"	Electric consumption baseline	
Ex. #	PUB-10-20	"	"	"	"	"	"	Enabling Strategies and Corporate Overhead - Electric and gas portfolios	
Ex. #	PUB-10-21	"	"	"	"	"	"	Gas and Electric PACT evaluation - discount rate	
Ex. #	PUB-10-22	<b>PUB-CC (Harper) - December 18, 2019</b>					Evaluation Criteria - Factors		
Ex. #	PUB-10-23	"	"	"	"	"	"	Refiling 2020-23 Plan after analysis	
Ex. #	PUB-10-24	"	"	"	"	"	"	Central Repository established for next Plan (2023-26) or refile 2020-23 plan	
Ex. #	PUB-10-25	"	"	"	"	"	"	Target savings values	
Ex. #	PUB-11	<b>PUB-DAY Intervener Information Requests (1-19) - December 13, 2019</b>							
Ex. #	PUB-11-1	"	"	"	"	"	"	Flexibility to achieve electric savings target	
Ex. #	PUB-11-2	"	"	"	"	"	"	15 year period	
Ex. #	PUB-11-3	"	"	"	"	"	"	Cost effectiveness - initiatives	

Ex. #	PUB-11-4	"	"	"	"	"	"	Compare to MH DSM plan / results	
Ex. #	PUB-11-5	"	"	"	"	"	"	membership in customer categories - targeted programs	
Ex. #	PUB-11-6	"	"	"	"	"	"	High or Low factors - free rider, free driver and persistence factors	
Ex. #	PUB-11-7	"	"	"	"	"	"	Table 17 - without load displacement projects	
Ex. #	PUB-11-8	"	"	"	"	"	"	Cost effectiveness test	
Ex. #	PUB-11-9	"	"	"	"	"	"	DSM Measures - levelized resource costs and levelized utility costs	
Ex. #	PUB-11-10	"	"	"	"	"	"	5 Electric Measures and 5 Gas Measures - lowest scores PMVT	
Ex. #	PUB-11-11	"	"	"	"	"	"	Sensitivity case of achievement	
Ex. #	PUB-11-12	"	"	"	"	"	"	Evaluation framework - Econoler v. Uniform Methods Project (UMP)	
Ex. #	PUB-11-13	"	"	"	"	"	"	Challenges verifying savings from Codes and Standards	
Ex. #	PUB-11-14	"	"	"	"	"	"	Measure life	
Ex. #	PUB-11-15	"	"	"	"	"	"	Savings at risk	
Ex. #	PUB-11-16	"	"	"	"	"	"	Codes and Standards Savings - Sunset periods	
Ex. #	PUB-11-17	"	"	"	"	"	"	Gas Savings - Other Residential Equipment - high efficiency furnace standard	
Ex. #	PUB-11-18	"	"	"	"	"	"	Load Displacement projects	
Ex. #	PUB-11-19	"	"	"	"	"	"	Underestimates or Overestimates	
Ex. #	PUB-12	<b>PUB-MIPUG Intervener Information Requests (1-17) - December 16, 2019</b>							
Ex. #	PUB-12-1	<b>PUB-MIPUG (D. Friesen)</b>					Load Displacement		
Ex. #	PUB-12-2	"	"	"	"	"	"	PACT - life-for-life replacement at end of life	
Ex. #	PUB-12-3	"	"	"	"	"	"	Update Potential Study - Industrial sector	
Ex. #	PUB-12-4	"	"	"	"	"	"	Additional Flexibility	
Ex. #	PUB-12-5	"	"	"	"	"	"	Acquisition Costs	
Ex. #	PUB-12-6	"	"	"	"	"	"	Total Resource Costs (TRC) and Societal Cost Test (SCT) - instead of or in addition to PACT	
Ex. #	PUB-12-7	"	"	"	"	"	"	Industrial gas portfolio - NPV percentages	
Ex. #	PUB-12-8	"	"	"	"	"	"	Table 3. 9 - Removing Codes and Standards and separating Industrial and Load Displacement savings	



Ex. #	PUB-12-9	" " " " " " " Table 3.15 - removing Load Displacement Projects
Ex. #	PUB-12-10	" " " " " " " Incentive levels
Ex. #	PUB-12-11	<b>PUB-MIPUG (P. Bowman)</b> Short-term marginal value
Ex. #	PUB-12-12	" " " " " " " Recommendations - DSM
Ex. #	PUB-12-13	" " " " " " " Recommendations - Integrated Resource Plan (IRP)
Ex. #	PUB-12-14	" " " " " " " Recommendation 6 - recognize savings from agencies and government efforts
Ex. #	PUB-12-15	" " " " " " " Recommendation 7 - Elasticity effects / factors
Ex. #	PUB-12-16	" " " " " " " Recommendation 8 - efficient technologies
Ex. #	PUB-12-17	" " " " " " " Short-term rate impacts
Ex. #	PUB-13	Board Order 191-19 - Second Procedural Order in Respect of Efficiency Manitoba's 2020/21 to 2022/23 Efficiency Plan Submission - December 17, 2019
Ex. #	PUB-14	PUB Book of Documents - January 3, 2020
Ex. #	PUB-15	PUB letter to all parties re: Rule 13 Decision - January 7, 2020
Ex. #	PUB-16	PUB letter to all parties re: Redactions to Information Requests PUB/EM I-1 and PUB/EM I-10 - January 13, 2020
Ex. #	PUB-17	Pre-Ask Mr. Harper - January 15, 2020
Ex. #	PUB-18	Pre-Ask Mr. Neme - January 15, 2020
Ex. #	PUB-19	Cold Climate Air Source Heat Pump Pricing - January 15, 2020



EXHIBIT LIST FOR  
**EFFICIENCY MANITOBA**  
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**ASSEMBLY OF MANITOBA CHIEFS (AMC) Exhibits**

Ex. #	AMC-1	Intervener Application - October 31, 2019
Ex. #	AMC-2	<b>AMC-EM Round I Information Requests (1-30) - November 11, 2019</b>
Ex. #	AMC-2-1	" " " " " " Reconciliation weighted against other priorities
Ex. #	AMC-2-2	" " " " " " Guiding Principles - Equity
Ex. #	AMC-2-3	" " " " " " Customer needs and barriers and delivery strategies for on-reserve First Nation customers
Ex. #	AMC-2-4	" " " " " " Mandatory First Nations sensitivity and cultural awareness training
Ex. #	AMC-2-5	" " " " " " Breakdown of budget related to First Nation companies
Ex. #	AMC-2-6	" " " " " " Target for First Nation staff hires
Ex. #	AMC-2-7	" " " " " " Breakdown of budget for Indigenous programs and Indigenous Small Business programs
Ex. #	AMC-2-8	" " " " " " Electric v. Natural gas budgets for hard-to-reach segment and Indigenous natural gas program available for off-reserve First Nation customers
Ex. #	AMC-2-9	" " " " " " Stakeholder Engagement Survey - engagement activities and level of engagement with First Nations
Ex. #	AMC-2-10	" " " " " " Average bill impact of one-time rate increase for First Nation residential and commercial customers
Ex. #	AMC-2-11	" " " " " " Estimated acquisition costs for programs within the Indigenous segment
Ex. #	AMC-2-12	" " " " " " Further breakdown of 33.9% energy consumption
Ex. #	AMC-2-13	" " " " " " Program delivery approaches for First Nation businesses
Ex. #	AMC-2-14	" " " " " " Non-energy benefits
Ex. #	AMC-2-15	" " " " " " 2017 Residential Energy Use Survey (REUS)

Ex. #	AMC-2-16	"	"	"	"	"	"	Indigenous population - supplementary positive impacts
Ex. #	AMC-2-17	"	"	"	"	"	"	Funding and coverage of Community energy plans, community-led DSM Initiatives and education strategies and <u>outputs for on-reserve First Nations</u>
Ex. #	AMC-2-18	"	"	"	"	"	"	Existing Efficiency Programs compared to Proposed Efficiency Programs for First Nations
Ex. #	AMC-2-19	"	"	"	"	"	"	Average cost for Indigenous Insulation and Direct Install Program
Ex. #	AMC-2-20	"	"	"	"	"	"	Metis Income Qualified Program (MIQP) and Indigenous Small Business (ISB) Offers for off-reserve First Nation customers
Ex. #	AMC-2-21	"	"	"	"	"	"	Commercial offerings for off-reserve First Nation businesses
Ex. #	AMC-2-22	"	"	"	"	"	"	Solar Energy Program
Ex. #	AMC-2-23	"	"	"	"	"	"	Socio-economic study to assess non-energy benefits
Ex. #	AMC-2-24	"	"	"	"	"	"	Indigenous bundle comparing budgeted costs and savings for each program prior to adjustments based on Multi-Criteria Decision Analysis (MCDA)
Ex. #	AMC-2-25	"	"	"	"	"	"	Bill Affordability collaborative process
Ex. #	AMC-2-26	"	"	"	"	"	"	Funding from Federal Government or Indigenous Services Canada
Ex. #	AMC-2-27	"	"	"	"	"	"	Programs, Budgets and energy use data for First Nation community buildings
Ex. #	AMC-2-28	"	"	"	"	"	"	Markey saturation rates for high-performing technologies for First Nations customers
Ex. #	AMC-2-29	"	"	"	"	"	"	Customer support services provided to First Nation customers
Ex. #	AMC-2-30	"	"	"	"	"	"	Alternative documents used for income verification
Ex. #	AMC-3	AMC Intervener Evidence - Review of Efficiency Plan - December 9, 2019 - <b>Revised December 20, 2019</b>						
Ex. #	AMC-3-1	"	"	"	"	"	"	AMC letter re: Revised Intervener Expert Report - December 20, 2019
Ex. #	AMC-4	AMC Book of Documents - January 8, 2020						
Ex. #	AMC-5	AMC Final Written Submission - January 23, 2020						
Ex. #	AMC-6	AMC Final Submission Book of Authorities - January 23, 2020						
Ex. #	AMC-7	AMC Closing Submission Presentation - January 27, 2020						



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

Ex. #	CC-1-1	CC letter to PUB re: Intervener Application - October 31, 2019
Ex. #	CC-1-2	" " " " " " Intervener Application
Ex. #	CC-1-3	" " " " " " Attachment A
Ex. #	CC-1-4	" " " " " " Attachment B
Ex. #	CC-1-5	" " " " " " CV of William Harper
Ex. #	CC-1-6	" " " " " " CV of Patricia Fitzpatrick
Ex. #	CC-1-7	" " " " " " CV of Chris Neme
Ex. #	CC-1-8	" " " " " " CV of Jim Grevatt
Ex. #	CC-2	<b>CC-EM Round I Information Requests (1-131)- November 12, 2019</b>
Ex. #	CC-2-1	" " " " " " Determination of Savings Targets - Reasonableness of net savings to meet savings targets
Ex. #	CC-2-2	" " " " " " Determination of Savings Targets - Adjustments made for Prior DSM Activity
Ex. #	CC-2-3	" " " " " " Determination of Savings Targets - Natural Gas - Sources - <b>Confidential</b>
Ex. #	CC-2-4	" " " " " " Achieving Savings Targets - Electricity - Achievement of Annual and Cumulative Targets
Ex. #	CC-2-5	" " " " " " Achieving Savings Targets - Natural Gas- Achievement of Annual and Cumulative Targets
Ex. #	CC-2-6	" " " " " " Portfolio Targets - Treatment of Interactive Effects
Ex. #	CC-2-7	" " " " " " Forecasted Energy Savings - Codes and Standards
Ex. #	CC-2-8	" " " " " " Customer Segments - Hard to Reach - Definition
Ex. #	CC-2-9	" " " " " " Customer Segments - Industrial, Commercial and Agricultural Customers

Ex. #	CC-2-10	"	"	"	"	"	"	DSM Program Opportunities - Identification - Approaches Used - <b>Revised</b>
Ex. #	CC-2-11	"	"	"	"	"	"	DSM Program Opportunities - Identification - DSM Aligned with the Act
Ex. #	CC-2-12	"	"	"	"	"	"	DSM Program Opportunities - Initial Screening - Cost Benefit Analyses Used - <b>Revised</b>
Ex. #	CC-2-13	"	"	"	"	"	"	Program Bundles Considered - Development of Program Bundles
Ex. #	CC-2-14	"	"	"	"	"	"	Portfolio Development - Quantitative Analysis - <b>Revised</b>
Ex. #	CC-2-15	"	"	"	"	"	"	Portfolio Development - Benefits for Manitobans and Manitoba economy
Ex. #	CC-2-16	"	"	"	"	"	"	Portfolio Development - Value for Money
Ex. #	CC-2-17	"	"	"	"	"	"	Portfolio Development Process - Cost Effectiveness - Program Bundles
Ex. #	CC-2-18	"	"	"	"	"	"	Portfolio Development - Customer Segment Considerations - <b>Confidential</b>
Ex. #	CC-2-19	"	"	"	"	"	"	Portfolio Development Process - Cost Effectiveness
Ex. #	CC-2-20	"	"	"	"	"	"	Portfolio Development Process - Hard to Reach Natural Gas Segments
Ex. #	CC-2-21	"	"	"	"	"	"	Portfolio Development Process - Electric Portfolio Savings
Ex. #	CC-2-22	"	"	"	"	"	"	Cost Effectiveness - PACT - Common Assumptions
Ex. #	CC-2-23	"	"	"	"	"	"	PACT - Costs Included - CRM/DSM System
Ex. #	CC-2-24	"	"	"	"	"	"	PACT - Costs Included - Evaluation Costs
Ex. #	CC-2-25	"	"	"	"	"	"	PACT - Electric Energy Benefits - Manitoba Hydro's Marginal Values
Ex. #	CC-2-26	"	"	"	"	"	"	PACT - Levelized Cost - Basic for Values
Ex. #	CC-2-27	"	"	"	"	"	"	PACT - Electric Energy Benefits - Representative Values - <b>Revised</b>
Ex. #	CC-2-28	"	"	"	"	"	"	PACT - Natural Gas - Costs Included - Furnace Replacement Program (FRP)
Ex. #	CC-2-29	"	"	"	"	"	"	PACT - Levelized Cost - Natural Gas - Basis for Values
Ex. #	CC-2-30	"	"	"	"	"	"	PACT - Indigenous Customer Segment - Treatment of Diesel Communities
Ex. #	CC-2-31	"	"	"	"	"	"	Rate Impact Calculations - Formula Used - System Energy Values Used
Ex. #	CC-2-32	"	"	"	"	"	"	Rate Impacts - Formula Used - Discount Rate Used
Ex. #	CC-2-33	"	"	"	"	"	"	Rate Impacts - LRI Formula Used - Revenue Loss - <b>Revised</b>

Ex. #	CC-2-34	"	"	"	"	"	"	Rate Impacts - LRI - Natural Gas - Costs Included
Ex. #	CC-2-35	"	"	"	"	"	"	Customer Bill Impact - Basis for Calculation - Average Annual Electric Bill Savings
Ex. #	CC-2-36	"	"	"	"	"	"	Customer Bill Impact - Basis for Calculation - Participation
Ex. #	CC-2-37	"	"	"	"	"	"	Performance Monitoring - Scorecard
Ex. #	CC-2-38	"	"	"	"	"	"	Portfolio Budget - Private Sector v. Staff Costs
Ex. #	CC-2-39	"	"	"	"	"	"	Portfolio Budget - Program Delivery / Program Design / Advertising / Program Administration / Incentives / Enabling Strategies and Corporate Overhead
Ex. #	CC-2-40	"	"	"	"	"	"	Portfolio Budget - Program Costs - Incentives - Attribution to Natural Gas v. Electric and to Individual Program Bundles
Ex. #	CC-2-41	"	"	"	"	"	"	Portfolio Budget - Program Costs - Program Delivery - Attribution to Natural Gas v. Electric and to Individual Program Bundles
Ex. #	CC-2-42	"	"	"	"	"	"	Portfolio Budget - Program Costs - Program Design, Modelling, Management, Administration, Technical Support and Customer Support - Attribution to Natural Gas v. Electric and to Industrial Program Bundles
Ex. #	CC-2-43	"	"	"	"	"	"	Portfolio Budget - Program Costs - Program Advertising - Attribution to Natural Gas v. Electric and to Individual Program Bundles
Ex. #	CC-2-44	"	"	"	"	"	"	Portfolio Budget - Treatment and Allocation of Enabling Strategies
Ex. #	CC-2-45	"	"	"	"	"	"	Portfolio Budget - Enabling Strategies - status and costs of CRM/DSM System
Ex. #	CC-2-46	"	"	"	"	"	"	Portfolio Budget - Corporate Overhead Budgets
Ex. #	CC-2-47	"	"	"	"	"	"	Contingency Funds
Ex. #	CC-2-48	"	"	"	"	"	"	Enabling Strategies
Ex. #	CC-2-49	"	"	"	"	"	"	Assumptions and Calculations used to develop electric targets
Ex. #	CC-2-50	"	"	"	"	"	"	Net Savings - Savings Projections
Ex. #	CC-2-51	"	"	"	"	"	"	Value of Electric System benefits
Ex. #	CC-2-52	"	"	"	"	"	"	Avoided Natural Gas purchasing costs
Ex. #	CC-2-53	"	"	"	"	"	"	Annual Program Electric Savings - Gross or Net Savings
Ex. #	CC-2-54	"	"	"	"	"	"	Annual Program Natural Gas Savings
Ex. #	CC-2-55	"	"	"	"	"	"	Calculations underpinning the levelized costs for electric programs from Figure A3.7

Ex. #	CC-2-56	"	"	"	"	"	"	Calculations underpinning the levelized costs for gas programs from Figure A3.10
Ex. #	CC-2-57	"	"	"	"	"	"	Participation levels and Market Penetration - MH's programs
Ex. #	CC-2-58	"	"	"	"	"	"	Financial incentives or rebates offered - Participation and Program Costs
Ex. #	CC-2-59	"	"	"	"	"	"	Electrically-heated homes
Ex. #	CC-2-60	"	"	"	"	"	"	Efficient Furnaces
Ex. #	CC-2-61	"	"	"	"	"	"	Financial Incentives / Rebates
Ex. #	CC-2-62	"	"	"	"	"	"	Energy Consumption among Indigenous communities on-reserve - DSM
Ex. #	CC-2-63	"	"	"	"	"	"	Community Geothermal Program - Community Driven Outcomes Contract model
Ex. #	CC-2-64	"	"	"	"	"	"	LED lamps and fixtures
Ex. #	CC-2-65	"	"	"	"	"	"	Load Displacement Program - CHP system
Ex. #	CC-2-66	"	"	"	"	"	"	Projected savings associated with changes to Codes and Standards - <b>Revised</b>
Ex. #	CC-2-67	"	"	"	"	"	"	Projected Savings - Programs
Ex. #	CC-2-68	"	"	"	"	"	"	Role of EEAG related to evaluations
Ex. #	CC-2-69	"	"	"	"	"	"	First year evaluation for programs
Ex. #	CC-2-70	"	"	"	"	"	"	Evaluation impacts of codes and standards
Ex. #	CC-2-71	"	"	"	"	"	"	Savings achieved through codes and standards
Ex. #	CC-2-72	"	"	"	"	"	"	Residential General Service Lighting - High saving potential from Codes and Standards changes
Ex. #	CC-2-73	"	"	"	"	"	"	Evaluation Framework and Planning Report - impact on gross and net savings
Ex. #	CC-2-74	"	"	"	"	"	"	Evaluation Framework and Planning Report - net-to-gross adjustments
Ex. #	CC-2-75	"	"	"	"	"	"	New and emerging Technologies - savings opportunities where addressed
Ex. #	CC-2-76	"	"	"	"	"	"	CRM/DSM System - Timeline
Ex. #	CC-2-77	"	"	"	"	"	"	Continuation or elimination of existing MH programs - Criteria
Ex. #	CC-2-78	"	"	"	"	"	"	Continuation or elimination of existing MH programs - Programs not included / New programs included
Ex. #	CC-2-79	"	"	"	"	"	"	Inclusion of measures or technologies with higher acquisition costs

Ex. #	CC-2-80	"	"	"	"	"	Existing efficiency programs with high participation and energy savings
Ex. #	CC-2-81	"	"	"	"	"	Third party service providers
Ex. #	CC-2-82	"	"	"	"	"	Rejection of individual technologies
Ex. #	CC-2-83	"	"	"	"	"	Customer segment offer summary - Home Energy Check-Up and Energy Efficiency Kits Programs
Ex. #	CC-2-84	"	"	"	"	"	Direct Install offers - Participation
Ex. #	CC-2-85	"	"	"	"	"	Direct Install Offers - Online Home Energy Questionnaire - Online Customer Portal - Timeline
Ex. #	CC-2-86	"	"	"	"	"	Direct Install Offers - Online home Energy Questionnaire
Ex. #	CC-2-87	"	"	"	"	"	Direct Install Offers - Home Energy Check-Up - Eligibility Criteria
Ex. #	CC-2-88	"	"	"	"	"	Technologies - Home Energy Check-Up - HRV controls / Smart Thermostats
Ex. #	CC-2-89	"	"	"	"	"	Product Rebate Offers - Reasonableness of programs selected and projections
Ex. #	CC-2-90	"	"	"	"	"	Product Rebate Offers - Retail Rebates - Online v. Instant Rebates
Ex. #	CC-2-91	"	"	"	"	"	Home Renovation Program - Home Renovation Offers
Ex. #	CC-2-92	"	"	"	"	"	Home Renovation Program - Individual Projects Track
Ex. #	CC-2-93	"	"	"	"	"	Home Renovation Program - Home Energy Efficiency Loan - Interest rate
Ex. #	CC-2-94	"	"	"	"	"	Home Renovation Program - Home Energy Efficiency Loan - Emerging Technology
Ex. #	CC-2-95	"	"	"	"	"	Home Renovation Program - Home Energy Efficiency Loan - Products and Measures
Ex. #	CC-2-96	"	"	"	"	"	New Home and Major Renovation - Proposed Participation
Ex. #	CC-2-97	"	"	"	"	"	New Home and Major Renovation - Savings 20% better than code
Ex. #	CC-2-98	"	"	"	"	"	New Home and Major Renovation - Technologies
Ex. #	CC-2-99	"	"	"	"	"	Home Energy Efficiency Kits and Education - Participation
Ex. #	CC-2-100	"	"	"	"	"	Home Energy Efficiency Kits and Education - Overview and Objectives
Ex. #	CC-2-101	"	"	"	"	"	Home Energy Efficiency Kits and Education - Technologies
Ex. #	CC-2-102	"	"	"	"	"	Income Qualified Offers - Customer Segment Description and Residential Income Qualified Offers
Ex. #	CC-2-103	"	"	"	"	"	Income Qualified Offers - Residential Income Qualified Offers







Ex. #	CC-11-6	"	"	"	"	"	"	MISO customers
Ex. #	CC-11-7	"	"	"	"	"	"	Appropriateness of Methodologies
Ex. #	CC-11-8	"	"	"	"	"	"	Non-participating customers bill impacts
Ex. #	CC-11-9	"	"	"	"	"	"	Peak and off Peak Marginal Values
Ex. #	CC-11-10	"	"	"	"	"	"	Weighted average measure life - savings - natural gas and electric portfolios
Ex. #	CC-11-11	"	"	"	"	"	"	Discount Rate
Ex. #	CC-11-12	"	"	"	"	"	"	Cost-effectiveness test
Ex. #	CC-11-13	"	"	"	"	"	"	LRI Sensitivity analysis
Ex. #	CC-11-14	"	"	"	"	"	"	Inflation to adjust natural gas and electricity rates in LRI analyses
Ex. #	CC-11-15	"	"	"	"	"	"	Load displacement energy savings
Ex. #	CC-11-16	"	"	"	"	"	"	Authors of Report
Ex. #	CC-12	CC Pre-Hearing Conference # 2 - Issues List - December 16, 2019						
Ex. #	CC-13	<b>CC-MIPUG Intervener Information Requests (1-7) - December 16, 2019</b>						
Ex. #	CC-13-1	"	"	"	"	"	"	P. Bowman - Cumulative Savings
Ex. #	CC-13-2	"	"	"	"	"	"	P. Bowman - Marginal Values
Ex. #	CC-13-3	"	"	"	"	"	"	P. Bowman - Cost-Effective
Ex. #	CC-13-4	"	"	"	"	"	"	P. Bowman - Forum for Testing resource plans, supply options and marginal values
Ex. #	CC-13-5	"	"	"	"	"	"	Savings - EM Targets
Ex. #	CC-13-6	"	"	"	"	"	"	BC DSM Plans
Ex. #	CC-13-7	"	"	"	"	"	"	DSM Programs - lowest cost
Ex. #	CC-14	Opening Statement - January 6, 2020						
Ex. #	CC-15	CC Letter to all Parties re: Corrections - January 13, 2020						
Ex. #	CC-16	Presentation of Dr. Patricia Fitzpatrick - January 14, 2020						
Ex. #	CC-17	Presentation of Mr. William Harper - January 14, 2020						

Ex. #	CC-18	Presentation of Mr. Jim Grevatt - January 14, 2020
Ex. #	CC-19	Presentation of Mr. Chris Neme - January 14, 2020
Ex. #	CC-20	Undertaking # 15 - Recommendations from comparable jurisdictions in terms of accessibility and residential programming - January 16, 2020
Ex. #	CC-21	Undertaking # 16 - Allocated percentages and allocated dollars of enabling strategies and corporate overhead to electric and gas portfolios by benefits - January 16, 2020
Ex. #	CC-22	Closing Submission Presentation - January 27, 2020



EXHIBIT LIST FOR

**EFFICIENCY MANITOBA**

3-YEAR ENERGY EFFICIENCY PLAN (2020/21-2022/23)

January 29, 2020

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

Ex. #	MIPUG-1	MIPUG comments on Timeline and Scope of hearing - October 16, 2019
Ex. #	MIPUG-2-1	MIPUG Intervener Application - October 31, 2019
Ex. #	MIPUG-2-2	" " " " " Attachment - Additional Information
Ex. #	MIPUG-2-3	" " " " " MIPUG comments on timeline and scope
Ex. #	MIPUG-2-4	" " " " " CV of Melissa Davies
Ex. #	MIPUG-2-5	" " " " " CV of Patrick Bowman
Ex. #	MIPUG-2-6	" " " " " CV of Dale Friesen
Ex. #	MIPUG-3	<b>MIPUG-EM Round I Information Requests (1-18) - November 12, 2019</b>
Ex. #	MIPUG-3-1	" " " " " Economic evaluations for programming choices - underlying inputs and supporting analysis to assess cost-effectiveness - <b>Revised - Confidential</b>
Ex. #	MIPUG-3-2	" " " " " Level of participation, cost and benefits for commercial and industrial programs - <b>Revised</b>
Ex. #	MIPUG-3-3	" " " " " Cost-effectiveness of portfolio and programs - marginal values and benefits of capital investment deferrals
Ex. #	MIPUG-3-4	" " " " " Impact on ratepayers - targeted savings and impacts on deferral capital expenditures and energy supply competitiveness
Ex. #	MIPUG-3-5	" " " " " Market Changes - adjustments for savings persistence to product lifetime
Ex. #	MIPUG-3-6	" " " " " Cost-effectiveness and impacts - Electrical Savings
Ex. #	MIPUG-3-7	" " " " " Impacts for industrial, commercial and agricultural segments - Planned savings - Electric
Ex. #	MIPUG-3-8	" " " " " Cost-effectiveness and impacts - Natural Gas Savings
Ex. #	MIPUG-3-9	" " " " " Impacts for industrial, commercial and agricultural segments - Planned savings - Natural Gas

Ex. #	MIPUG-3-10	"	"	"	"	"	Cost Effectiveness of electric program bundles
Ex. #	MIPUG-3-11	"	"	"	"	"	Cost Effectiveness of Natural Gas program bundles
Ex. #	MIPUG-3-12	"	"	"	"	"	Composition and consumption characteristics of the Manitoba commercial, industrial and agricultural customer segments
Ex. #	MIPUG-3-13	"	"	"	"	"	Annual and cumulative energy (i.e. electric and natural gas) and capacity (i.e. electric only) savings
Ex. #	MIPUG-3-14	"	"	"	"	"	Process and framework for identification of emerging technologies
Ex. #	MIPUG-3-15	"	"	"	"	"	Savings load profiles are developed and applied to the marginal values provided by Manitoba Hydro for the purpose of determining <u>marginal benefits</u>
Ex. #	MIPUG-3-16	"	"	"	"	"	Marginal values provided by Manitoba Hydro have evolved since the last review of a DSM plan
Ex. #	MIPUG-3-17	"	"	"	"	"	Levelized marginal value obtained when multiplying the levelized cost by the PACT ratio is consistent with how Manitoba Hydro <u>intends for its marginal values to be applied</u>
Ex. #	MIPUG-3-18	"	"	"	"	"	Sensitivity to program uptake on cost effectiveness
Ex. #	MIPUG-4	MIPUG letter re: Request for Extension for Intervener Evidence - December 6, 2019					
Ex. #	MIPUG-5-1	MIPUG Intervener Evidence prepared by Patrick Bowman - December 10, 2019					
Ex. #	MIPUG-5-2	"	"	"	"	"	CV of Patrick Bowman
Ex. #	MIPUG-6-1	MIPUG Intervener Evidence prepared by Dale Friesen - December 10, 2019 - <b>Revised January 20, 2020</b>					
Ex. #	MIPUG-6-2	"	"	"	"	"	CV of Dale Friesen
Ex. #	MIPUG-7	<b>MIPUG-COALITION (GREVATT) Intervener Information Requests (1) - December 13, 2019</b>					
Ex. #	MIPUG-7-1	"	"	"	"	"	Benefits and Needs of Energy Efficiency Potential Study
Ex. #	MIPUG-8	<b>MIPUG-COALITION (HARPER) Intervener Information Requests (1-5) - December 13, 2019</b>					
Ex. #	MIPUG-8-1	"	"	"	"	"	Derivation of Electric Target Values
Ex. #	MIPUG-8-2	"	"	"	"	"	Measurement to calculate energy savings, natural gas load, weather normalized load
Ex. #	MIPUG-8-3	"	"	"	"	"	IRP goals
Ex. #	MIPUG-8-4	"	"	"	"	"	Savings mandate
Ex. #	MIPUG-8-5	"	"	"	"	"	Marginal Values- peak and off-peak
Ex. #	MIPUG-9	<b>MIPUG-COALITION (NEME) Intervener Information Requests (1) - December 13, 2019</b>					

Ex. #	MIPUG-9-1	"	"	"	"	"	Costs and Impacts of Geothermal Heat Pump recommendation
Ex. #	MIPUG-10	<b>MIPUG-DAY Intervener Information Requests (1-27) - December 13, 2019</b>					
Ex. #	MIPUG-10-1	"	"	"	"	"	Energy Efficiency Potential Study
Ex. #	MIPUG-10-2	"	"	"	"	"	Life cycle methodology
Ex. #	MIPUG-10-3	"	"	"	"	"	Cumulative three-year spending and savings - Electric and Natural Gas Portfolios
Ex. #	MIPUG-10-4	"	"	"	"	"	Incremental Annual Savings
Ex. #	MIPUG-10-5	"	"	"	"	"	Industrial Segments in Electric Portfolio Budget
Ex. #	MIPUG-10-6	"	"	"	"	"	Portfolio Budget - Industrial Segment - Electric and Natural Gas Spending
Ex. #	MIPUG-10-7	"	"	"	"	"	Electric portfolio metrics - Commercial, Industrial and Agricultural segments
Ex. #	MIPUG-10-8	"	"	"	"	"	Electric Portfolio Budget - Industrial Segment
Ex. #	MIPUG-10-9	"	"	"	"	"	Cumulative Electric portfolio savings
Ex. #	MIPUG-10-10	"	"	"	"	"	Free ridership levels
Ex. #	MIPUG-10-11	"	"	"	"	"	Measures targeting commercial, industrial and residential sectors
Ex. #	MIPUG-10-12	"	"	"	"	"	Industrial Custom program savings
Ex. #	MIPUG-10-13	"	"	"	"	"	PACT NPV relates to measure life
Ex. #	MIPUG-10-14	"	"	"	"	"	Interactive effects on PACT NPV
Ex. #	MIPUG-10-15	"	"	"	"	"	Lifecycle Revenue Impact (LRI) Measure and Rate Impact Measure (RIM) Test
Ex. #	MIPUG-10-16	"	"	"	"	"	Impact of interactive effects on electrically heated buildings
Ex. #	MIPUG-10-17	"	"	"	"	"	Collection and procurement of fuel for self-generation activities
Ex. #	MIPUG-10-18	"	"	"	"	"	Revised Table 33 - results of PMVT measure analysis for natural gas programs
Ex. #	MIPUG-10-19	"	"	"	"	"	Use of Lifecycle Methodology has on program metrics
Ex. #	MIPUG-10-20	"	"	"	"	"	Adjusting Codes and Standards savings based on date of enactment
Ex. #	MIPUG-10-21	"	"	"	"	"	Extending the life of measure savings - sustainability of savings
Ex. #	MIPUG-10-22	"	"	"	"	"	Changes in marginal values

Ex. #	MIPUG-10-23	"	"	"	"	"	Rate Impacts for large industrial customers - services at higher voltage transmission rates
Ex. #	MIPUG-10-24	"	"	"	"	"	15-year saving target
Ex. #	MIPUG-10-25	"	"	"	"	"	Levelized costs used to support Table 1
Ex. #	MIPUG-10-26	"	"	"	"	"	Load Displacement
Ex. #	MIPUG-10-27	"	"	"	"	"	PACT benefits of residential New Homes and MR, and Home Renovation programs
Ex. #	MIPUG-11	The Regulatory Accountability Impact Analysis for the Efficiency Manitoba Regulation website link - January 9, 2020					
Ex. #	MIPUG-12	4 Pages from PUB MFR 72 from MH 2017/18 & 2018/19 GRA - January 13, 2020					
Ex. #	MIPUG-13	Patrick Bowman's Presentation - January 20, 2020					
Ex. #	MIPUG-14	Dale Friesen's Presentation - January 20, 2020					
Ex. #	MIPUG-15	Undertaking # 17 - Chart from PUB-14 page 380 incorporating corrections to chart - with and without MH DSM amortization and most current approximation of export pricing					
Ex. #	MIPUG-16-1	MIPUG Written Final Arugment - January 27, 2020					
Ex. #	MIPUG-16-2	"	"	"	"	"	Hansard - March 9, 2017
Ex. #	MIPUG-16-3	"	"	"	"	"	Hansard - April 10, 2017
Ex. #	MIPUG-16-4	"	"	"	"	"	Hansard - May 11, 2017
Ex. #	MIPUG-16-5	"	"	"	"	"	Hansard - May 23, 2017





EXHIBIT LIST FOR  
**EFFICIENCY MANITOBA**  
 3-YEAR ENERGY EFFICIENCY PLAN (2020/21-2022/23)

January 29, 2020

**MANITOBA KEEWATINOWI OKIMAKANAK (MKO)**

Ex. #	MKO-1	MKO Comments on Preliminary Issues List - October 17, 2019
Ex. #	MKO-2-1	MKO Intervener Application - October 31, 2019
Ex. #	MKO-2-2	" " " " " " Comments on Timeline and Scope
Ex. #	MKO-3	<b>MKO-EM Round I Information Requests (1-48) - November 12, 2019</b>
Ex. #	MKO-3-1	" " " " " " Indigenous customer segment - calculation of customer numbers
Ex. #	MKO-3-2	" " " " " " Reconciliation - mandate and framework letters
Ex. #	MKO-3-3	" " " " " " Cost-effectiveness of electric DSM program bundles and portfolio
Ex. #	MKO-3-4	" " " " " " Electric Portfolio Budget - Allocation and calculation of DSM Budget - percentage of DSM budget for income qualified and hard-to-reach customers
Ex. #	MKO-3-5	" " " " " " Electrical Energy Savings - DSM initiatives
Ex. #	MKO-3-6	" " " " " " Fuel Switching - Conversion from dies to electric - Diesel Zone
Ex. #	MKO-3-7	" " " " " " DSM Programs accessible to Residential customers - First Nations Residential On-Reserve customers
Ex. #	MKO-3-8	" " " " " " Stakeholder Engagement Survey - low income and hard-to-reach customers including First Nations customers
Ex. #	MKO-3-9	" " " " " " Engagement Strategy for low income and hard-to-reach customers - Public engagement
Ex. #	MKO-3-10	" " " " " " Third Party service providers - Safety and inclusion of norther First Nations
Ex. #	MKO-3-11	" " " " " " Calculation of Estimated Bill savings - Indigenous customer segment annual bill savings
Ex. #	MKO-3-12	" " " " " " Improvements to housing on-reserve - building designs, techniques and technology
Ex. #	MKO-3-13	" " " " " " Energy consumption patterns for Indigenous customer segment
Ex. #	MKO-3-14	" " " " " " Solar photovoltaic system - Indigenous customer segment
Ex. #	MKO-3-15	" " " " " " Targeted areas in plan- Northern Manitoba and First Nations in Northern Manitoba

Ex. #	MKO-3-16	"	"	"	"	"	Modifications to Plan - customer engagement - First Nations Customers
Ex. #	MKO-3-17	"	"	"	"	"	Customer Relationship Management Interface - poor internet connection for First Nation customers
Ex. #	MKO-3-18	"	"	"	"	"	Evaluation, Measurement and Verification Framework
Ex. #	MKO-3-19	"	"	"	"	"	Contingency Budget - Allocation of unallocated budget items
Ex. #	MKO-3-20	"	"	"	"	"	Accessibility of energy-efficient products to northern Manitoba First Nations
Ex. #	MKO-3-21	"	"	"	"	"	Timely, Efficient and Safety of Independent third-party contractor services provided to hard to reach locations including 4 First Nations in Diesel Zone
Ex. #	MKO-3-22	"	"	"	"	"	Program design - Customer Support - DSM program bundles and portfolio
Ex. #	MKO-3-23	"	"	"	"	"	PACT Levelized cost of Emerging Technology - Indigenous customer segment
Ex. #	MKO-3-24	"	"	"	"	"	Residential Programs - Indigenous customer segment
Ex. #	MKO-3-25	"	"	"	"	"	Rebate Programs - Costs to reach customers who have not yet participated
Ex. #	MKO-3-26	"	"	"	"	"	Product eligibility - Building Codes applicable to Indigenous customer segments
Ex. #	MKO-3-27	"	"	"	"	"	Direct Install Offers for Homeowners - Indigenous customer segment - band-owned housing on-reserve
Ex. #	MKO-3-28	"	"	"	"	"	Retail Rebates - lack of internet availability
Ex. #	MKO-3-29	"	"	"	"	"	Barriers to DSM uptake on First Nations - Program design and delivery
Ex. #	MKO-3-30	"	"	"	"	"	Data Driven approach - Energy consumption data
Ex. #	MKO-3-31	"	"	"	"	"	Community-led DSM - Energy Efficiency Education on First Nations
Ex. #	MKO-3-32	"	"	"	"	"	Ongoing First Nation and Metis working group - Volunteer v. Remunerated position
Ex. #	MKO-3-33	"	"	"	"	"	Energy Efficiency impacts - Resiliency to climate change - First Nations in northern Manitoba
Ex. #	MKO-3-34	"	"	"	"	"	Installation and direct install offer for Indigenous customer segment
Ex. #	MKO-3-35	"	"	"	"	"	First Nation Insulation and Direct Install Program - Residential direct install program
Ex. #	MKO-3-36	"	"	"	"	"	Federal funding of Indigenous customer segment - Cost sharing models
Ex. #	MKO-3-37	"	"	"	"	"	Identifying homes on-reserve with high energy consumption - Engagement with First Nations
Ex. #	MKO-3-38	"	"	"	"	"	Small Business Offers under Indigenous customers segment
Ex. #	MKO-3-39	"	"	"	"	"	Community Geothermal Program - MKO member First Nations including Diesel Communities
Ex. #	MKO-3-40	"	"	"	"	"	Wood Pellet and Wood Chip heating systems - Diesel Zones
Ex. #	MKO-3-41	"	"	"	"	"	Solar Energy Program - Diesel Zones

Ex. #	MKO-3-42	"	"	"	"	"	Solar Photovoltaic Program Incentive
Ex. #	MKO-3-47	"	"	"	"	"	Codes and Standards - Indigenous customer segment
Ex. #	MKO-3-48	"	"	"	"	"	Measurement of electric savings by customer segment
Ex. #	MKO-4	<b>MKO-COALITION Intervener Information Requests (1-2) - December 13, 2019</b>					
Ex. #	MKO-4-1	"	"	"	"	"	Dr. P. Fitzpatrick Evidence - Engagement Survey - Engagement with First Nation customers
Ex. #	MKO-4-2	"	"	"	"	"	C. Neme Evidence - Heat Pumps - Potential DSM initiatives - methods to select or reject
Ex. #	MKO-5	MKO Final Submission Presentation - January 27, 2020					



EXHIBIT LIST FOR  
**EFFICIENCY MANITOBA**  
 3-YEAR ENERGY EFFICIENCY PLAN (2020/21-2022/23)  
 January 29, 2020

**Daymark Energy Advisors (DAY) Exhibits**

Ex. #	DAY-1	<b>DEA-EM Round I Information Requests - Set I (1-79) - November 7, 2019</b>				
Ex. #	DAY-1-1	"	"	"	"	Sensitivity Analyses work papers
Ex. #	DAY-1-2	"	"	"	"	Metrics for Programs and Services
Ex. #	DAY-1-3	"	"	"	"	Segmentation Analysis
Ex. #	DAY-1-4	"	"	"	"	Programs offered by Manitoba Hydro
Ex. #	DAY-1-5	"	"	"	"	Materials associated with EEAG
Ex. #	DAY-1-6	"	"	"	"	Plan Budget pie chart
Ex. #	DAY-1-7	"	"	"	"	Composition of Energy Savings by Customer Segment - <b>Confidential</b>
Ex. #	DAY-1-8	"	"	"	"	Codes and Standards
Ex. #	DAY-1-9	"	"	"	"	Improve building designs, techniques and technologies for energy efficiency
Ex. #	DAY-1-10	"	"	"	"	Measure-level Savings and Budget Information
Ex. #	DAY-1-11	"	"	"	"	Cost-Effectiveness Analysis Methodology - DSM initiatives by MH
Ex. #	DAY-1-12	"	"	"	"	Centra Gas offering existing DSM and Energy Efficiency Programs
Ex. #	DAY-1-13	"	"	"	"	Critical Service Providers and Delivery Partners
Ex. #	DAY-1-14	"	"	"	"	Jump in Electric Annual Budget for 2021/22, but drop in 2022/23
Ex. #	DAY-1-15	"	"	"	"	Enabling Strategies for Electric v. Natural Gas Programs
Ex. #	DAY-1-16	"	"	"	"	75% Electric portfolio v. 25% natural gas portfolio rational
Ex. #	DAY-1-17	"	"	"	"	methodology of cost allocation between rate classes
Ex. #	DAY-1-18	"	"	"	"	30 Year time frame analysis - measures considered

Ex. #	DAY-1-19	"	"	"	"	Annual Cost Components and value for program administration and corporate overhead for electric and natural gas
Ex. #	DAY-1-20	"	"	"	"	Determination of marginal values
Ex. #	DAY-1-21	"	"	"	"	Annual or Seasonal marginal cost value for evaluating each program bundle
Ex. #	DAY-1-22	"	"	"	"	table documenting marginal values annually for natural gas purchasing and transportation costs
Ex. #	DAY-1-23	"	"	"	"	Program administration cost test (PACT) - estimated values
Ex. #	DAY-1-24	"	"	"	"	expected natural gas program benefits are expected to be distributed in each year
Ex. #	DAY-1-25	"	"	"	"	program administration cost test (PACT) for cost-effectiveness testing - formulas used to estimate values
Ex. #	DAY-1-26	"	"	"	"	analysis of its electric and/or natural gas efficiency measures, programs or plan using the Total Resource Cost Test
Ex. #	DAY-1-27	"	"	"	"	sensitivity analysis in PACT by varying discount rate and NPV time horizon
Ex. #	DAY-1-28	"	"	"	"	mathematical formulae and calculation parameters that were used to determine the measure-level PACT Ratio, PACT NPV and PACT Levelized Cost in both the Electric and Natural Gas portfolio cost-effectiveness
Ex. #	DAY-1-29	"	"	"	"	FRP benefits captured in other areas of Efficiency Manitoba's cost-benefit or rate impact analyses
Ex. #	DAY-1-30	"	"	"	"	Consideration of these measures besides LRI as it applies the standard DSM rate impact measure test components and is consistent with the PACT
Ex. #	DAY-1-31	"	"	"	"	additional information as to how the rate increases were determined
Ex. #	DAY-1-32	"	"	"	"	Bill Savings calculations
Ex. #	DAY-1-33	"	"	"	"	Table 5.8 Customer Electric Bill Savings
Ex. #	DAY-1-34	"	"	"	"	Table 5.9 Customer Natural Gas Bill Savings
Ex. #	DAY-1-35	"	"	"	"	Table 5.10 - Acquisition Costs by fiscal year
Ex. #	DAY-1-36	"	"	"	"	Support the proposed time span of 30 year for benefit calculation
Ex. #	DAY-1-37	"	"	"	"	Net energy savings at DSM program bundle level.
Ex. #	DAY-1-38	"	"	"	"	Free-ridership and spillover effect in estimating the net energy savings
Ex. #	DAY-1-39	"	"	"	"	Other commonly used cost-effectiveness test (such as Total Resource Cost Test and Participant Cost Test)
Ex. #	DAY-1-40	"	"	"	"	Why the interactive effects were considered
Ex. #	DAY-1-41	"	"	"	"	Justification of remove the enabling strategies and corporate overhead costs from the PACT calculation for the program only metrics
Ex. #	DAY-1-42	"	"	"	"	15-year time span in the sensitivity analysis

Ex. #	DAY-1-43	"	"	"	"	Reasonableness of the assumptions and input parameters that were considered in the calculation of these metrics
Ex. #	DAY-1-44	"	"	"	"	differences between its Plan and prior Manitoba Hydro DSM plans in order to provide the best available information to the PUB, based on four parameters – Incentive Costs, Program Costs, Staff Costs, and <u>Overhead Costs</u>
Ex. #	DAY-1-45	"	"	"	"	Measure-level data for the proposed 2020/23 Efficiency Plan with Manitoba Hydro’s 2015/16 Efficiency Plan comparing key parameters
Ex. #	DAY-1-46	"	"	"	"	Natural gas EE budget for income-qualified customers is significantly higher in terms to total EE budget
Ex. #	DAY-1-47	"	"	"	"	Non-energy benefits (NEBs)
Ex. #	DAY-1-48	"	"	"	"	Plan Adjustments
Ex. #	DAY-1-49	"	"	"	"	Pace at which Efficiency Manitoba will be able to show that savings have been achieved, so that progress towards annual goals can be measured
Ex. #	DAY-1-50	"	"	"	"	CRM/DSM system
Ex. #	DAY-1-51	"	"	"	"	DSM Scorecard
Ex. #	DAY-1-52	"	"	"	"	Comparing proposed EM&V methodology with industry standards.
Ex. #	DAY-1-53	"	"	"	"	Multi-criteria decision analysis for each technology
Ex. #	DAY-1-54	"	"	"	"	Table A3.1 program bundles and individual measures
Ex. #	DAY-1-55	"	"	"	"	Table A3.2 program bundles and individual measures
Ex. #	DAY-1-56	"	"	"	"	Electric portfolio budget by program bundle
Ex. #	DAY-1-57	"	"	"	"	Natural gas portfolio budget by program bundle
Ex. #	DAY-1-58	"	"	"	"	Monthly Electric funding Schedules for 2020-2023 period
Ex. #	DAY-1-59	"	"	"	"	Monthly Natural Gas funding schedules for 2020-23 period
Ex. #	DAY-1-60	"	"	"	"	Electric portfolio PACT Results
Ex. #	DAY-1-61	"	"	"	"	Natural Gas portfolio PACT Results
Ex. #	DAY-1-62	"	"	"	"	Changes to Codes & Standards - National Energy Efficiency building codes and performance standard committees
Ex. #	DAY-1-63	"	"	"	"	Annual savings related with Codes & Standards during 2020/23 period
Ex. #	DAY-1-64	"	"	"	"	Attachment 3 - Tables in except format
Ex. #	DAY-1-65	"	"	"	"	Annual Natural Gas Energy Savings (million m <sup>3</sup> ) at the program-bundle level
Ex. #	DAY-1-66	"	"	"	"	Annual Natural Gas Cots (000’s \$) at the program-bundle level
Ex. #	DAY-1-67	"	"	"	"	Annual Natural Gas GHG Savings (tonnes CO <sub>2</sub> eq) at the program-bundle level

Ex. #	DAY-1-68	"	"	"	"	Annual bill reduction per program bundle (all participants) for natural gas portfolio
Ex. #	DAY-1-69	"	"	"	"	Natural gas program cost-effectiveness metrics at the program-bundle level
Ex. #	DAY-1-70	"	"	"	"	Annual Natural Gas participation estimates at the program-bundle level
Ex. #	DAY-1-71	"	"	"	"	Annual Electric Energy Savings (GWh) at the program-bundle level
Ex. #	DAY-1-72	"	"	"	"	Annual electric capacity savings (MW) at the program-bundle level
Ex. #	DAY-1-73	"	"	"	"	Annual electric costs (000's \$) at the program-bundle level
Ex. #	DAY-1-74	"	"	"	"	Electric program cost effectiveness metrics at the program-bundle level
Ex. #	DAY-1-75	"	"	"	"	Annual bill reduction at the program-bundle level
Ex. #	DAY-1-76	"	"	"	"	Annual electric participation at the program-bundle level
Ex. #	DAY-1-77	"	"	"	"	Incentive setting methodology
Ex. #	DAY-1-78	"	"	"	"	DSM potential studies for designing the Plan
Ex. #	DAY-1-79	"	"	"	"	Managing under-spent energy efficiency budget.
Ex. #	DAY-1-80	"	"	"	"	GHG Reduction Objective
Ex. #	DAY-1-81	"	"	"	"	Full-time equivalent Staff
Ex. #	DAY-1-82	"	"	"	"	Annual Reporting of Efficiency Manitoba
Ex. #	DAY-1-83	"	"	"	"	Cumulative total annual percentage savings targets
Ex. #	DAY-1-84	"	"	"	"	Natural gas target savings over long horizon
Ex. #	DAY-1-85	"	"	"	"	Measure-level savings and impact of measures not being able to realize full useful life
Ex. #	DAY-1-86	"	"	"	"	Evaluation Framework and Planning Report
Ex. #	DAY-1-87	"	"	"	"	Evaluation Framework and Planning Report for evaluations of natural gas energy and electric energy efficiency programs
Ex. #	DAY-1-88	"	"	"	"	Codes & Standards programs
Ex. #	DAY-1-89	"	"	"	"	Customer Sited Load Displacement program
Ex. #	DAY-1-90	"	"	"	"	Continuation and augmentation of existing energy efficiency programs and initiatives
Ex. #	DAY-1-91	"	"	"	"	Manitoba Hydro DSM Optimization Report
Ex. #	DAY-1-92	"	"	"	"	Program Bundles - Savings targets
Ex. #	DAY-1-93	"	"	"	"	Impact of the Plan at the measure versus the program level
Ex. #	DAY-1-94	"	"	"	"	Hard to reach Customers

Ex. #	DAY-1-95	"	"	"	"	Breakdown of customer types and rate classes of Manitoba Hydro
Ex. #	DAY-1-96	"	"	"	"	Breakdown of customer types and rate classes of Centra Gas - <b>Confidential</b>
Ex. #	DAY-1-97	"	"	"	"	Electric annual program bundle savings by customers segment
Ex. #	DAY-1-98	"	"	"	"	Natural annual program bundle savings by customer segment
Ex. #	DAY-1-99	"	"	"	"	Electric Portfolio Summary and NG Portfolio Summary - Program Bundles - Bundle Summary
Ex. #	DAY-2	DAY Email request re: Extension of time to file Report - December 6, 2019				
Ex. #	DAY-3	Daymark Independent Expert Report: Demand Side Management and Energy Efficiency - December 10, 2019 - <b>Revised December 11 &amp; 12, 2019 &amp; January 10, 2020</b>				
Ex. #	DAY-3-1	"	"	"	"	DAY letter to PUB re: Revised Report - December 11, 2019
Ex. #	DAY-3-2	"	"	"	"	DAY letter to PUB re: Revised Report - December 12, 2019
Ex. #	DAY-3-3	"	"	"	"	DAY letter to PUB re: Revised Report - January 10, 2020
Ex. #	DAY-4-1	CV of John Athas - January 10, 2020				
Ex. #	DAY-4-2	John Athas further information regarding experience on utility ratemaking - January 10, 2020				
Ex. #	DAY-5-1	CV of Kathy Kelly - January 10, 2020				
Ex. #	DAY-5-2	Kathy Kelly further information regarding experience as consultant - January 10, 2020				
Ex. #	DAY-6-1	CV of Suman Gautam - January 10, 2020				
Ex. #	DAY-6-2	Suman Gautam further information regarding experience on energy efficiency - January 10, 2020				
Ex. #	DAY-7	Public PowerPoint Presentation - January 13, 2020				
Ex. #	DAY-8	Undertaking # 11 - Total resource cost without non-energy benefits column for tables 27-30 in Daymarks Report - January 17, 2020				
Ex. #	DAY-9	Undertaking # 12 - LRI percentage increase using 4.5 cents per kilowatt hours in tables 42-43 in Daymark Report - January 17, 2020				
Ex. #	DAY-10	Undertaking # 14 - PACT ratio differences explained between Plan page 516 and slide 33 of DAY-7 - January 17, 2020				
Ex. #	DAY-11	Undertaking # 13 -Best practices for improving access for hard-to-reach customers - January 20, 2020				