COST ALLOCATION AND CHARGE DETERMINANTS

1.0 PURPOSE

The purpose of Exhibit G1 is to describe the process followed by Hydro One Transmission to allocate the Transmission revenue requirement identified in Exhibit E1, Tab 1, Schedule 1 into the four rate pools.

This Exhibit sets the context for the Transmission Cost Allocation and Charge Determinants for this Application. This information will be Hydro One Transmission's input towards determining the Uniform Transmission Rates [UTR] for Ontario's transmitters.

2.0 SUMMARY

The rates revenue requirement outlined in Exhibit E1, Tab 1, Schedule 1 Table 4 is the starting point for the revenues to be allocated into the Rate Pools using the process described in this exhibit.

Table 1 summarizes the allocation of the 2011 and 2012 transmission rates revenue requirement to the four rate pools. The details of the cost allocation methodology are provided in Exhibit G1, Tab 2, Schedule 1. Also provided in Table 1 are the associated charge determinants per Rate Pool which will be used as Hydro One Transmission's inputs into the determination of the provincial UTRs. The Charge Determinants are discussed in Exhibit H1, Tab 3, Schedule 1.

Table 1
Summary of Rate Pool Revenue Requirement and Charge Determinants

	Network	Line Connection	Transformation Connection	Wholesale Meter	Total
2011 Revenue Requirement ($ Millions)	839.7	195.6	369.6	0.8	1405.8
2011 Charge Determinants: Ave Monthly MWs Meter Points	20,150	19,500	16,850	 100	
2012 Revenue Requirement ($ Millions)	933.0	201.1	392.7	0.6	1,527.5
2012 Charge Determinants: Ave Monthly MWs Meter Points	19,845	19,286	16,667	 75	

3.0 COST ALLOCATION METHODOLOGY

The Cost Allocation and Charge Determinants methodologies remain unchanged from what was approved by the Board in the Decision and Rate Order in Proceedings EB-2006-0501 and EB-2008-0272.

In response to the OEB's direction to Hydro One Transmission with respect to AMPCO's proposal for Network Charge Determinants included in the Board Decision with Reasons in Proceeding EB-2008-0272, (page 69), Hydro One Transmission will file at a later date, and as soon as it is completed, a report being prepared by a consultant retained by Hydro One Transmission to respond to the OEB's direction of further analyzing AMPCO's proposal. Hydro One has included, in this submission, illustrative Network charge

determinants based on AMPCO's proposal in the event that the OEB decides to change the charge determinants for implementation in 2011.

The charges for transmission service are collected by the Independent Electricity System Operator (IESO) from Market Participants who are defined transmission customers, using Board-approved transmission rates. These rates are Uniform Transmission Rates that apply to the transmission customers of all transmitters in the Province of Ontario.

The remaining schedules of Exhibit G1 comprise the following:

- Exhibit G1, Tab 2, Schedule 1 details the cost allocation methodology used to determine the revenue requirement for the rate pools;
- Exhibit G1, Tab 3, Schedule 1 describes the Network and Line Connection rate pools;
- Exhibit G1, Tab 4, Schedule 1 describes the Transformation Connection rate pool;
- Exhibit G1, Tab 5, Schedule 1 describes the Wholesale Meter rate pool;
- Exhibit G1, Tab 6, Schedule 1 describes the Low Voltage Switchgear Compensation.

DESCRIPTION OF COST ALLOCATION METHODOLOGY

1.0 INTRODUCTION

This schedule provides an overview of the cost allocation methodology used to allocate the 2011 and 2012 Transmission Revenue Requirement and Rate Base into the rate pools defined for Hydro One Transmission.

The cost allocation methodology described below is the same methodology used for the transmission rate applications approved under Proceeding EB-2006-0501 and EB-2008-0272.

The Transmission Revenue Requirement and Rate Base to be allocated to the rate pools are described in Exhibits E1, Tab 1, Schedule 1 and D1, Tab 1, Schedule 1, respectively.

2.0 KEY STEPS OF COST ALLOCATION METHODOLOGY

The cost allocation methodology consists of the basic steps identified below:

(a) Review Board decisions from Proceeding EB-2008-0272 and any other Board decisions impacting cost allocation and rate design, as discussed in Exhibit A, Tab 16, Schedule 1.
(b) Functionalize assets into the transmission functional categories that can subsequently be used to assign or allocate these assets to the rate pools. The term “transmission functional categories” refers to the groupings to which all physical assets, and their associated costs, are assigned on the basis of the criteria described in Section 3.0.
(c) Apportion costs to the functional categories or rate pools on the basis of direct assignment, to the extent possible. Allocate other costs, which cannot be directly assigned, among the functional categories and to rate pools using the previously

approved methodology. The allocation of costs is summarized in Section 4.0 below. At the conclusion of this step, the total transmission revenue requirement is fully allocated among the rate pools.

In developing the rates for some public utilities, there is often an additional step called "Categorization" in the cost allocation process. Categorization groups the assets and functions to develop fixed and variable charges, for example. Variable charges may then be further categorized into peak demand and commodity components. The Board addressed the issue of categorization of transmission charges between fixed and variable components during the transmission rate Proceedings RP-1999-0044 and EB-2006-0501. The Board decided at the conclusion of these proceedings that all transmission charges should be collected on the basis of demand-based charge determinants. This submission is based on the categorization approved by the Board under Proceedings RP-1999-0044 and EB-2006-0501.

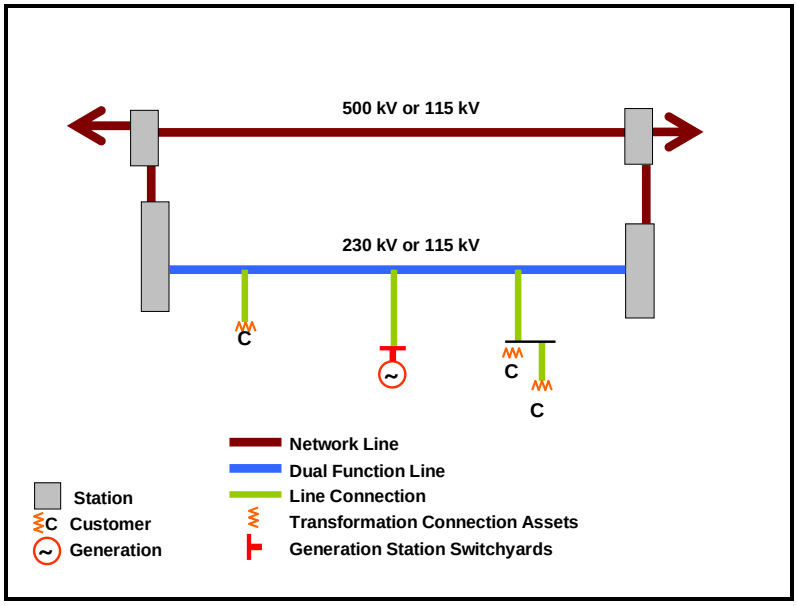
The cost allocation activities described by the above steps result in the split of the transmission revenue requirement by rate pool, which is a necessary step to enable the Board to determine the uniform provincial rates.

3.0 FUNCTIONALIZATION OF ASSETS

A key activity in determining the revenue requirement for each rate pool is the assignment of the physical transmission assets owned by Hydro One Transmission to transmission functional categories. The assignment of these assets to the functional categories is based on load forecast data for each delivery point, the Fixed Asset financial database and the electrical system connectivity database that identifies the connectivity between the transmission assets to which customers are connected; lines, stations and delivery points.

A simplified diagram of the basic elements of the transmission system, useful in understanding the assignment of assets to the functional categories, is provided in Figure 1.

Figure 1



The functional categories to which assets are assigned are Network, Dual Function Line, Line Connection, Transformation Connection, Generation Station Switchyards, Wholesale Meter, Common and Other. A description of the functional categories to which all transmission assets are assigned is provided below:

(i) Network Assets

The transmission facilities that are used for the benefit of all customers, or have been approved by the OEB as being for the benefit of all customers in the province, are categorized as Network Assets. In general, these assets comprise the integrated transmission facilities operating at 500 kV or 230 kV that link Network stations around major sources of generation and major load centres. Network facilities are designed to

provide reliability of the integrated transmission system and enhance overall electricity market efficiency. They include:

- All 500 kV circuits and 500/230 kV Auto-Transformer facilities
- All 230 kV circuits that are not tapped to supply load and that are normally operated in parallel with 500 kV circuits; such parallel circuits may be circuit(s) that form a group of transmission circuits that together normally operate in parallel with the 500 kV circuit(s).
- All 115 kV circuits that are not tapped to supply load and that are normally operated in parallel with network circuits noted above.
- All 230 kV and 345 kV "interconnections", which are lines connecting Hydro One's transmission system to the transmitter systems owned by other transmitters in Ontario and to the power system(s) in the neighboring jurisdictions.
- All 230 kV circuits that are not tapped to supply load and that are normally operated in such a manner that they connect the "interconnection circuits", directly or through a group of transmission circuits, to any of the 500 kV and 230 kV network circuits noted above.
- The 230/115 kV Auto-Transformer facilities normally connecting the 230 kV and 115 kV network circuits noted above and/or the Dual Function Lines described below.
- The specific sections of 115 kV circuits that interconnect with transmitter systems owned by other transmitters in Ontario and the neighboring jurisdictions, beginning from the junction or station from/at which Hydro One Transmission's customer load is supplied up to the border.
- The transformation or switching stations, or portions thereof, including the circuit breakers and associated assets that switch the network circuits and the Dual Function Lines described below.

(ii) Dual Function Line Assets

The transmission circuits used for both the common benefit of all customers and for providing a connection between a Network station and load supply point(s) for one or few customers are categorized as Dual Function Line assets.

A transmission circuit that is classified a Dual Function Line is deemed to provide both network and line connection functions. It is necessary to identify Dual Function Lines separately since the costs for Dual Function Lines are split between the Network and Line Connection Pools.

Specifically, the transmission circuits comprising the following types of electrical assets are assigned to Dual Function Line functional category of assets:

- All 230 and 115 kV circuits that are tapped to supply load and that are normally operated in parallel with 500 kV circuits; such parallel circuits may be circuit(s) that form a group of transmission circuits that together normally operate in parallel with the 500 kV circuit(s).
- All 115 kV circuits that are tapped to supply load and that are normally operated in parallel with network circuits or Dual Function Lines noted above.
- All 230 kV circuits that are tapped to supply load and that are normally operated in such a manner that they connect the “interconnection circuits”, directly or through a group of transmission circuits, to any of the 500 kV and 230 kV network circuits noted above.
- Local Loops:
    - An existing Line Connection that is reconfigured to create a local loop is considered to provide a Network benefit only if that loop creates a new independent delivery path emanating from one Network Station and ending uninterrupted at another Network Station, and would normally increase the transfer capacity between these

two existing Network stations. Under this condition, the local loop would be classified as a Dual Function Line, which provides both a Network function and a Line Connection function for local customers.

(iii) Line Connection Assets

The transmission circuits and intermediate stations operating at 230 kV or 115 kV that are used to provide a connection between a Network station and load supply point(s) for one or more customers and one or more generating stations are categorized Line Connection assets. Similarly, transmission circuits used to provide a connection between a Dual Function Line and load supply point(s) for one or more customers and/or one or more generating stations are also categorized Line Connection assets. The Line Connection circuits that tap Dual Function Lines can also be referred to as "Tap of Dual Function Line". The intermediate 230 kV or 115 kV radial station assets that serve one or more customers are also included as Line Connection assets.

A more detailed explanation of Network, Dual Function and Line Connection assets is provided in Exhibit G1, Tab 3, Schedule 1, which also includes a detailed diagram illustrating these types of transmission assets.

Specifically, the transmission lines or stations comprising the following type of electrical assets are assigned to Line Connection functional category of assets:

- Transmission circuits that are radial and connect (directly or indirectly via other connection circuits) to one of the Network Stations or Dual Function Lines defined above. Line Connection assets do not reinforce the integrated transmission system that is commonly shared by a large portion of, or entire, Province.

- Line Connection circuits that are used to provide connection to only one Transmission Delivery Point, which is defined as the transformation station that steps down the voltage from above 50 kV to below 50 kV, are identified as "Dedicated Line Connection" assets. Line Connection circuits that tap to Dual Function Lines can also be called "Tap on Dual Function Line".
- Local Loops:
  - If the local loop, as described above in section (ii), does not increase the transfer capability along the full length of the transmission interface between two existing Network stations, then such a local loop would be classified as Line Connection.

Intermediate radial stations, or portions thereof, dropping voltage from 230 kV to 115 kV are also categorized as a Line Connection asset if they are not already categorized as a Network asset as per the guidelines above. They cannot be assigned to the Transformation Connection Pool, since they do not "drop the voltage from above 50 kV to below 50 kV".

(iv) Transformation Connection Assets

The transformer stations owned by Hydro One Transmission or portions thereof that step down the voltage from above 50 kV to below 50 kV are categorized as Transformation Connection assets.

(v) Generating Station Switchyard Assets

The switchyards owned by Hydro One Transmission or portions thereof that connect generating stations to the transmission system are categorized as Generating Station Switchyard assets.

(vi) Wholesale Meter Assets

Wholesale revenue metering assets are those metering-related facilities included in the regulated transmission rate base of Hydro One Transmission and used for billing and settlement in respect of transmission and/or wholesale energy charges. These facilities include the recorders, physical meters and related instrument transformers, wiring, and panels that can be separately identified as being used solely for revenue metering purposes. In accordance with Chapter 6 of the Market Rules, Hydro One Transmission is the default Meter Service Provider with respect to these meters for the transition period from market opening until the earliest reseal date of one or more elements of the corresponding meter installation.

Wholesale meter assets that are used for revenue metering of Local Distribution Companies and large end-use customers previously supplied by the former Ontario Hydro are included in this category if the corresponding distribution company or end-use customer has registered to participate in the IESO-administered wholesale market.

(vii) Common Assets

Commonly used facilities that serve the operation of the overall provincial transmission system are categorized Common Assets. Common assets include rate base telecommunication and control equipment, administration buildings and control rooms, minor fixed assets (such as office computers and equipment) and electrical equipment held in reserve.

(viii) Other Assets

Remaining Hydro One-owned transmission facilities that cannot be assigned to any of the functional categories listed above are categorized as Other. These assets include facilities such as disconnect switches in customer-owned stations and transmission facilities that cannot be allocated to one of the other functional categories under normal operating conditions.

A listing of all transmission lines, and the functional categories to which they are allocated, is provided in Exhibit G2, Tab 1, Schedule 1. A listing of all transmission stations and the functional categories to which they are allocated are provided in Exhibit G2, Tab 1, Schedule 2.

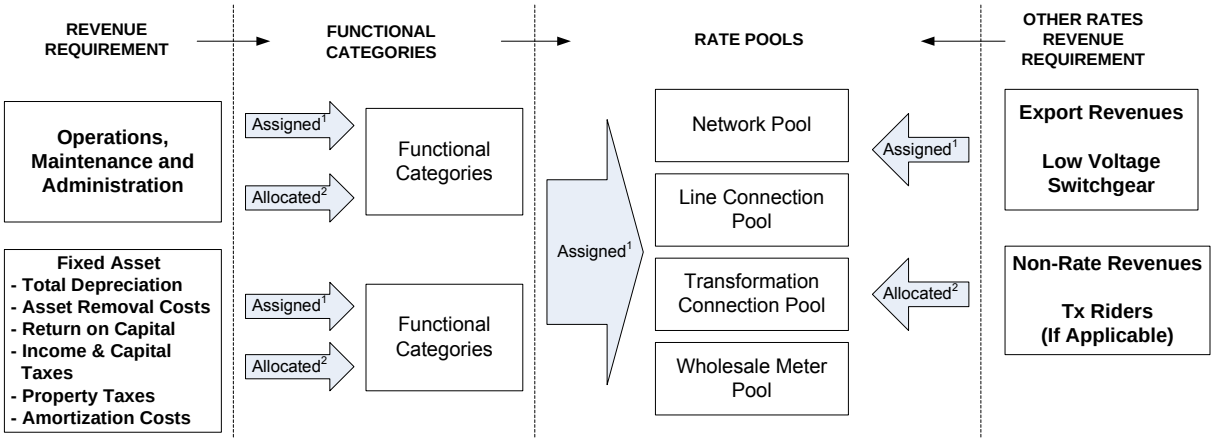
The assignment of assets to the functional categories noted above facilitates the assignment and allocation of revenue requirement as described in Section 4.0.

4.0 ALLOCATION OF REVENUE REQUIREMENT TO RATE POOLS AND DERIVATION OF RATES REVENUE REQUIREMENT

The following sub-sections describe the activities to allocate the Transmission revenue requirement to the Network, Line Connection, Transformation Connection and Wholesale Meter pools - collectively referred to as the Rate Pools.

The allocation of the Transmission revenue requirement to the rate pools is summarized in Figure 2.

Figure 2



[1] The term "Assigned" refers to a value that is designated to a particular Functional Category or Rate Pool (e.g. Export Revenues are directly assigned to the Network Rate Pool)

[2] The term "Allocated" indicates that a parameter(s) is used to calculate the proportion of the values that are designated to more than one Functional Category or Rate Pool (e.g. load forecast data is applied to the value of Dual Function Line assets to determine the proportion of its value that is allocated to the Network Functional Category and to the Line Connection Functional Category)

As illustrated in Figure 2, there are three basic elements of the revenue requirement allocated or assigned using the process discussed in this schedule. They are:

1. Operations, Maintenance and Administration ("OM&A") costs
2. Fixed Asset associated expenses such as depreciation, asset removal costs, return on capital, income taxes, capital taxes, property taxes and amortization costs
3. Other Rates Revenue Requirement components such as non-rate revenues, export revenue credit, Tx riders (if applicable) and the amount to recover the Low Voltage Switchgear credit

It is necessary to allocate the Gross Book Value of transmission assets to functional categories. The Gross Book Value by functional category is used to:

- Assign and allocate depreciation costs as described in Section 4.2.
- Assign and allocate the accumulated depreciation of assets in order to determine Net Book Value by functional category, which is subsequently used to allocate elements of the OM&A costs, as described in Section 4.3, and to allocate elements of the Other Rates Revenue Requirement, as described in Section 4.4.2.
- derive the Transmission Rate Base.

4.1 Allocation of Asset Value

The Gross Book Value of transmission assets are assigned to the functional categories as described in Section 3.0. However, for the purpose of delineating costs to the rate pools, the asset values for the Dual Function Line, Line Connection and Transformation Connection functional categories must be further separated as per the methodology described below.

4.1.1 Allocation Factors for Dual Function Line Assets

The asset value of each Dual Function Line ("DFL") is split between the Network and Line Connection pools using the methodology approved by the Board in Proceedings EB-2006-0501 and EB-2008-0272. The allocation factors used to split the DFL asset value between these pools are derived using the annual average coincident peak demand of customer load ("DFL Customer Demand") connected to the Dual Function Line and the minimum of the average of summer and winter transmission capacity ("Minimum DFL Capacity") of the Dual Function Line as follows:

Proportion Allocated to the Line Connection Portion of DFL =
(DFL Customer Demand) divided by
[(Minimum DFL Capacity)*12]

Proportion Allocated to the Network Portion of DFL =
(1 minus Proportion allocated to the Line Connection Portion of DFL)

The use of average coincident peak demand of customers as a proxy for the extent to which the minimum of the average DFL capacity is used for Line Connection purposes is considered an appropriate allocator as it reflects the load diversity inherent in the use of a DFL by connected customers.

Exhibit G2, Tab 2, Schedule 1 lists the Dual Function Lines and the corresponding proportions of asset value that are allocated to the Network and Line Connection Pools.

4.1.2 Allocation Factors for Generation Connection Assets

Some of the existing Line Connection and Transformation Connection assets owned by Hydro One Transmission are partially or fully used to connect generating stations to the transmission system.

Based on the Board Decision under Proceeding RP-1999-0044, generators do not pay Transmission Service charges with respect to transmission connection facilities used to transfer electricity from the generating station to the network. As such, for rate making purposes, the cost of such connection facilities are included in the Network Pool. This approach is considered fair and equitable, since the revenue requirement for the Network Pool is recovered through Network rates applicable to all load customers, while the revenue requirement for Connection Pools are recovered only from load customers that utilize the

connections. Since generators connected to the transmission system enhance and contribute to the electricity market for all load customers, it is appropriate that the portion of connection costs associated with generating stations be allocated to the Network Pool.

The asset value for a connection facility used solely to connect a generating station(s) can be fully allocated to the Network Pool. In cases where a connection facility is used to connect one or more generating station(s) and one or more transmission load customer delivery points, some of the costs associated with that facility are allocated to the Network Pool and the remaining costs are included in the appropriate Connection pool. In these cases, the allocation of the asset value is based on the sum of the maximum annual non-coincident peak demand of all delivery points connected to the connection facility (Non-Coincident Peak Demand) and the maximum installed capacity of generation (Generation Capacity) connected to that facility as follows:

Proportion Allocated to the Generator Connections =
(Generation Capacity) divided by
(Generation Capacity + Non-Coincident Peak Demand)

Therefore, the Proportion allocated to the Load Connections =
(1 minus Proportion Allocated to the Generator Connections)

This use of a delivery point's maximum annual non-coincident peak demand and the maximum generator installed capacity as the basis for allocating the costs of connection assets specifically dedicated for their joint use is considered appropriate since these values represent the maximum extent to which the assets could be used by either party, and it is the methodology approved by the Board in Proceedings EB-2006-0501 and EB-2008-0272.

Exhibit G2, Tab 3, Schedule 1 and Exhibit G2, Tab 3, Schedule 2 provide a list of the transmission lines and stations, respectively, which are used for connecting generation stations to the transmission network. These exhibits show the corresponding proportion of those assets that is allocated to the Generator Connection and to the Load Connection functional categories in accordance with the methodology described above.

4.1.3 Summary of Asset Value by Functional Category

Assignment of the physical assets to the functional categories and the subsequent split of the Dual Function Lines and generation connection assets, as described above, yields the functionalization of the Gross Book Value of transmission assets into the ten functional categories shown below:

- Network
- Network Portion of Dual Function Line
- Line Connection Portion of Dual Function Line
- Line Connection
- Generator Line Connection
- Transformation Connection
- Generator Station Connection (includes Generation Station Switchyards)
- Wholesale Meter
- Common
- Other

Once the Gross Book Value has been allocated into the 10 Functional Categories, the Net Book Value ("NBV") of transmission assets is determined by assigning the accumulated depreciation, discussed in Exhibit D1, Tab 1, Schedule 1, to the functional categories listed

above in proportion to the share of Gross Book Value of assets in each functional category by Uniform System of Accounts.

A summary of the Gross Book Value and Net Book Value of assets by functional category is provided in Exhibit G2, Tab 4, Schedule 1.

The breakdown of the asset values among the functional categories provides the data required to:

- determine the fixed asset depreciation costs (as per Section 4.2);
- split the connection-related OM&A costs between the load supply and generation functions (as per Section 4.3); and,
- allocate the Other Rates Revenue Requirement line items (as per Section 4.4).

4.2 Assignment of Depreciation Costs, Return on Capital , Capital Taxes and Income Taxes

The treatment of Depreciation Costs, Return on Capital, Capital Taxes and Income Taxes is in accordance with the methodology approved by the Board in Proceedings EB-2006-0501 and EB-2008-0272.

The Depreciation costs on transmission fixed assets and those associated with the Major and Minor General Transmission Plant are allocated to the ten functional categories with the same distribution as the average Gross Book Value over two years. The asset removal costs and capitalized depreciation determined per Exhibit C1, Tab 6, Schedule 1 are assigned to the ten functional categories in proportion to the Gross Book Value. A summary of the Depreciation costs by functional category is provided in Exhibit G2, Tab 4, Schedule 2.

Return on Capital, and Capital and Income Taxes are assigned on the basis of the Rate Base in each functional category. The Rate Base is determined by adding the Working Capital, which includes Materials and Supplies Inventory, identified in Exhibit D1, Tab 1, Schedule 1 to the Net Book Value of the functional categories assigned to each rate pool. The share of Working Capital added to each rate pool is based on the OM&A associated with the functional categories assigned to each pool. These costs are summarized at Exhibit G2, Tab 4, Schedule 3.

4.3 Allocation of Operations, Maintenance and Administration Costs

The 2011 and 2012 OM&A costs to be allocated as per the methodology described in this Section, and approved under Proceedings EB-2006-0501 and EB-2008-0272, are the totals shown in Exhibit E1, Tab 1, Schedule 1, less the amount for "Taxes Other Than Income Taxes". The "Taxes Other Than Income Taxes" are largely grants-in-lieu of property taxes and will be allocated as described in Section 4.4.

The expenditures for the various OM&A projects and programs, which are described in Exhibit C1, are allocated to the functional categories using the following approach:

Costs are directly assigned to specific functional categories where the work associated with the functional category is readily identifiable.

(a) Where direct assignment is not possible, allocation to the functional categories is based on parameters representative of the relative O&MA expenditure requirements, such as:

- the kilometers of line in each functional category as a percent of the total number of kilometres installed.
- the Gross Book Value of stations within a particular functional category as a percent of the total Gross Book Value of all stations.

- the length of underground circuit-km in a functional category as a percent of the total length of underground lines within the system.

In order to allocate costs to the rate pools, the OM&A spending associated with the Network and Line Connection portions of Dual Function Lines, as well as the OM&A spending associated with the generator and load portions of Line Connection and Transformation Connection assets must be determined. The methodology to determine these costs is described below.

4.3.1 OM&A Costs for Generator Connections

The OM&A costs associated with Generator Line Connections and Generator Station Connections used solely to connect a generating station(s) can be fully assigned to the Network Pool. In cases where a connection facility is used to connect one or more generating station(s) and one or more load customers, some of the costs associated with that facility are allocated to the Network Pool and the remaining costs are included the appropriate Connection (Line or Transformation) pool. Using the data from Section 4.1.3 and the OM&A costs determined as per Section 4.3, the following formula is used to estimate Generator's share of OM&A costs for each of the line and station connection functional categories:

Proportion allocated to Generator Line (or Transformation Connection) =
(Total Generation Line or Transformation OM&A Costs) multiplied by
[(Generation Line or Transformation Connection NBV) divided by
(Generation Line or Transformation Connection NBV +
Line or Transformation Connection NBV)]

Therefore, the Proportion allocated to the load customer's Line or Transformation Connection =

(1 minus Proportion allocated to the Generator Line or Transformation Connection).

4.3.2 OM&A Costs for Dual Function Lines

The cost allocation proposed for the Network and Line Connection Pools, as detailed in Exhibit G1, Tab 3, Schedule 1, requires the OM&A costs of each Dual Function Line to be split between the Network and Line Connection Pools. As shown below, the OM&A costs associated with the Network portion and the Line Connection portion of the Dual Function Lines are derived using the Net Book Value of assets determined as per Section 4.1.3:

OM&A Costs for Network Portion of Dual Function Lines =
(OM&A Costs for Dual Function Lines) multiplied by
(NBV of Network Portion of Dual Function Lines) divided by
(sum of Total NBV of Dual Function Lines).

OM&A Costs for Line Connection Portion of Dual Function Lines =
(Total OM&A Costs for Dual Function Lines) minus
(OM&A Costs for Network Portion of Dual Function Lines).

4.3.3 Summary of OM&A Costs

Allocation of the OM&A costs described above results in the split of total OM&A costs between the ten functional categories, a summary of which is provided in Exhibit G2, Tab 4, Schedule 4.

4.4 Allocation of Costs to Rate Pools

4.4.1 Allocation of Asset Value, Depreciation and OM&A Costs to Rate Pools

The derivation of Net Book Value, Depreciation costs and OM&A costs for the ten functional categories facilitates the allocation of these financial values to the four rate pools; Network, Line Connection, Transformation Connection and Wholesale Meter.

The methodology approved by the Board in Proceedings EB-2006-0501 and EB-2008-0272 is used to allocate the financial values in the ten functional categories to the four rate pools as shown in Table 1 and described below.

Table 1:

Functional Category to Rate Pool Mapping

Functional Category	Rate Pool
Network	Network
Line Connection	Line Connection
Transformation Connection	Transformation Connection
Generation Line Connection	Network
Generation Station Connection	Network
Wholesale Meter	Wholesale Meter
DFL – Network	Network
DFL – Line Connection	Line Connection
Common	Prorate to Network, Line and Transformation excluding Wholesale Meters
Other	

- The financial values associated with the Network, Line Connection, and Transformation Connection functional categories are directly assigned to the corresponding rate pools

(i.e. Network Pool, Line Connection Pool, and Transformation Connection Pool, respectively).

- The financial values associated with the Generator Line Connection and Generator Station Connection functional categories are assigned to the Network Pool.
- The financial values associated with the Wholesale Meter functional category are assigned to the Wholesale Meter Pool.
- The financial values associated with the Network portion of Dual Function Lines are assigned to the Network Pool and the values associated with the Line Connection portion of Dual Function Lines are assigned to the Line Connection Pool.
- The financial values associated with the functional categories "Common" and "Other" are allocated to the Network, Line Connection and Transformation Connection rate pools in proportion to the corresponding amounts of financial values that are already assigned to those rate pools based on the process described in the four bullets above (e.g. "Common" OM&A costs are allocated to the rate pools based on the relative share of OM&A costs already assigned to the rate pools). "Common" and "Other" financial values are not allocated to the Wholesale Meter Pool as the assets and costs for these functional categories are more appropriately associated with line and transformer station assets. This treatment is consistent with the methodology established in Proceeding RP-2003-0188 and approved again in Proceedings EB-2006-0501 and EB-2008-0272 to determine the meter costs for calculating Meter Rebate charges.

4.4.2 Allocation of Other Line Items of Transmission Rate Revenue Requirement

Hydro One Transmission's rate revenue requirement includes amounts in addition to the fixed asset Depreciation costs, Return on Capital, Capital and Income Taxes, and OM&A costs, allocated above. These costs are discussed in Exhibit E1, Tab 1, Schedule 1 and are generically defined for the purpose of this exhibit as "Other Rates Revenue Requirement".

Table 2 below identifies the Other Rates Revenue Requirement items, the total revenues to be collected and the allocators used to divide these costs among the four rate pools. Allocation of the items in Table 2 is done on the same basis as under Proceeding EB-2008-0272.

Table 2
Other Rates Revenue Requirement

Other Rates Revenue Requirement Items	2011 ($ Million)	2012 ($Million)	Allocator
Amortization	7.3	7.8	Allocated NBV of Functional Categories
Taxes other than Income Taxes	70.8	72.2	Allocated NBV of Functional Categories
Non Rate Revenues			
• Regulatory Assets	-10.0	2.6	Prorated based on the amounts of financial values that are already assigned to those rate pools
• Export Service	-10.1	-10.2	Direct Assignment to Networks
• External Revenues	-31.3	-24.7	Prorated based on the amounts of financial values that are already assigned to those rate pools
Total Non Rate Revenues	-51.5	-32.4	

5.0 SUMMARY OF REVENUE REQUIREMENT FOR RATE POOLS

The process described in this exhibit is applied to determine the revenue requirement for the Network and Line Connection Pools (discussed in Exhibit G1, Tab 3, Schedule 1), the Transformation Connection Pool (discussed in Exhibit G1, Tab 4, Schedule 1), and the Wholesale Meter Pool (discussed in Exhibit G1, Tab 5, Schedule 1).

NETWORK AND LINE CONNECTION POOLS

1.0 INTRODUCTION

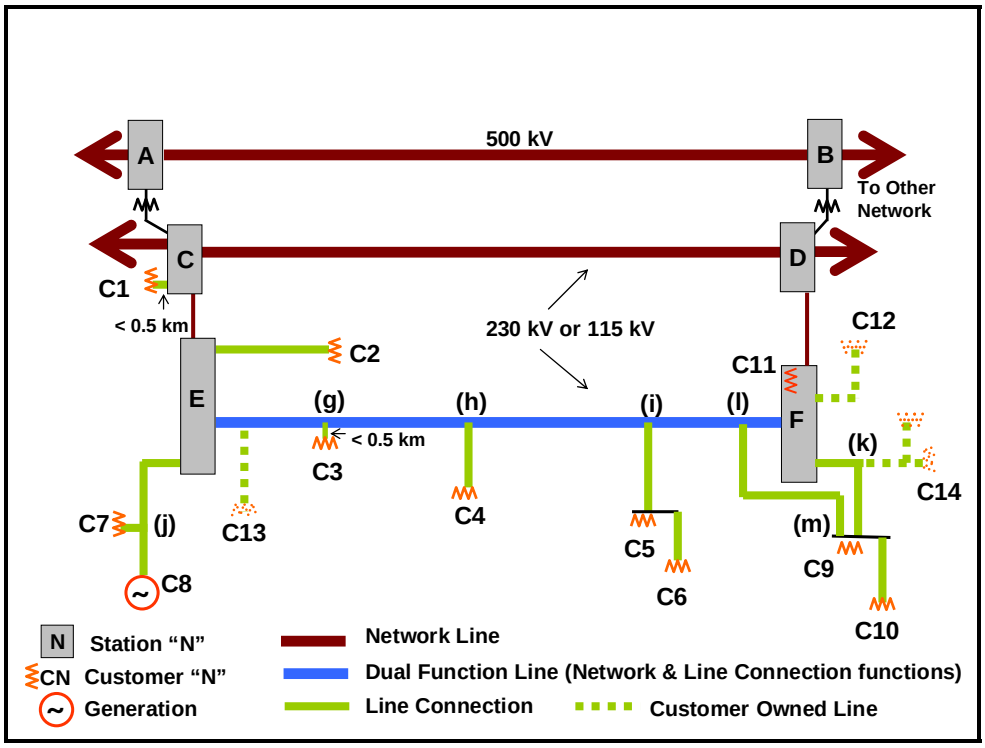
The functions performed by the regulated transmission assets owned by Hydro One Transmission remain unchanged from when the Board reviewed the transmission cost allocation methodology as part of the EB-2006-0501 and the EB-2008-0272 Proceedings.

This Schedule describes the cost allocation matters related to the Network and Line Connections pools.

2.0 BACKGROUND

An explanation of the role of transmission lines in serving and connecting transmission customers, and providing overall reliability via the bulk transfer of power between areas of the Province, is essential to the understanding of the issues surrounding Network and Line Connection pools. A simplified illustrative diagram of transmission lines in a power system is provided in Figure 1.

Figure 1



In reference to Figure 1:

- The 500 kV transmission line between stations "A" and "B" is classified as a Network asset in that it serves all customers connected to the power system. Such an inter-area transmission line is part of the Network that provides overall system reliability and enhances energy market efficiency by allowing electricity customers to purchase energy from anywhere in Ontario and neighbouring jurisdictions.
- The high voltage (230 kV or a 115 kV) line between stations "C" and "D" is operated in parallel with the 500 kV Network. As such, its full capacity is used to enhance the reliability of the overall system (for example to continue to supply electricity even when the 500 kV line is out of service). It is also classified as a Network asset.
- Each transmission delivery point (C1 to C14) is treated as a distinct (separate) entity for the purpose of calculating transmission charges. This applies even if the same

customer is taking power from the transmission system at two or more transmission delivery points (as per Board Decision in Proceeding RP-1999-0044).

- The radial lines from stations "C", "E", and "F" connect one or more transmission customers. These lines can vary in length from a few hundred meters to a hundred kilometers or more. Since these lines serve only one or a few customers, they are classified as Line Connection.
- Customer C11 is directly connected at station "F" and is not using any transmission line dedicated solely to that customer.
- The radial lines connecting customer C12 to station "F", connecting customer C13 to the Dual Function Line between stations "E" and "F", and connecting Customer C14 to a connection line at point (k) are owned by those customers and are not Hydro One Transmission assets.
- The line between stations "E" and "F" is operated in parallel with the Network lines described above, and it is also used to supply electricity to customers C3 to C6 and to customer C13, who are connected to this line through line taps. This line, which is classified "Dual Function Line", has two properties:

  The line is operated in parallel with the Network lines between "A" and "B" and between "C" and "D". Thus, in this context, some of the capacity of the line between "E" and "F" contributes to enhance the reliability and energy market for all customers in Ontario.

  Some of the capacity of this line is used to connect customers C3 to C6 and C13 to Stations "E" and "F". The customers connected to this line may be tapped to it by very short connections (e.g. customer C3), or they may be utilizing relatively longer taps many kilometers in length, or they may be connected via a customer-owned line (e.g. customer C13).
- The addition of a line between points (l) and (m) is an example of a situation that creates a local loop that provides a Line Connection function to customers C9 and C10, but also provides some limited Network benefits by operating in parallel with

the Dual Function Line between Stations "E" and "F". As approved by the Board in the Settlement Agreement for issue 1.2 in Proceeding EB-2006-0501, Local Loops are considered to provide a Network benefit only if the loop creates a new independent path between two Network Stations that increases the transfer capacity between the two stations. In this example, the local loop alone does not increase the transfer capacity between stations "E" and "F" and therefore it is treated as a line connection for the purpose of cost allocation.

- The line taps from the Dual Function Line between stations "E" and "F" and customers C3, C4, and C5/C6 respectively connect one or a few specific customers and are classified as Line Connection.

The determination of the functional category to which a transmission asset belongs is based on the normal system operating condition of assets in-service as of the end of 2008, and with due consideration of any Board decisions regarding the treatment of specific assets.

3.0 SUMMARY OF ASSET VALUE AND REVENUE REQUIREMENT

The revenue requirement for the Network pool includes an offset of $10.1 million and $10.2 million in Export Transmission Service revenue forecast to be collected in 2011 and 2012, respectively, as discussed in Exhibit H1, Tab 5, Schedule 1.

The Net Book Value (at mid-year) and revenue requirement for the Network Pool, derived using the cost allocation methodology described in Exhibit G1, Tab 2, Schedule 1 are provided in Table 1.

Table 1

Year	Net Book Value ($ Million)	Revenue Requirement ($ Million)
2011	4,877.8	839.7
2012	5,582.5	933.0

The Net Book Value (at mid-year) and revenue requirement for the Line Connection Pool are provided in Table 2.

Table 2

Year	Net Book Value ($ Million)	Revenue Requirement ($ Million)
2011	1,224.8	195.6
2012	1,282.4	201.1

A summary of the revenue requirement for all of the Network, Line Connection, Transformation, and Wholesale Meter rate pools is provided in Exhibit G2, Tab 5, Schedule 1.

TRANSFORMATION CONNECTION POOL

1.0 INTRODUCTION

This exhibit summarizes the revenue requirement allocated to the Transformation Connection pool.

2.0 COST ALLOCATION FOR TRANSFORMATION CONNECTION POOL

The revenue requirement for the Transformation Connection Pool includes Hydro One Transmission's costs associated with transformer station assets used to step-down voltage from the transmission level to the distribution level (i.e. from above 50 kV to 50 kV and below), in accordance with the cost allocation methodology summarized in Exhibit G1, Tab 2, Schedule 1.

The revenue requirement for the Transformation Connection pool also includes an amount that is payable by Hydro One Transmission to Toronto Hydro-Electric System Inc. and Hydro Ottawa Inc. as compensation for Low Voltage Switchgear ("LVSG") equipment that those utilities own, operate and maintain within the transformation stations owned by Hydro One Transmission. The compensation amount is determined in accordance with the methodology approved by the Board, in Proceeding EB-2006-0501 and in EB-2008-0272, and is based on the LVSG costs for stations owned by Hydro One Transmission as a proportion of the total transformation station costs, including OM&A and capital-related charges, incurred by Hydro One Transmission. Details of how the LVSG proportion of costs has been determined are provided in Exhibit G1, Tab 6, Schedule 1. The 19% LVSG proportion of Hydro One station costs approved by the Board in EB-2006-0501 and in EB-2008-0272 was reviewed and remains valid for this application.

The annual LVSG compensation payable to each utility is calculated using the same methodology approved by the Board in Proceedings EB-2006-0501 and EB-2008-0272. That is, the compensation is based on the forecast of each utility's total monthly non-coincident peak demand ("LVSG Demand") supplied from all Hydro One Transmission transformer stations in which the utilities own the LVSG facilities, multiplied by the LVSG proportion of Hydro One Transmission's Transformation Connection rate.

The annual LVSG compensation amount will be $11.8 million in 2011 and $12.5 million in 2012 as shown in Table 1. These amounts are added to the revenue to be collected by the Transformation Connection Service charges.

Table 1

	LVSG Component of Transformation Connection Rate ($/kW/Month)	Average Monthly NCP Demand for Toronto Hydro and Hydro Ottawa (MW)	Total Credit ($ Million)
2011	0.34	2,912	11.8
2012	0.36	2,879	12.5

3.0 SUMMARY OF ASSET VALUE AND REVENUE REQUIREMENT

The 2011 and 2012 Net Book Value (at mid-year) and revenue requirement for the Transformation Connection pool, derived using the cost allocation methodology described in Exhibit G1, Tab 2, Schedule 1, and including the LVSG compensation amount discussed in Section 2 is summarized in Table 2.

Table 2

Year	Net Book Value ($ Million)	Revenue Requirement ($ Million)
2011	1763.5	369.6
2012	1952.4	392.7

A summary of the annual revenue requirement for all of the Network, Line Connection, Transformation, and Wholesale Meter rate pools is provided in Exhibit G2, Tab 5, Schedule 1.

WHOLESALE METER POOL

1.0 INTRODUCTION

This Exhibit discusses the assets and customers included in the Wholesale Meter Pool and the revenue requirement allocated to the Wholesale Meter Pool.

2.0 BACKGROUND

The wholesale revenue metering assets inherited by Hydro One from the former Ontario Hydro are included in Hydro One's Transmission business. Hydro One Transmission is the "Default Meter Service Provider" for these meters as per the Market Rules for the Ontario Electricity Market. The meters and associated equipment are used to measure the electricity supplied to the following entities:

- Local Distribution Companies and the End Use Customers that are connected to the transmission facilities owned by Hydro One Transmission;
- Local Distribution Companies that are embedded in the distribution systems owned by other distributors, if these embedded LDCs were former customers of Ontario Hydro and if they have registered to be market participants with the IESO; and
- A few large, non-LDC, customers that are embedded in the distribution systems owned by LDCs, if these embedded customers were wholesale customers of Ontario Hydro, classified by Ontario Hydro as Direct Customers, and if these customers have registered as market participants with the IESO.

At the end of 2009, Hydro One Transmission owned metering installations[1] comprising 174 meter points[2] that fall under the transitional arrangement for wholesale revenue meter services provided to Metered Market Participants (MMPs). The forecasted number of meter points falls to 88 and 62 in the 2011 and 2012 test years, respectively.

A metering installation can vary in size and complexity depending on the number of meter points in the installation. The instrument transformers that provide a meter related function at each meter point are the current transformers and potential transformers that "step down" the current and voltage to a level that is consistent with the requirements of the meter and control equipment. The instrument transformers owned by Hydro One Transmission and used for revenue metering fall into one of four categories:

- Dedicated instrument transformers for metering purposes that are within the Hydro One Transmission-owned Pole-mounted Metering Equipment ("PME") that, together with the corresponding meter located at the foot of the pole, form a stand-alone metering installation.
- Instrument transformers that are integrated into the bulk power equipment such as high voltage transformers, circuit breakers or switchgear used for high voltage transmission purposes (that is, the instrument transformers are a relatively small component built into, and inseparable from, the power equipment).
- In a few cases, the current and/or voltage transformers are installed on a stand-alone basis, as part of a high voltage station owned by Hydro One Transmission, and are

[1] As defined in Chapter 11 of the Market Rules, "Metering Installation" means any apparatus, including but not limited to an RWM [Registered Wholesale Meter], used to measure electrical quantities and includes the communication system by which metering data is transferred to the relevant telecommunications network through which metering data is transferred to the communication of the metering database.

[2] As defined in Chapter 11 of the Market Rules, "Meter Point" means, in respect of a load facility and of a generation facility with respect to which the current transformers are located on the output side of the generation facility, the physical location of the current transformers used to measure power flow and, in respect of a generation facility with respect to which the current transformers are located on the grounded side of the generation facility, the physical location of the voltage transformers.

used for revenue metering purposes as well as for power system protection and system control and supervisory functions.

- In a few exceptional installations, the current and/or voltage transformers installed on a stand-alone basis as part of a high voltage station owned by Hydro One Transmission may be dedicated to revenue metering function.

In accordance with the requirements in Chapter 6 of the Market Rules for the Ontario Electricity Market, Hydro One Transmission is a Meter Service Provider ("MSP") under a transitional arrangement with respect to the wholesale revenue metering facilities that it inherited from the former Ontario Hydro. The transitional MSP arrangement is envisaged to exist for each metering installation of the type described above from the open market commencement date (May 1, 2002) until the earliest expiry date of any seal period[3] of any equipment forming part of such metering installation. Once the seal period expires, the MMP is required to make alternative arrangements for obtaining competitive MSP services as necessary to comply with the provisions of Chapter 6 of the Market Rules. If a MMP fails to take action to upgrade or otherwise bring their metering installation into compliance with the Market Rules, Hydro One Transmission will re-seal and continue to service these meters as in pre-market commencement conditions, to fulfill its obligations with Measurement Canada.

Several MSPs have registered with the IESO to provide a competitive metering service to the MMPs through contestable arrangements after the metering installation(s) for these market participants is no longer under the transitional arrangement with Hydro One Transmission.

[3] Under Federal guidelines administered by Measurement Canada, each meter used for wholesale revenue transactions has a seal period, normally about 6 years for the wholesale electricity meters, after which it has to be recertified with respect to its accuracy of measurement.

As a result, it is considered necessary to address the following scenarios in this Application:

(a) Some MMPs will exit the Wholesale Meter Service pool administered by Hydro One Transmission, as envisaged by the Market Rules (Chapter 6). As MMPs exit the Wholesale Meter Service pool to obtain the services of an alternative MSP they would not have to pay costs associated with the regulated meter assets and services thereof; and

(b) Those Metered Market Participants who continue to receive regulated MSP service administered by Hydro One Transmission until they exit, will pay costs associated with regulated meter assets and related services on the basis of cost causality, to the extent possible.

3.0 COST ALLOCATION FOR WHOLESALE METER POOL

The Wholesale Meter pool revenue requirement includes operations and maintenance expenses related to wholesale meter assets, including costs associated with activities to comply with the Market Rules administered by the IESO. The Wholesale Meter pool revenue requirement also includes asset related charges such as depreciation and a share of the Other Revenue Requirement costs (e.g. return on Capital, taxes, etc.).

At the end of the transitional arrangement for the metering installation, when the current meter seal period for any meter included in that installation expires, the MMP shall make arrangements to exit the Wholesale Meter pool with respect to that installation. At the discretion of the MMP, they may arrange to exit the Wholesale Meter pool prior to the expiry of any meter seal in the metering installation. Regulated Wholesale Meter Service charges shall not apply to MMPs that exit a meter installation from the Wholesale Meter pool at the end of the transitional arrangement, or earlier, in accordance with Hydro One Transmission's wholesale meter exit policy.

For every metering installation with respect to which a MMP arranges to exit the Wholesale Meter pool, Hydro One Transmission shall cease to be responsible for any direct or indirect costs that may be incurred to maintain, repair, or replace any equipment required for wholesale revenue metering or any other purpose related to the metering installation. The 2011 and 2012 Net Book Value (at mid-year) and Revenue Requirement for the Wholesale Meter pool, derived using the cost allocation methodology described in Exhibit G1, Tab 2, Schedule 1, is provided in Table 1.

Table 1

Year	Net Book Value ($ Million)	Revenue Requirement ($ Million)
2011	2.1	0.83
2012	1.6	0.64

A summary of the annual revenue requirement for all of the Network, Line Connection, Transformation Connection, and Wholesale Meter rate pools is provided in Exhibit G2, Tab 5, Schedule 1.

LOW VOLTAGE SWITCHGEAR COMPENSATION

1.0 INTRODUCTION

Under the Settlement Agreement for the EB-2006-0501 Proceeding, the Ontario Energy Board approved that two distribution companies (Toronto Hydro Electric System Ltd. and Hydro Ottawa Ltd.) should continue to receive compensation for the low voltage switchgear equipment they own, operate and maintain in Hydro One's transformation stations.

2.0 BACKGROUND

In the 1960s, Toronto Hydro and Ottawa Hydro decided to install and pay for their own low voltage switchgear at some of the Ontario Hydro Owned transformation stations supplying their loads.

There was no credit paid to these utilities at the time. In 1966 the utilities involved negotiated with Ontario Hydro for a credit in recognition of their ownership of these assets. This credit has been paid by Ontario Hydro since that time, and the value of the credit was escalated from time to time in the same proportion as the transformer station asset base (115 kV) has escalated. Upon open access, the credit mechanism ceased. Hydro One Transmission, Toronto Hydro Electric System Ltd. and Hydro Ottawa Ltd. submitted a joint low voltage switchgear compensation proposal to Ontario Energy Board for resolution as part of the RP-1999-0044 on October 30, 2000.

The Board approved the proposal which specifies that Toronto Hydro Electric System Ltd. and Hydro Ottawa Ltd. should continue to receive compensation for the low voltage

switchgear equipment they own, operate, and maintain in Hydro One Transmission's transformation stations after Open Access.

3.0 CONCLUSION

The estimate of the cost of providing low voltage switchgear service which was updated and approved in the EB-2006-0501 and EB-2008-0272 Proceedings, was reviewed and remains valid for use in calculating the 2011 and 2012 Transformation Connection Service revenue requirement and rates.

The average low voltage switchgear service costs comprise 19.0% of Hydro One Transmission's total station costs.