NON-CONFIDENTIAL

Request IR-1:

Reference: Evidence page 9, lines 8-14.

> **Under the proposed regulation, and consistent with the amended Electricity Act, meter aggregation is now expanded to a Distribution Zone. A single customer may net-meter more than one electric service account against its generator, if those metered accounts are owned by the same customer, and if the metered accounts and the generator are connected to NSPI distribution feeders emanating from a single distribution supply transformer within a substation (i.e. a Distribution Zone).**

See also Evidence page 5, lines 1 and 2 and Appendix B, page 2, Section 3.6.3.1.

(a) Please provide clarification of the definition of a defined "Distribution Zone" as well as the boundaries for each defined Distribution Zone. If boundaries are not available, include approximate geographic area.

Response IR-1**:**

(a) In the proposed revisions to Regulation 3.6, the Distribution Zone is defined as all NSPI distribution feeders emanating from a single distribution supply transformer within a substation. NSPI's distribution system is supplied from the transmission system via distribution substations, where transmission voltage is stepped down by a transformer to the distribution level voltages of 25 kV and less. Emanating from each of these distribution transformers are feeder circuits (typically from one to four) that extend over and define the service area of that distribution supply substation. The distribution zone is defined by the service area of a particular distribution supply transformer's feeder routing, and includes any electrical connection or service point within a supply substation's feeder "footprint". A defined geographic area/community can be served by

Response IR-1: (cont'd)

one or more distribution zones (for example, two transformers supplying the same geographic area), and a single distribution zone may serve more than one geographic area/community, depending on the transformer's feeder routing and service area.

Over time, NSPI's network of feeders and transformers will change as the system grows and for reasons of optimization. This may affect the distribution zone boundaries. NSPI will provide support to answer customer questions about distribution zones.

This approach to the Distribution Zone definition ensures that use of the transmission system, which is subject to NSPI's OATT, can be avoided.

Please refer to Attachment 1 for a list of general geographic areas and distribution zones.

General Geographic Area	Distribution Zone ID*	General Service Areas**
Amherst	**17N-T1**	**Brownell Ave. Substation**
		Brownell Ave/Havlock St./Eddy St./Amherst
		Fort Lawrence Ridge/Laplanche
		North Adelaide/Amherst/Brownell/Clifford
Amherst	**20N-T1**	**Park Street Substation**
		Park St./Victoria West/Anson Ave/Amherst
		Park/Spring/Church/Beacon/Charles St./Amherst
		Spring St./Charles St./Amherst High School
		West Pleasant St./Brookfield Creamery/Amherst
Amherst	**22N-T61**	**Church Street Substation**
		Amherst/Industrial Park/Amherst Pt
		Northport/Amherst Shore/Tidnish/Linden
		Port Howe/Linden/Macdonald Rd.
		Willow/Albion/Along Tyndal Rd./East Amherst
Antigonish, Antigonish east	**4C-T63**	**Locharber Rd. Substation**
		Adam St./Cloverville Rd.
		Antigonish
		Giant's Lake
		Malignant Cove
		Tracadie
Argyle	**19W-T51**	**Central Argyle Substation**
		Central Argyle/Crowell Town/Route #3
		West, Middle & Lower Pubnico/Argyle Sound
Auld's Cove	**100C-T61**	**Cape Porcupine Substation**
		Havre Boucher
		Mulgrave
Avonport	**20V-T52**	**Five Points Substation**
		Avonport/Hantsport/Lockhartville
		Five Points/Hantsport
Baddeck	**104S-T51**	**Baddeck Substation**
		Baddeck Forks
		Englishtown
		Nyanza
Baddeck West	**9C-T1**	**Aberdeen Substation**
		Bucklaw
		Little Narrows/Gypsum/Aberdeen
Baddeck West	**9C-T2**	**Aberdeen Substation**
		Aberdeen/Little Narrows/Hazeldale/South
		Washabuck/Iona/South Cove
Barrington Passage	**22W-T51**	**Barrington Passage Substation**
		Barrington Head
		Barrington Passage
		Clarks Harbour
		Shag Harbour/The Hawk/Barrington Passage
Bear River	**13V-T51**	**Gulch Hydro Substation**
		Bear River
Bedford/Sackville	**101H-T62**	**Cobequid Rd. Substation**
		Bedford/Eaglewood
		Cobequid Rd.
		Cobequid/Windsor Jct./Lakeview/Devonport
		Union St./Bedford Hwy
Bridgetown	**70V-T51**	**Bridgetown Substation**
		Bridgetown
		Centrelea/E Dalhousie/Albany
		Hampton/Pt Lorne

Notes:
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**The general service area is a summary and does not describe all areas served.

General Geographic Area	Distribution Zone ID*	General Service Areas**
Bridgewater	**70W-T51**	**High St./Bridgewater Substation**
		Bridgewater/Empire/Queen/Pleasant/King
		High St./Bridgewater
Bridgewater	**70W-T53**	**High St./Bridgewater Substation**
		Bridgewater/Dominion/Hillcrest/Parkdale
		East Side Overhead
		Pinecrest Subdivision
		Pleasantville/Conquerall Bankwest Lahave
		Bridgewater Town Centre
		Wileville, Newcombville, Lower Branch
Bridgewater east	**89W-T1**	**Bridgewater/East Substation**
		Aberdeen/Glen Allen
		Blockhouse/Oakland/Maitland/Martins Pt
		Dayspring/Upper & Middle Lahave/Crouses
Bridgewater, Auburndale, New Germany	**73W-T1**	**Auburndale Substation**
		Auburndale
		Barr's Corner/Caledonia/Hemford/New Germany
		Bridgewater/Industrial Park
Broad River	**46W-T1**	**Broad River Substation**
		Summerville/Hunt's Point
		Port Mouton
		Port Joli
Burlington	**18V-T51**	**Upper Burlington Substation**
		Brooklyn/Belmont/Ashdale/Woodville/Green
		Up & Ctr. Burlington/Bramber/Summerville
		Walton/Pembroke/Cambridge/Tenecape
Caledonia	**57W-T1**	**Caledonia Substation**
		Caledonia
		Caledonia Mill
		West Caledonia
		Westfield/Brookfield/Pleasant River
Canso	**19C-T51**	**Canso Substation**
		Canso
Cape Breton, Isle Madame	**22C-T1**	**Cleveland Substation**
		Cleveland
		Isle Madame
		Louisdale/Grandique Ferry
		West Bay / Melford
Cape Breton, Mira, Louisbourg	**57S-T1**	**Albert Bridge Substation**
		Albert Bridge/Horn's Rd.
		Louisbourg/Mira Gut/Albert Bridge/Black Brook
		Marion Bridge/Grand Mira/Forchu
Cape Breton, St. Peter's, Whycocomagh	**59C-T61**	**St. Peters Substation**
		Big Pond Centre / Grand River
		River Bourgeois
		Samsonville
		St. Peters
		Port Hood
		Whycocomagh
		Whycocomagh/Iona Rear/Orangedale/Iron Mines
Carlton	**92W-T1**	**Carlton Substation**
		Carlton
		Deerfield/Carleton/Sloan's Lake/Hwy #340
		Kemptville/Forest Glen/Richfield/Hwy #34

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Chester	**84W-T1**	**Robinson Corner Substation**
		Hwy #14/Chester To East Chester
		Robinson's Corner/Chester Basin/Western Shore
Chester West	**103W-T1**	**Gold River Substation**
		Gold River/Western Shore/Martin's Point
		Gold River/Western Shore/Martin's Point
		Marriot's Cove/Chester Basin
Cheticamp	**103C-T51**	**Cheticamp Substation**
		Cheticamp
		Grand Etang
		Petit Etang
Clyde River	**23W-T1**	**Clyde River Substation**
		Baccaro/NE & West Harbour/Clyde River
		Clyde River
		Clyde River/Hwy #301/Goose Lake/Beaverdale
Cornwallis	**74V-T51**	**Cornwallis Substation**
		Former Cornwallis Base
		Bren/Sherman
Dartmouth	**113H-T64**	**Dartmouth East Substation**
		#7 Hwy/Riley Rd./Montague Rd./Appian Way
		Forest Hills Pkwy/Caldwell Rd.
		John Stewart/Colby Village
		Montague/Waverley Rd./Caledonia
Dartmouth	**40H-T1**	**Woodlawn Substation**
		Montebello Dr./Caledonia Dr./Dar Crossing
Dartmouth	**40H-T2**	**Woodlawn Substation**
		Brigadoon/Booth/Caledonia
		Ellenvale/Dorothea/Nantucket
		Guysborough/Woodlawn
		Mt Edward/Woodlawn/Portland
		Woodlawn/Dartmouth
Dartmouth	**48H-T1**	**Penhorn Substation**
		Circumferential Hwy
		Fenwick St./Pleasant St./Portland
		Manor Park/Sinclair/Penhorn Dr.
		Portland St.
Dartmouth	**62H-T1**	**Albro Lake Rd. Substation**
		Albro Lake Rd.
		Mic Mac Mall/Crichton
		Mic Mac Mall/Woodland Intchg
		Pinecrest/Courtney/Windmill
		Windmill Rd./Shannon Pk.
Dartmouth	**99H-T51**	**Farrell St. Substation**
		MacDonald Ave/Wright Ave/Windmill Road
		Windmill Road/Victoria Road/Wright's Cove
Dartmouth	**113H-T63**	**Dartmouth East Substation**
		Cole Hbr. Rd./Ross Rd./Colby Dr./Coleridge
		Main/Mt Edward/Portland Estates
		East Dartmouth/Riley Rd./Loon Lake
		Upper Lawrencetown/Cole Hbr..
Dartmouth, Burnside	**108H-T61**	**Burnside Substation**
		Joe Zatzman/Williams Ave
		Moosehead/Highfield/Green Rd.
		Vidito Dr./Ilsley Ave/City Of Lakes

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Dartmouth, Burnside	**124H-T1**	**Akerley Blvd. Substation**
		Borden/Wright/Macdonald Ave
		Fielding Ave/Windmill Rd.
Dartmouth, Downtown	**54H-T3**	**Maple St. Substation**
		5 Corners Area of Dartmouth/Portland
		Downtown Dartmouth/Underground
		Maple/(Dartmouth/Underground
		Windmill/Dartmouth/Underground
		Everette/Cow Bay/Heritage Hills
Dartmouth, Eastern Passage	**58H-T3**	**Imperial Oil Substation**
		Shearwater/Eastern Passage
Dartmouth, Porter's Lake	**126H-T61**	**Porters Lake Substation**
		Chezzetcook/Lawrencetown
		Lake Echo
		Porters Lake/Middle Porters Lake
Debert	**81N-T61**	**Debert Substation**
		Debert To Wentworth And Bass River
		Debert To Wentworth/Bass River/Folly Mtn
Digby	**77V-T1**	**Conway Substation**
		Barton/Pt Prim
		Digby
		Smiths Cove/Doucetville
Digby	**77V-T52**	**Conway Substation**
		Conway
		Digby Neck
Enfield, Elmsdale	**82V-T1**	**Elmsdale Substation**
		Enfield
		Gays River/Shubenacadie
		Nine Mile R/Kennetcook/Noel
Enfield, Elmsdale	**82V-T62**	**Elmsdale Substation**
		Elmsdale
		Enfield
Fall River	**127H-T61**	**Aerotech Park Substation**
		Fall River/Wellington
		Halifax Airport/Barnes Road
		Pratt & Whitney/Aerotech Park
Glace Bay	**81S-T1**	**Reserve St. Substation**
		Dominion
		Donkin/Port Morien
		Reserve Mines
Glace Bay	**81S-T2**	**Reserve St. Substation**
		Brookside St.
		Main St.
		Main St./South St.
		New Aberdeen
		Reserve St./Glace Bay
Green Harbour	**36W-T1**	**Green Harbour Substation**
		Green Harbour
		Jordan Falls/East Green Harbour
		Lydgate/Sable River/East Green Harbour
Guysborough	**24C-T54**	**Dickie Brook Substation**
		Dickie Brook
		Dort's Cove/Hazel Hill/Dover/TorBay
		Guysborough

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Guysborough	**57C-T1**	**Salmon River Lake Substation**
		Goshen
		Indian Harbour Lake
		Salmon River Lake
		Salmon River To Guysborough
Halifax Peninsula	**104H-T61**	**Kempt Rd. Substation**
		Bayers/Oxford/South/Beaufort
		Robie/Windsor/North/Almon
		Windsor/North/Chebucto
		Windsor/Strawberry Hill/Kempt/Hood
Halifax Peninsula	**104H-T62**	**Kempt Rd. Substation**
		Kempt Rd.
		Robie/Duffus/Novalee/Barrington
		Young/Connolly/Chebucto
		Young/Veith/Barrington/North Dockyard
Halifax Peninsula	**104H-T63**	**Kempt Rd. Substation**
		Kempt Rd.
		Kempt/Commission/Lady Hammonds/High
		Livingstone/Agricola/North Park/Troloppe
		Livingstone/Ilseville/Fuller Terrace/May
		Russell/Agricola/North Park/Trollope/Bel
Halifax Peninsula South/Downtown	**1H-T61**	**Water St. Substation**
		Barrington/Hollis/Morris/Tower
		Barrington/Inglis/South/Tower
		Joe Howe Bldg/Centennial Bldg/Scotia Square
		Morris/Spring Garden
		South/Tower/Armdale
		Tower/Inglis
		VG/Camp Hill Hospitals
Halifax Peninsula South/Downtown	**1H-T62**	**Water St. Substation**
		Downtown Halifax
		Metro Centre (Underground)
		VG Hospital (Underground)
		Water St.
Halifax, Armdale, Southend	**2H-T1**	**Armdale Substation**
		Quinpool/Henry/Dalhousie University
		Armdale/Dutch Village/Bay Road
		Armdale/Southend
Halifax, Bedford West	**129H-T61**	**Kearney Lake Rd. Substation**
		Blue Water/Hammonds Plains/Bedford Hills
		Kearney Lake/Castle Hill/Dowing/Bedford
		Kearney Lake/Donaldson/Farnham Gate
Halifax, Clayton Park	**23H-T51**	**Clayton Park Substation**
		Bedford Hwy/Sherbrook/Main/Mt Saint Vincent
		Clayton Park
		Dunbrack/Radcliffe/Barkton/Main St.
		Meadowlark/Flamingo Dr./Bedford Hwy/Tremont
		Rockingham
Halifax, Lakeside/Timberlea	**103H-T61**	**Lakeside Substation**
		Bay Road/Bayers Lake Industrial Park/Lacewood
		Bay Road/Crown/Brook/Dutch Village/Mumford
		Beechville/Prospect Rd./McGrath's Cove
		Lakeside/Timberlea

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Halifax, Spryfield	**20H-T1**	**Spryfield Substation**
		Spryfield
		Herring Cove/Portuguese Cove/Ketch Harbour
		Herring Cove/Punch Bowl/Cowie Hill
		Sussex/Rockingstone/Sambro
Halifax, Spryfield	**20H-T2**	**Spryfield Substation**
		Herring Cove/Chocolate Lake/Armdale
		Herring Cove/Drysdale/Princeton
		Herring Cove/Williams Lake/Purcell's Cove
		Spryfield
Hammonds Plains Road	**137H-T1**	**Hammonds Plains Substation**
		Hammonds Plains Road
Hubbards	**87W-T61**	**Hubbards Substation**
		Hubbards/Hwy #329/Blandford/Tancook
		Simms Settlement/East Chester/East Rive
Ingonish	**85S-T11**	**Wreck Cove Hydro Substation**
		Ingonish/Cape North/Dingwall/White Point
		Tarbot/Wreck Cove/Breton Cove/North Rive
Inverness, Margaree	**58C-T51**	**Southwest Margaree Substation**
		Cheticamp/Middle River
		Inverness Town
		Southwest Margaree
Kentville	**50V-T51**	**Klondike Substation**
		Kentville
		Klondike/Kentville
Kingston	**63V-T51**	**Kingston Substation**
		Kingston/Bishop Mtn/Ravenwood Sub
		W Kingston/Wilmot/Stronach Mtn
		E Kingston/Aylesford/Auburn/Nicholsville
Lequille	**12V-T2**	**Lequille Hydro Substation**
		Clementsport
		Mochelle
		Parkers Cove/Victoria Beach
Liverpool	**48W-T1**	**Waterloo St./Liverpool Substation**
		Henry Hensey Dr./Bristol Ave
		Liverpool/Church St./Union St./White Point
		Main St.
Liverpool, Milton	**50W-T53**	**Milton Substation**
		Milton/Brooklyn/Liverpool
		Milton/Mill Village/Charleston/Dansville
Lockport	**37W-T1**	**Lockeport Substation**
		Lockeport/South Breakwater
		Lydgate/Pond Cove/Lockeport
Lower and Middle Sackville	**131H-T62**	**Lucasville Rd. Substation**
		Beaverbank Road
		Lucasville Rd./Hammonds Plain Rd.
		Lucasville/Mt Uniacke/Hwy #1/Moore Settlement
		Millwood/Glendale Ave
Lower Sackville	**101H-T61**	**Cobequid Rd. Substation**
		Glendale Dr./First Lake Dr.
		Old Sackville Rd.
		Sackville Dr.
Lunenburg	**80W-T1**	**Indian Path Substation**
		Crescent Beach/New Cumberland/Petite Riviere
		First South/Bayport/Centre/Corkums Island
		Riverport Electric

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Lunenburg, Martin's Brook	**78W-T1**	**Martin's Brook Substation**
		Fauxburg/Northwest/Lilydale/Centre
		Maders Cove/Second Peninsula/Stonehurst
		Martin Brook
Maitland Bridge	**76V-T1**	**Maitland Bridge**
		Kejimkujik/Harmony Mills
		Grafton Rd/Harmony/Kempt/Albany
		Maitland Bridge
Maccan, Nappan	**30N-T61**	**Maccan Substation**
		Joggins/River Hebert/Boars Back Rd.
		Village Of Maccan/Nappan/West Amherst
Middlefield	**91W-T51**	**Middlefield Substation**
		Greenfield/Pleasantfield
		Middlefield
Musquodoboit Harbour	**87H-T61**	**Musquodoboit Harbour Substation**
		East Chezzetcook
		Jeddore/Ship Hbr.
		Musq Hbr/Petpeswick/Ostrea Lake
		Musquodoboit Harbour
New Glasgow, Stellarton	**62N-T1/T2**	**Bridge Ave. Substation**
		Bridge Ave/Stellarton
		E New Glasgow/Aberdeen Hospital/Shopping
		New Glasgow/North Ford/Highland Mall
		New Glasgow/Parkdale/Vale/Plymouth/Thorburn
		Part of Stellarton/Westville/Landsdowne
		Stellarton/Westville/Durham/Central W River
		Westville/Union Centre/Rocklin/Riverton
New Minas	**22V-T51**	**New Minas Substation**
		New Minas/Commercial St.
		Golf View Sub
		Crescent Dr./Highbury Dr.
New Minas	**22V-T52**	**New Minas Substation**
		Highbury/S & N Alton/Aldersville/Blue Mtn.
		Meadow Terrace Sub/Greenwich/Wolfville
		Port Williams/N Kentville/Starrs Point
New Ross	**1V-T51**	**Avon No 1 (Hydro) Substation**
		Mill Section/Lower Vaughn/New Ross/Forties
New Waterford	**15S-T1**	**New Waterford Substation**
		Ellsworth Ave/New Victoria
		Lingan/New Victoria
		Mahon St./Roaches Rd.
North Sydney	**3S-T5**	**Gannon Rd. Substation**
		Christie Beach
		Convent St./Memorial Dr./Cranberry Hill
		Gannon Rd./North Sydney
		Upper North Sydney/Commercial St./Lorne St.
		Collingwood Corner/Oxford/Sutherland Lake
Oxford	**3N-T1**	**Oxford Junction Substation**
		Oxford
Parrsboro	**37N-T51**	**Parrsboro Substation**
		Athol/Harrison Settlement/Mapleton
		Kirkhill To Advocate/Ward Brook/Diligent
		Little Bass River/Five Islands/Economy Point
		Parrsboro/White Hall/West Bay/Black Rock

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Pictou	**55N-T1**	**Pictou Substation**
		Pictou/Cottage St.
		Pictou/Water St.
		Saint Andrews
		Wellington St./Beeches Rd.
Pictou, Sunrise Trail	**56N-T1**	**Haliburton Substation**
		Browns Point Road
		Pictou/Braeshore/Three Brooks/Caribou River
		Sunrise Trail/Seafoam/Haliburton/Scotsburn
Port Hawkesbury, Port Hastings	**1C-T61**	**Point Tupper Substation**
		Point Tupper
		Port Hawkesbury
Port Hawkesbury, Port Hastings	**2C-T2**	**Port Hastings Substation**
		Port Hastings
		Port Hawkesbury
		Port Hood
Port Maitland, Hebron	**16W-T1**	**Hebron Substation**
		Ohio/Hectanooga/Hebron
		Port Maitland/Hebron
Pubnico	**20W-T51**	**Lower East Pubnico Substation**
		Pubnico/Lower East Pubnico
		Upper Woods Harbour/Lower East Pubnico
Pugwash	**7N-T54**	**Pugwash Substation**
		County Home Rd./Pugwash Jct.
Pugwash	**7N-T3**	**Pugwash Substation**
		Wallace/Pugwash
Saulnierville	**93V-T51**	**Saulnierville Substation**
		Metegan
		Saulnierville To Beaver River
		Saulnierville,Church Point
Sheet Harbour, Eastern Shore	**96H-T53**	**Ruth Falls Hydro Substation**
		Liscomb Mills/Port Dufferin Mines
		Sheet Harbour Substation
		Sheet Harbour/Sober Is/Marinette
Shelburne	**25W-T1**	**Ohio Rd. Substation**
		Ohio/McNutt's Island/Birchtown/Carleton
		Shelburne
		Shelburne/Sandy Point/Lockes Island/Jordan River
Springhill	**6N-T1**	**Black River Rd. Substation**
		Black River/Windham Hill
		Springhill
		Springhill/Leamington/Black River Rd.
Springhill, Oxford	**74N-T41**	**Springhill Substation**
		Oxford/River Phillip
		Springhill
Stewiake	**16N-T1**	**Stewiacke Substation**
		Stewiacke To Brookfield Corner
		Stewiacke/Shubenacadie
Sydney	**11S-T1**	**Keltic Dr./Coxheath Substation**
		Kings Rd./Weidner Dr./Alexander/Membertou
		Westmount Rd./Murphy Rd./Riverdale Dr.
		Westmount/Dobson/Sunnydale/Ingram's

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General Geographic Area	Distribution Zone ID*	General Service Areas**
Sydney	**4S-T52**	**Townsend St. Substation**
		Ashby
		George St.
		Kings Rd.
		Prince St.
Sydney	**4S-T53**	**Townsend St. Substation**
		Bentinck/Esplanade
		Kings Rd.
		Mira Rd.
		Welton St.
Sydney	**6S-T1**	**Terrace St. Substation**
		Birch Hill Dr.
		Harold St./George St.
		Oxford St./George St.
		St. Peters Rd.
Sydney	**82S-T1**	**Whitney Pier Substation**
		Whitney Pier
		South Bar
Sydney	**84S-T1**	**Victoria Junction Distribution Substation**
		Sydney - Glace Bay Hwy.
		Welton St.
Sydney Mines	**3S-T3**	**Gannon Rd. Substation**
		Sydney Mines
Sydney Mines	**3S-T4**	**Gannon Rd. Substation**
		Florence/Big Bras D'Or/Alder Point
		Gannon Rd./North Sydney
		Pierce St./Peppett St./Blower St.
		Sydney Mines/Gannon Rd./North Sydney
Sydney River West	**11S-T52**	**Keltic Dr./Coxheath Substation**
		Christmas Island/Frenchvale/Ironville
		Coxheath/Cantley Village/Blacketts Lake
		Sydney River/Carmichael Dr./Howie Center
Sydney, Eskasoni	**11S-T53**	**Keltic Dr./Coxheath Substation**
		Keltic Dr./Coxheath
		Eskasoni/Ben Eoin/Castle Bay/Grand Narrows
Tantallon, St. Margaret's Bay	**92H-T61**	**Tidewater Hydro Substation**
		Ingram Port/Upper Tantallon/Allen Heights
		Peggy's Cove/East Dover
		Upper Tantallon/Sheldrake Lake/Lewis Lake
Tatamagouche	**4N-T51**	**Tatamagouche Substation**
		River John/New Annan/Tatamagouche
		Tatamagouche To Wallace/Malagash
		Tatamagouche/Earltown/West Branch/Denmark
Tremont	**51V-T51**	**Tremont Substation**
		Greenwood/Harmony
Trenton	**50N-T51**	**Trenton Substation**
		Trenton Car Works
Trenton	**50N-T13**	**Trenton Substation**
		New Glasgow/Trenton West/Abercrombie
		Pictou Landing/Lower Landing
		Trenton East/Oak/Duke
		Trenton//Little Harbour/Ardness
Truro	**15N-T1**	**Willow Lane Substation**
		Truro/Arthur/Willow Lane/Young/Dominion
		Willow/Prince St./Young/Hilden/Harmony

Notes:
*Distribution Zones boundaries are subject to change over time, due to changes in NSPI's network of feeders and transformers.
**The general service area is a summary and does not describe all areas served.

General Geographic Area	Distribution Zone ID*	General Service Areas**
Truro	**15N-T2**	**Willow Lane Substation**
		Glenwood Dr.
		Harmony/Greenfield
Truro	**15N-T3**	**Willow Lane Substation**
		Truro Industrial Park
		Truro Hts/Hilden To Brookfield
Truro	**1N-T65**	**Onslow Substation**
		Bible Hill/North River/McCallum Settlement
		Bible Hill/Pictou Road/College Road
		College Rd./Agricultural College/Bible Hill
		Crowes Mills/Onslow Mtn To Old Tatamagouche
		Downtown/Prince/Esplanade/Young St.
		Onslow/Lloyd Crt/Part St./Marshland/Lorne
		Onslow/Masstown
		Queen Street/Prince Street/Park Street
		Queen/Walker/Park St./Logan/Normandy Ave
		Tidal Bore Rd./Robie St./Maitland/Selma
		Walker St./Downtown Truro/Bible Hill
Tusket	**102W-T51**	**Tusket Distribution Substation**
		Hwy #3/Tusket/Morris Is/Springhaven/East
		Tusket/Pleasant Lake/Route #3/Wedgeport
Upper and Middle Musquodoboit	**88H-T1**	**Upper Musquodoboit Substation**
		Middle Musquodoboit/Chasswood
		Upper Musquodoboit
		Upper Stewiacke/Dean/Burnside/South Branch
Valley, Blomidon, Canning	**36V-T1**	**Hillaton Substation**
		Canning/Scotts Bay/Pereau/Medford/Blomidon
		Hillaton
		Lower Canard/Church St./Lower Saxon
		Saxton St./Glenmont/Lakeville/Sheffield
Valley, Coldbrook, Waterville	**55V-T51**	**Waterville Substation**
		Waterville
		Black Rock/Welsford/Harbourview
		S Berwick/Morristown/Viewmont
Valley, Coldbrook, Waterville	**55V-T52**	**Waterville Substation**
		Coldbrook/Bishop/Lovett
		Cambridge/Waterville Mtn Rd/North Bishop
Valley, Greenwood	**64V-T1**	**Greenwood Village Substation**
		CFB Greenwood
		Greenwood Townhouses
		Greenwood Village
		W Greenwood/Meadowvale/Messenger
Valley, Middleton	**65V-T1**	**Middleton Substation**
		Middleton/Gates Mtn.
		Nictaux West/Brickton/Mt Hanley/Port George
		Wilmot/Middleton/Victoria Vale/Margaret's
Weymouth	**16V-T51**	**Weymouth Hydro Substation**
		Corberrie/Weymouth
		Weymouth Town/Plympton
Whycocomagh	**67C-T64**	**Whycocomagh Substation**
		Whycocomagh/Iona Rear/Orangedale/Iron Mines
		Lake Ainslie
		Port Hood

Notes:
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**The general service area is a summary and does not describe all areas served.

General Geographic Area	Distribution Zone ID*	General Service Areas**
Windsor	**79V-T1**	**Three Mile Plains Substation**
		Three Mile Plains/Martock/Windsor Forks
		Newport Corner/Mt. Uniacke/South Rawdon
		Windsor/Mt Denson/Falmouth
Wolfville	**45V-T1**	**Acadia University Substation**
		Acadia University, Wolfville Area
Wolfville	**83V-T1**	**Wolfville Ridge Substation**
		Gaspereau/White Rock & Methals Sunken Lake
		Lower Wolfville/Grand Pre/Walbrook Mtn
		Wolfville
		Wolfville/Acadia University
		Wolfville/Highland/Prospect/Skyway
Wood's Harbour	**21W-T51**	**Lower Wood's Harbour Substation**
		Lower Wood's Harbour/Upper Woods Harbour
		Shag Harbour
Yarmouth	**11W-T51**	**King St. Substation**
		North Main St./King St./Yarmouth
		Parade St./King St./Yarmouth
		South Main St./King St./Yarmouth
Yarmouth	**88W-T51**	**Pleasant St. Substation**
		Yarmouth/Dayton/Pembroke/Hwy #1/Brooklyn
		Yarmouth/Rockville/Bunkers Island/Kelly's Cove
Yarmouth	**88W-T52**	**Pleasant St. Substation**
		Overton/Sidon Hill/Forchu
		Yarmouth/Brooklyn/Yarmouth Industrial Park
		Yarmouth/Central Cheboque/Comeau's Hill

Notes:
*Distribution Zones boundaries are subject to change over time, due to changes in NSPI's network of feeders and transformers.
**The general service area is a summary and does not describe all areas served.

NON-CONFIDENTIAL

Request IR-2:

Reference: Evidence, page 6, lines 9-17.

> **Under the proposed regulation, and consistent with the amendments to the Electricity Act, maximum net generating capacity is increased to 1 MW. The capacity of the customer's generator may now be sized to meet the annual consumption of the customer, allowing for aggregation of multiple meters under one account within a defined distribution zone. The intention of the enhanced net metering program is still to enable customers to offset part or all of the customer's own electrical requirements. NSPI will work with customers to help ensure their generator is sized to meet the expected annual consumption of the customer, as required by Section 3A(2)(c) of the Electricity Act.**

See also Evidence, page 4, lines 31 and 32 and Appendix B, page 1, Section 3.6.2.

(a) Please indicate the method NSPI will use to determine the customer's expected annual consumption with respect to determining the maximum size of a customer's net metered generation system.

(b) Please indicate how much excess energy generation will be considered acceptable over the expected customer's annual consumption when determining the maximum size of the customer's net metered generation system (i.e. how much flexibility will be provided in determining the maximum size of customer's net metered generation system, considering the demand and some of the energy sources which will qualify for net metering will both vary to some degree from year to year)?

Response IR-2**:**

(a) A customer's expected annual consumption will be determined utilizing historical consumption when available as well as anticipated changes for all accounts proposed by the customer for net metering.

Response IR-2: (cont'd)

Prior to a study of system impacts, where applicable, and based on the guiding principles as outlined in Section 1.0 Statutory Requirements of NSPI's Application, NSPI will evaluate the details of each customer's application to make a reasonable judgment as to whether the nameplate capacity and estimated capacity factor of the customer's generation device are appropriately sized relative to the customer's consumption, not to exceed a maximum generator capacity of 1 MW.

(b) The intent of the legislation is to allow customers to generate to meet their consumption needs. With respect to determining the maximum size of the generator(s), please refer to part (a).

NON-CONFIDENTIAL

Request IR-3:

Reference: Evidence, page 6, lines 19-22.

NSPI proposes two classes of service for net metering customers as follows:

Class 1: up to and including 100 KW
Class 2: >100 kW to 1MW"

See also Evidence, Appendix B, page 1, Section 3.6.2.

(a) Please provide an explanation or rationalization for the two classes of net metered generation, and why the Class 1 (generators up to 100kW) capacity has been reduced from the former upper limit of approximately 12MW to the proposed value of 5MW.

Response IR-3**:**

(a) The two classes of net metered generation align with existing NSPI guidelines and processes for interconnection of generation to the NSPI distribution system. Those units rated up to and including 100 kW do not appreciably change the distribution system and its characteristics and are therefore not required to meet the more stringent interconnection requirements of the larger Class 2 generators. Providing a separate class for smaller generators allows for a more streamlined and less costly process for customers.

The overall capacity of net metered generation has been increased from 0.5 percent of NSPI's historical peak demand (approximately 11 MW) to 20 MW. The new 20 MW capacity was subsequently divided between the Class 1 and Class 2 generation based on historic usage of the net meter program. The 5 MW allocated to Class 1 projects represents a tenfold increase over current Class 1 generation levels.

NON-CONFIDENTIAL

Request IR-4:

Reference: Evidence page 4, lines 13 and 14.

NSPI's proposed program establishes a maximum capacity of 20MW, apportioned between the two proposed classes.

(a) Please provide an explanation or rationalization of why the maximum allocation under net metering of 20MW is appropriate and provide all analysis and studies conducted by NSPI to determine this amount.

(b) Did NSPI consider the impact of increasing the maximum capacity above 20MW? If so, explain why 20MW is the optimum amount. If not, why not?

Response IR-4**:**

(a-b) The 20 MW cap is intended as a more suitable replacement of the current cap as set at 0.5 percent of NSPI's historical peak demand. It represents a near 100 percent increase in the enrolment limit. Its purpose remains essentially the same. It is intended as a regulatory mechanism that will trigger a review of the cost implications of the net metering service on the utility and non-participating customers when service uptake approaches the established enrolment limit.

The selection of 20 MW is motivated by the perceived needs of two distinct customer classes. Class 1 Net Metering Service, designed to cater to the needs of the currently eligible customers, is allocated a 5 MW limit which is approximately ten times the current enrolment level. Class 2, designed to serve larger applications not eligible under the current service offering, is allocated a 3 times higher limit of 15 MW in reflection of the anticipated better economics of these larger applications.

Request IR-5:

Reference: Evidence, pages 4, lines 26 to 30 and Appendix B, page 3.

> **(b) as a condition of participation, the customer transfer or assign all emission credits or allowances arising from the use of renewable energy sources to the public utility to enable the public utility to comply with the requirements of any enactment regulating emissions, but for no other purpose.**

(a) Please explain why NSPI should receive the customer's emissions credits for electricity where the electricity is consumed directly by the customer, and not purchased by NSPI or does not use NSPI's distribution lines or system.

(b) Please explain how acquiring emission credits or allowances directly related to self-generation enables NSPI to comply with any enactment regulating emissions relating to NSPI's generation.

(c) Please explain what happens to excess emission credits or allowances once NSPI is in compliance with any enactment regulating emissions.

Response IR-5**:**

(a) Section 3A of the *Amended Electricity Act*[1] states that, as a condition of participation in a public utility's net metering project, the customer transfers or assigns all emission credits or allowances arising from the use of renewable energy sources to the public utility to enable the public utility to comply with the requirements of any enactment regulating emissions, but for no other purpose.

[1] *Electricity Act*, R.S.N.S., amended 2010, c. 14.

Response IR-5: (cont'd)

NSPI's proposed revisions to Regulation 3.6 are consistent with the legislation. The example described in part (a) of the question is an "off grid" scenario, not net metering, and NSPI would have no involvement with the customer's generation, use or credits.

(b) Energy produced by net metering customers displaces energy produced by NSPI fossil generating units. Less fossil energy reduces GHG emissions. Net metering is one of the contributors to reduced emissions by NSPI to comply with the regulation.

If the emission credit is not linked to the energy, NSPI would be required to add the equivalent amount of GHG emissions back into the inventory for that time period. No emission reduction would result and the energy would have significantly less value.

This is identical for any low carbon and carbon free energy source that displaces conventional carbon intensive energy whether through net metering, feed in tariffs, or larger Power Purchase Agreements.

(c) There are currently no mechanisms in place in Nova Scotia to define or value emission credits. Should there be in future, the value of any such excess credits would serve to reduce fuel costs for NSPI's customers.

NON-CONFIDENTIAL

Request IR-6:

Reference: Evidence, page 6, lines 31-32 and page 7, lines 1-2.

> **All distribution connected generation of 100 kW or greater currently falls into NSPI's distribution interconnection process. As such, net metered generators of this size will similarly undergo assessment, and where applicable, study of system impacts and determination of facility requirements before interconnecting.**

(a) For the Class 2 projects, will the process follow the current interconnection process or is NSPI considering other ways to streamline the application process and any system impact analysis or studies that may be needed?

(b) Please explain in detail why application process and system impact analysis or studies you will require for Class 2 projects.

Response IR-6**:**

(a) Yes. Class 2 projects (> 100 kW) will follow the current Distribution Generator Interconnection Procedures. NSPI is reviewing its Distribution Generator Interconnection Procedures to align it with changes resulting from this Application.

(b) NSPI's interconnection procedures are posted on the OASIS site, including the application forms, procedures, and associated agreements. These are applicable to Class 2 projects. An application is required, followed by a preliminary assessment of the project and a more detailed System Impact Study. The preliminary assessment provides the customer with particulars of the existing NSPI system, a preliminary evaluation of various technical criteria, and an order of magnitude cost to make system modifications as identified by the assessment. The System Impact Study subsequently provides a

Response IR-6: (cont'd)

detailed look at the ability of the generator(s) to be integrated with the distribution system from both technical and physical perspectives.

NON-CONFIDENTIAL

Request IR-7:

Reference: Evidence, Appendix B, page 1, Section 3.6.1.

> **Net Metering service is a metering and billing practice that enables electricity consumers to generate electricity from renewable, low-impact, generators to offset part or all of their own electrical requirements.**

See also Appendix B, page 4, Section 3.6.6. clause (b), subclause (i)

> **Utilizes only a renewable, low-impact source of energy as defined in the Renewable Electricity Regulation for the purposes of Section 3A of Chapter 25 of the Electricity Act.**

(a) HRWC has opportunities to generate clean renewable energy from capturing excess energy from pressure reducing valve chambers and the combustion of biodiesel. Please confirm that these will be considered eligible for Net Metering, and if not why.

Response IR-7**:**

(a) The *Renewable Electricity Regulations*[1] defines renewable low impact electricity as follows:

> "renewable low-impact electricity" means electricity produced from any of the following:
>
> (i) solar energy,
> (ii) wind energy,
> (iii) run-of-the-river hydroelectric energy,
> (iv) ocean-powered energy,

[1] *Renewable Electricity Regulations* made under Section 5 of the *Electricity Act* S.N.S. 2004, c. 25 O.I.C. 2010-381 (October 12, 2010), N.S. Reg. 155/2010.

Response IR-7 (cont'd)

> (v) tidal energy,
> (vi) wave energy,
> (vii) biomass that has been harvested in a sustainable manner,
> (viii) landfill gas,
> (ix) any resource that, in the opinion of the Minister and consistent with Canadian standards, is able to be replenished through natural processes or through sustainable management practices so that the resource is not depleted at current levels of consumption;

HRWC's proposed methods of generation are not explicitly enumerated in the definition of renewable low-impact electricity in the *Renewable Electricity Regulation*s. If HRWC has received favorable opinions from the Minister with respect to each of these proposed methods of generation, in accordance with subsection (ix) of the definition, they would be considered eligible for net metering.

NON-CONFIDENTIAL

Request IR-8:

Reference: Evidence, page 9, lines 8 to 19.

> **Under the proposed regulation, and consistent with the amended Electricity Act, meter aggregation is now expanded to a Distribution Zone. A single customer may net-meter more than one electric service account against its generator, if those metered accounts are owned by the same customer, and if the metered accounts and the generator are connected to NSPI distribution feeders emanating from a single distribution supply transformer within a substation (i.e. a Distribution Zone). This enhancement is consistent with the statutory language which requires that a customer's generated electricity be for his/her own use and that aggregation be limited to a distribution zone. The amended Electricity Act does not define 'distribution zone'.**

See also Appendix B, page 2, Section 3.6.3.1.

The amendments to the Electricity Act require that the Net Metering Regulation permit customers to have multiple meters under one account within a defined distribution zone, but there is no definition or further analysis of a defined distribution zone, and as such NSPI indicates that its proposed definition is consistent with the statutory language. However, the amendments to the Electricity Act do not prohibit the Net Metering Regulation from allowing customers to have multiple meters under multiple accounts within multiple defined distribution zones or from having different approaches for Class 1 or Class 2 generators for net metering customers, and so long as it permits customers to have multiple meters under one account within a defined distribution zone this would also be consistent with the statutory language.

(a) Please explain and provide copies of any documentation or studies as to whether NSPI believes or projects that many customers will be able to take advantage of aggregated metering, given that many customers with multiple electrical loads spread over a large geographical area and which are separately metered are generally not likely to have more than one meter on a "distribution zone".

Request IR-8: (cont'd)

(b) Please explain any possible definitions of "Distribution Zone" which could permit broader access to net metering than the limitations invoked by restricting net metering to customers with multiple meters under one account within NSPI's definition of Distribution Zone, and explain why NSPI has not put such definitions forwarded under its recommendations for the Net Metering Regulation?

(c) Please explain why the proposed Net Metering Regulation does not permit customers to have multiple meters under multiple accounts within multiple defined distribution zones, and if there are technical, system impact or other concerns relating to the Nova Scotia Power System Operator ("NSPSO") please explain how those concerns could be addressed to permit broader access to net metering than the limitations invoked by restricting net metering to customers with multiple meters under one account within NSPI's definition of Distribution Zone?

(d) Please explain in detail why the proposed Net Metering Regulation does not permit customers with multiple electrical loads spread over a large geographical area and which are separately metered to utilize clean renewable energy for net metering where they are using (i) a Class 1 generator, regardless of the Distribution Zone into which they are to feeding the energy produced, or alternatively as long as the Nova Scotia Power System Operator deems it acceptable based on the load on the distribution zone where the generator is located and other factors; and/or (ii) a Class 2 generator, and the generator is connected to NSPI distribution feeders emanating from any distribution supply transformer within a substation, if the Nova Scotia Power System Operator deems it acceptable based on the load on the distribution zone where the generator is located and other factors.

Response IR-8: (cont'd)

(a) NSPI has not conducted any such studies. Since customers may choose to subscribe to net metering based on many factors specific to their own circumstances, NSPI is not able to predict which customers may decide to subscribe to this service.

(b) Please refer to Multeese IR-2.

(c) Section 3A(2)(d) of the *Amended Electricity Act*[1] specifies that "customers may have multiple meters under one account within a defined distribution zone." NSPI's filed program is compliant with this requirement.

(d) Section 3A(1) of the *Amended Electricity Act*[2] specifies that this program be designed to "permit any customer to generate electricity for the customer's own use…" and is not intended to be fed into the electricity grid for use by other loads on the distribution system.

[1] *Electricity Act*, R.S.N.S., amended 2010, c. 14.
[2] *Ibid.*