

MANITOBA HYDRO CAPITAL EXPENDITURE FORECAST (CEF01-1)
(IN MILLIONS OF DOLLARS)
FOR THE YEARS 2001/02 TO 2011/12

Appendix B

	Project Total	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	11 Year Total
POWER SUPPLY													
NEW GENERATION													
BRANDON COMBUSTION TURBINE	183	92	16										108
HVDC FACILITIES													
HVDC BIPOLE RELIABILITY ENHANCEMENTS	56	3		-	-	-	-	-	-	-	-	-	3
BIPOLE 1 MERCURY ARC VALVES STAGE 3	74	0	2	45	27	-	-	-	-	-	-	-	74
HVDC BIPOLE 2 THYRISTOR POLY PIPE REPLACEMENTS	5	1	-	-	-	-	-	-	-	-	-	-	1
CONVERTER TRANSFORMER BUSHING REPLACEMENT	7	1	1	2	-	-	-	-	-	-	-	-	3
DORSEY BIPOLE 1 SYNCH CONDENSER BREAKER REPLACEMENT	7	1	2	-	-	-	-	-	-	-	-	-	4
BIPOLE 1&2 DC FILTER CAPACITOR REPLACEMENT	5	2	1	-	-	-	-	-	-	-	-	-	3
BIPOLE 1 VALVE HALL WALL BUSHING REPLACEMENT	9	1	(0)	-	-	-	-	-	-	-	-	-	0
BIPOLE 1 & 2 ELECTRODE LINE MONITORING	1	-	1										1
HVDC SYSTEM SWITCHGEAR UPGRADE	3	1	1	1	-								3
HVDC AUXILLIARY POWER SUPPLY	2	1	0	1									2
DORSEY SYNCHRONOUS CONDENSER REFURBISHMENT	8		1	-	1	1	1	1	1				8
	-												-
HYDRAULIC REHABILITATION													
GREAT FALLS G.S. REHABILITATION	23	4	9	6	3	0	-	-	-	-	-	-	22
PINE FALLS G.S. REHABILITATION	20	2	2	6	5	1	-	-	-	-	-	-	16
LAURIE RIVER PLANT 1 AND 2 REHABILITATION	17	-	3	1	1	1	-	-	-	-	1	1	6
GRAND RAPIDS G.S. REHABILITATION	96	8		-		-	-	-	-	-	-	-	8
JENPEG G.S. UNIT OVERHAULS (UNITS 1 - 6)	29	0	4	4	0	4	4	4	-	-	-	-	21
POWER SUPPLY DAM SAFETY UPGRADES	15	1	2	2	2	2	-	-	-	-	-	-	10
WINNIPEG RIVER CONTROL SYSTEM	17	2	3	3	-	-	-	-	-	-	-	-	7
LIMESTONE OUTSTANDING WORK	17	0	1	4	-	-	-	-	-	-	-	-	4
WINNIPEG RIVER RIVERBANK PROTECTION PROGRAM	7	1	1	1	1	1	1	-	-	-	-	-	4
KETTLE GS - IMPROVEMENTS & UPGRADES	69	1	1	1	0	-	-	-	-	-	-	0	2
KELSEY G.S. IMPROVEMENTS & UPGRADES	15	-	3	10	1	-	1	-	1	-	-	-	15
KETTLE ANNUNCIATION SYSTEM RENEWAL	2	1											1
NELSON RIVER CONTROL	6		2	2	2								6
	-												-
THERMAL REHABILITATION													
BRANDON G.S. UNIT 5 LIFE EXTENSION	23			2	1	6	1	2	1	3	1	1	17
SELKIRK GS FUEL SWITCHING PROJECT	32	19	13										32
SELKIRK GS LIFE EXTENSION	29		2	15	12	0							29
	-												-
OTHER													
200MW ONTARIO HYDRO SALE - SYNC COND CONVERSION	9	0	1	1	2	-	-	-	-	-	-	-	5
SITE REMEDIATION OF CONTAMINATED CORPORATE FACILITIES	13	2	1	1	1	1	1	1	1	1	0	1	10
OIL CONTAINMENT	16	0	1	2	1	1	1	1	1	-	-	-	7
FIRE PROTECTION PROJECTS	8	1	3	-	-	-	-	-	-	-	-	-	4
GENERATION TOWNSITE INFRASTRUCTURE		2	3	-	-	-	-	-	-	-	-	-	4
PLANNING STUDY COSTS		41	12	6	5	4	3	5	7	16	26	10	135
													-
DOMESTIC ITEMS - POWER SUPPLY													
		11	11	11	11	12	12	12	12	13	13	13	131
													-
PROPOSED POWER SUPPLY													
		197	100	124	76	33	24	26	25	32	42	26	705

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TRANSMISSION AND DISTRIBUTION													
WUSKWATIM TRANSMISSION													
HVDC CONVERSION BIPOLE 3/CONAWAPA TRANSMISSION													
TRANSMISSION FOR GENERATION													
RADISSON - RIEL ± 500kV HVDC LINE	352		3	5	13	14	12	101	76	84	44	-	352
RIEL 230/500kV STATION	98		2	5	6	8	25	31	22				98
INTERCONNECTIONS													
200MW ONTARIO HYDRO SALE - T/L UPGRADE	5	0	-	-	-	-	-	-	-	-	-	-	0
GLENBORO - RUGBY 230KV LINE	25	13	9	1	1								24
TRANSMISSION													
NORTHERN AC TRANSMISSION SYSTEM REQUIREMENTS	31	0	2	7	11	9							30
THOMPSON>HERBLET LAKE 230kV TRANSMISSION	53	-	1	1	2	9	22	18	-	-	-	-	53
NORTH CENTRAL MANITOBA PROJECT	18	0	-	-	-	-	-	-	-	-	-	-	0
FLIN FLON - CLIFF LAKE TRANSFORMER REPLACEMENT	6	0	(1)	-	-	-	-	-	-	-	-	-	(1)
HERBLET LAKE > THE PAS 230kV TRANSMISSION	46	-	-	0	0	1	1	2	7	20	16	-	46
DORSEY > NEEPAWA > CORNWALLIS 230kV LINE	50	0	(0)	-	-	-	-	-	-	-	-	-	(0)
WINNIPEG > BRANDON TRANSMISSION IMPROVEMENTS	37	-	1	3	5	6	10	8	4	-	-	-	37
FT GARRY - PERIMETER SOUTH BANK REPLACEMENT	5	-	-	0	3	2	-	-	-	-	-	-	5
RIDGEWAY TRANSFORMER ADDITION	9	-	-	0	1	1	4	3	-	-	-	-	9
ST. VITAL TRANSFORMER ADDITION	9	7	1	-	-	-	-	-	-	-	-	-	8
DORSEY-ROSSER 230kV TRANSMISSION IMPROVEMENTS	2	0	0	-	-	-	-	-	-	-	-	-	0
DORSEY > ST. VITAL 230kV AC TRANSMISSION	8	6	1	-	-	-	-	-	-	-	-	-	7
DORSEY > LAVERENDRYE > ST. VITAL 230kV TRANSMISSION	26	-	-	-	-	-	-	-	-	-	-	-	-
ROSSER > SILVER 230kV TRANSMISSION	30	0	0	3	7	14	-	-	-	-	-	-	24
NEEPAWA 230 -66kV STN	18	-	-	0	1	8	9	-	-	-	-	-	18
ASSINIBOINE - WILKES AVE 115-24 KV BANK 1 ADDITION	15	1	(2)	-	-	-	-	-	-	-	-	-	(1)
ROSSER > MCPHILLIPS 115kV TRANSMISSION IMPROVEMENTS	3	-	0	1	2	-	-	-	-	-	-	-	3
RICHER SOUTH 230-66kV TRANSFORMER ADDITION	5	-	0	0	2	2	-	-	-	-	-	-	5
PINE FALLS > BLOODVEIN 115kV TRANSMISSION LINE	29	-	-	-	0	0	0	0	1	2	7	16	26
ST. VITAL > STEINBACH 230kV TRANSMISSION	23	-	-	-	0	0	1	3	4	14	-	-	23
RIDGEWAY > SELKIRK 230kV TRANSMISSION	26	-	1	2	4	5	7	6	-	-	-	-	26
SOURIS > PEMBINA VALLEY 230kV TRANSMISSION	33	-	-	-	-	-	1	1	1	2	12	16	33
WINNIPEG AREA TRANSMISSION REFURBISHMENT	8	2	2	1	-	-	-	-	-	-	-	-	4
DORSEY STATION 230kV BREAKER REPLACEMENT	19	0	0	-	-	-	-	-	-	-	-	-	0
DORSEY > US BORDER D602F 500KV AC T/L INSULATOR REPLACEMENT	8	1	1	-	-	-	-	-	-	-	-	-	2
BIPOLE 1 & 2 LINE SPACER DAMPERS REPLACEMENT	15	4	5	-	-	-	-	-	-	-	-	-	9
DORSEY 230kV BUS ENHANCEMENTS	16	3	4	4	4	2	-	-	-	-	-	-	16
FLIN FLON AREA TRANSMISSION IMPROVEMENTS	22	1	-	3	5	3							12
PINE FALLS-GREAT FALLS 115-66kV SUPPLY	10	2	4	4	0								10
SUBTRANSMISSION													
JENPEG > NORWAY HOUSE 66 kV SUB TRANSMISSION LINE	12	5	6			-	-	-	-	-	-	-	11
RUTTAN > SOUTH INDIAN LAKE 66 kV LINE	16	0	0	0	2	4	-	-	-	-	-	-	7
PIKWITONEI & THICKET PORTAGE SITE REMEDIATION	6	2	1	-	-	-	-	-	-	-	-	-	2
BIRTLE SOUTH > ROSSBURN 66kV LINE	6	-	0	0	4	2	-	-	-	-	-	-	6
ST. BONIFACE PLESSIS Rd 115-25kV STATION	16	0	(2)	-	-	-	-	-	-	-	-	-	(1)
ROSSER - OAK POINT 115-24KV STATION	21	-	-	-	-	-	0	2	2	13	4	-	21

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ROSSER - OAK POINT BANK 2 ADDITION	10	-	-	-	-	-	-	-	1	6	3	-	10
ST. BONIFACE PLESSIS Rd BANK 2 ADDITION	3	0	2	0	-	-	-	-	-	-	-	-	2
NEEPAWA 66KV SYSTEM	4	-	-	0	4	-	-	-	-	-	-	-	4
RESTON/GLENBORO CAPACITY INCREASE	6	3	1	-	-	-	-	-	-	-	-	-	4
ST. LEON 230-66KV TRANSFORMER ADD'N AND IPL EXPANSION	6	4	0	0	-	-	-	-	-	-	-	-	5
BRANDON CROCUS PLAINS 115-24kV BANK ADDITION	8	1	-	-	-	4	2	0	-	-	-	-	8
BRERETON LAKE STATION AREA	7	1	1	2	0	0	1	-	-	-	-	-	7
	-	-	-	-	-	-	-	-	-	-	-	-	-
DISTRIBUTION													
VIRDEN AREA DISTRIBUTION CHANGES	15	2	1	1	1	-	-	-	-	-	-	-	6
DEFECTIVE RINJ CABLE REPLACEMENT	8	1	2	2	2	1	-	-	-	-	-	-	7
PAINT LAKE FEEDER	2	2	-	-	-	-	-	-	-	-	-	-	2
	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMUNICATIONS, CONTROLS AND INFO TECHNOLOGY													
MICROWAVE RADIO REPLACEMENTS	141	13	41	23	8	28	7	-	-	-	-	-	120
MAPINFO IMPLEMENTATION	33	4	3	-	-	-	-	-	-	-	-	-	6
	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER													
SITE REMEDIATION	10	2	2	1	0	-	-	-	-	-	-	-	5
OIL CONTAINMENT	4	1	1	1	0	-	-	-	-	-	-	-	4
	-	-	-	-	-	-	-	-	-	-	-	-	-
DOMESTIC ITEMS - TRANSMISSION AND DISTRIBUTION		61	68	70	72	73	75	77	79	81	83	84	822
PROPOSED TRANSMISSION AND DISTRIBUTION		142	161	142	159	195	177	253	197	221	169	116	1,930
CUSTOMER SERVICE & MARKETING													
DEMAND SIDE MANAGEMENT CAPITAL COSTS		11	14	22	22	19	16	13	12	12	12	8	162
AUTOMATIC METER READING IMPLEMENTATION	31	2	3	3	3	3	3	3	6	2	0	-	31
	-	-	-	-	-	-	-	-	-	-	-	-	-
DOMESTIC ITEMS - CUSTOMER SERVICE		44	45	48	49	50	51	52	54	55	56	57	560
	-	-	-	-	-	-	-	-	-	-	-	-	-
PROPOSED CUSTOMER SERVICE & MARKETING		57	62	73	74	72	71	68	72	69	69	64	752
FINANCE & ADMINISTRATION													
CORPORATE BUILDING PROGRAM		7	8	8	8	8	22	10	8	8	8	8	100
CUSTOMER INFORMATION SYSTEM	11	-	4	7	0	-	-	-	-	-	-	-	10
	-	-	-	-	-	-	-	-	-	-	-	-	-
HUMAN RESOURCE MANAGEMENT SYSTEM	13	-	12	1	-	-	-	-	-	-	-	-	13
	-	-	-	-	-	-	-	-	-	-	-	-	-
DOMESTIC ITEMS - FINANCE & ADMINISTRATION		22	21	21	22	22	23	24	24	25	25	25	253
	-	-	-	-	-	-	-	-	-	-	-	-	-
PROPOSED FINANCE & ADMINISTRATION		29	45	37	29	30	45	33	32	32	33	33	377
PROPOSED CAPITAL EXPENDITURES (ELECTRIC)		425	367	376	338	330	318	380	325	355	312	239	3,764