

Substation Functionalization Factors

Newfoundland Power Inc.

SUBSTATION PLANT FUNCTIONALIZATION

	Total	Production				Transmission	Distribution	Specifically Assigned	
		Steam	Hydro	Other	Total			Transmission	Distribution
Fixed Assets Year End 2001 ¹	\$105,601.25		\$2,982.40	\$988.70	\$3,971.10	\$34,582.71	\$66,534.60	\$160.79	\$352.05
% Allocators	100.00%	0.00%	2.82%	0.94%	3.76%	32.75%	63.01%	0.15%	0.33%

NOTES:

1 - Total functional assignment before assignment to specifically assigned category is from the detailed study of fixed assets.

SPECIFICALLY ASSIGNED ASSETS

Specifically Assigned Assets Taken from Plant Ledgers (Updated for Year End 2001)

Customer Class		Total Specific Cust. Plant In Service	Transmission				Distribution			
			Lines	Substations	Total	% byClass	CP&F	Substations	Total	% byClass
Domestic Regular	1.1	\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
Domestic A.E.	1.1	\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
General Service (0-10 kW)	2.1	\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
General Service (10-100 kW)	2.2	\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
General Service (110-350 kVA)	2.3									
PRIMARY		\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
SECONDARY		\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
General Service (350-1000 kVA)	2.3									
TRANSMISSION		\$102,562	\$102,562	\$0	\$102,562	12.19%	\$0	\$0	\$0	0.00%
PRIMARY		\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
SECONDARY		\$0		\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
General Service (Over 1000 kVA)	2.4									
TRANSMISSION		\$644,003	\$577,728	\$66,275	\$644,003	76.57%	\$0	\$0	\$0	0.00%
PRIMARY		\$446,565	\$0	\$94,512	\$94,512	11.24%	\$0	\$352,053	\$352,053	100.00%
SECONDARY		\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
Streetlighting	4.1	\$0	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	0.00%
Total		\$1,193,130	\$680,290	\$160,787	\$841,077	100%	\$0	\$352,053	\$352,053	100%

DATE: 2002/03/25

The substation plant allocation is based on a review of the assets associated with each substation. The substation plant cost are allocated between generation (hydro and other), transmission and distribution based on their use.

- A substation used solely for generation is considered 100% generation.
- A substation that has both generation and distribution has its components split between generation and distribution with common high voltage equipment (>25 kV) regarded as transmission.
- For a substation that contains both distribution and transmission voltages (>25 kV), the costs are split at the high voltage air break switch on the step-down transformer. All the costs on the distribution side of the air break switch is allocate to distribution while the rest is allocated to transmission.

The overall results of the allocation study is shown below.

Functional Allocation Results for 2001 (\$000)

Total	Generation		Transmission	Distribution
	Hydro	Other		
105,249.2	2,982.4	988.7	34,743.5	66,534.6
100.00%	2.83%	0.94%	33.01%	63.22%

Note: These breakdowns are before specifically assigned cost.

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 3 of 11

St John's				
SUBSTATION	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
ST. JOHN'S MAIN	2,100.1		594.6	1,505.5
HARDWOODS	3,723.0		1,249.2	2,473.8
KINGS BRIDGE	1,436.3		444.2	992.1
STAMPS LANE	2,329.8		803.6	1,526.2
MOBILE	1,161.5		839.2	322.3
BROAD COVE	750.6			750.6
PETTY HARBOUR	351.1	150.8		200.3
PIERRE'S BROOK	96.0	96.0		
TORS COVE	76.8	76.8		
ROCKY POND	55.0	55.0		
RIDGE ROAD	1,305.8		316.6	989.2
MOBILE (PLANT)	91.9	91.9		
MORRIS	188.4	188.4		
CAPE BROYLE	506.0		96.6	409.4
HORSE CHOPS	77.7	77.7		
ST. JOHN'S STEAM	235.3	235.3		
MOLLOYS LANE	1,196.1		149.3	1,046.8
FRONT ROAD (B.I.)	18.5			18.5
OXEN POND	1,053.0		880.9	172.1
TOPSAIL	113.5	113.5		
SEAL COVE (H.V.)	588.2	107.7	258.6	221.9
SEAL COVE (L.V.)	44.1			44.1
KENMOUNT	1,939.8		524.2	1,415.6
GOULDS	2,169.9		1,320.9	849.0
MEMORIAL	499.0		144.4	354.6
PORT. 1 TRANS.	425.4	84.3		341.1
PORT. 3 TRANS.	654.8		245.6	409.2
PORT. 4 TRANS.	1,993.4		777.0	1,216.4
ST. JOHN'S DEISEL	26.7	26.7		
PULPIT ROCK	1,015.8			1,015.8
VIRGINIA WATERS	1,782.2		419.0	1,363.2
GLENDALE	1,889.9		142.1	1,747.8
FERMEUSE	145.2			145.2
KELLIGREWS	638.0		121.6	516.4
CHAMBERLAINS	1,218.6		225.4	993.2
BIG POND	467.2		35.3	431.9
NEW GOWER STREET	53.8			53.8
PEPPERRELL	725.5		179.4	546.1
POUCH COVE	8.9			8.9
SUB TOTAL	33,152.8	1,304.1	9,767.7	22,081.0
Other Production		262.0		

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 4 of 11

Avalon

SUBSTATION	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
COLLIERS	1,350.2		289.0	1,061.2
BAY ROBERTS	2,643.3		1,862.8	780.5
HARBOUR GRACE	629.7		237.4	392.3
WHITBOURNE	10.0		10.0	
CARBONEAR	1,237.8		396.1	841.7
BLAKETOWN	2,470.9		1,546.4	924.5
QUARRY	58.2			58.2
USN ARGENTIA	43.0			43.0
CLARKES POND	653.4			653.4
WESTERN AVALON	371.1		84.3	286.8
RIVERHEAD	441.0		197.8	243.2
GREEN'S HARBOUR	-			
PLACENTIA JUNC.	35.8			35.8
VICTORIA	306.1	21.1		285.0
HEARTS CONTENT	751.3	37.8	626.2	87.3
NEW CHELSEA	727.9	216.2	362.4	149.3
PITTMAN'S POND	29.1	29.1		
TREPASSEY	237.3			237.3
ISLINGTON	236.9		66.5	170.4
SPRINGFIELD	619.3			619.3
OLD PERLICAN	447.7			447.7
HOLYROOD	721.8			721.8
COUNTRY ROAD	16.6		16.6	
NEW HARBOUR	389.1		78.5	310.6
NORTH SHORE	4.7			4.7
DUNVILLE	396.3			396.3
ISLAND COVE	610.8		133.4	477.4
ST. CATHERINES	786.4			786.4
SUB TOTAL	16,225.7	304.2	5,907.4	10,014.1

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 5 of 11

Burin				
<i>SUBSTATION</i>	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
FALL POND	21.1	21.1		
WEST BROOK	86.0	86.0		
LAWN	66.8	66.8		
WEBBERS	909.3			909.3
SALT POND	2,691.1	144.0	2,118.8	428.3
GRAND BEACH	18.0			18.0
GARNISH	163.0			163.0
LINTON LAKE	1,201.2		414.1	787.1
BAY L'ARGENT	203.2			203.2
GREENHILL	1,398.6	317.5	449.5	631.6
LAURENTIAN	877.8		393.2	484.6
MARYSTOWN	788.5		104.9	683.6
BURIN	8.3			8.3
FORTUNE	11.4			11.4
MONKSTOWN	532.9			532.9
SUB TOTAL	8,977.2	635.4	3,480.5	4,861.3
Other Production		461.5		

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 6 of 11

Bonavista				
<i>SUBSTATION</i>	Total	Generation	Transmission	Distribution
	2001	2001	2001	2001
NORTHWEST BROOK	815.6			815.6
CLARENVILLE	1,902.7		1,409.2	493.5
LETHBRIDGE	122.5			122.5
LOCKSTON	448.6	182.5	109.6	156.5
PORT UNION	138.3	65.6		72.7
BONAVISTA	1,340.4			1,340.4
SUMMERVILLE	86.4			86.4
SUNNYSIDE	1,020.6			1,020.6
MILTON	746.4			746.4
CATALINA	1,475.4		963.9	511.5
PORT BLANDFORD	532.6			532.6
PRINCETON POND	198.1		198.1	
SUB TOTAL	8,827.6	248.1	2,680.8	5,898.7
Other Production		65.6		

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 7 of 11

Gander				
<i>SUBSTATION</i>	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
GANDER	1,451.2		1,014.9	436.3
NEW GLENWOOD	650.6		244.7	405.9
GANDER BAY	511.8		179.2	332.6
GAMBO	1,319.5		954.9	364.6
TERRA NOVA	261.5			261.5
WESLEYVILLE	427.7			427.7
MUSGRAVE HARBOUR	41.2			41.2
HARE BAY	231.3		36.5	194.8
GLOVERTOWN	551.4			551.4
COBB'S POND	2,137.4		1,506.6	630.8
CARMANVILLE	4.2			4.2
JONATHAN'S POND	44.0			44.0
BOYD'S COVE	518.9		518.9	
TRINITY	270.2			270.2
GREENSPOND	151.3			151.3
INDIAN COVE	45.7			45.7
TWILLINGATE	347.7			347.7
SUMMERFORD	344.3		75.8	268.5
ROYCEFIELD MINES	242.3		242.3	
SUB TOTAL	9,552.2	0.0	4,773.8	4,778.4

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 8 of 11

Grand Falls				
SUBSTATION	Total	Generation	Transmission	Distribution
	2001	2001	2001	2001
GRAND FALLS (OLD)	388.7		153.1	235.6
GRAND FALLS (NEW)	1,801.8		822.9	978.9
BISHOPS FALLS (NEW)	1,140.4		788.3	352.1
RATTLING BROOK	471.8	424.1		47.7
NOTRE DAME JCT.	152.5		38.9	113.6
NOTRE DAME JCT.(NEW)	4.0		4.0	
LEWISPORTE	1,218.1			1,218.1
BOTWOOD	457.3			457.3
SANDY BROOK	51.2	51.2		
EXPLOITS	4.7			4.7
SPRINGDALE	952.5			952.5
MONTROSE	1.5			1.5
BUCHANS	22.6			22.6
INDIAN RIVER	81.6			81.6
SUB TOTAL	6,748.7	475.3	1,807.2	4,466.2

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 9 of 11

Corner Brook

SUBSTATION	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
HUMBER	1,294.7		52.2	1,242.5
NORTH STAR	5.7			5.7
DEER LAKE	618.0			618.0
BAYVIEW	1,012.4		436.8	575.6
WALBOURNES	1,134.1		410.3	723.8
PASADENA	396.0			396.0
GILLIAMS	350.5			350.5
FRENCHMAN'S COVE	303.9			303.9
PETRIES	15.7			15.7
SEAL COVE ROAD	1,212.9		716.5	496.4
HOWLEY	143.9			143.9
MASSEY DRIVE	400.0		400.0	
ADVOCATE	15.4			15.4
GREEN BAY	1.0			1.0
LITTLE BAY	2.0			2.0
BROOKFIELD	9.5			9.5
RAMBLER	3.0			3.0
MARBLE MOUNTAIN	670.1			670.1
SUB TOTAL	7,588.8	0.0	2,015.8	5,573.0

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 10 of 11

Stephenville

SUBSTATION	Total 2001	Generation 2001	Transmission 2001	Distribution 2001
GALLANT STREET	1,610.9		648.9	962.0
AGUATHUNA	49.0	49.0		
S'VILLE CROSSING	338.6		52.1	286.5
ST. GEORGES	674.8		343.5	331.3
FLINRKOTE CRUSHER				
LOOKOUT BROOK	197.2	197.2		
PORT AUX BASQUES	787.6	17.6		770.0
WHEELERS	74.4		74.4	
BOTTOM BROOK	3.8		3.8	
HARMON	310.7		39.5	271.2
ROSE BLANCHE	560.4	560.4		
DOYLES	147.2			147.2
ROBINSONS	312.3		36.7	275.6
ABRAHAM'S COVE	425.3		143.6	281.7
BERRY HEAD	413.4			413.4
STEPHENVILLE G. T.	555.7		555.7	
FLAT BAY	90.8			90.8
MCKAYS	6.8			6.8
GRAND BAY	1,171.2	133.0	688.4	349.8
LONG LAKE	360.6			360.6
SUB TOTAL	8,090.7	957.2	2,586.6	4,546.9
Other Production		199.6		

NEWFOUNDLAND POWER INC.
SUBSTATION PLANT ALLOCATION

PUB-216
Attachment D
NP 2003 GRA
Page 11 of 11

Miscellaneous				
<i>SUBSTATION</i>	Total	Generation	Transmission	Distribution
	<i>2001</i>	<i>2001</i>	<i>2001</i>	<i>2001</i>
Spare S/S Equip.	1,567.9		734.4	833.5
Undistributed WO's.	1,034.5	46.8	593.5	394.2
Spare Power Trans.	1,902.2			1,902.2
Stepdown Trans.	227.2			227.2
Spare Reclosers	653.8			653.8
Spare O.C.B.'s	699.9		395.8	304.1
SUB TOTAL MISC.	6,085.5	46.8	1,723.7	4,315.0