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 Proceeding RP-1999-0044.

However, refinements to the Network and Line Connection pools have been considered for this Application as per the Board’s direction in its Decision and Rate Order in Proceeding RP-1999-0044, which stated that “the Board expects Hydro One Networks Inc to recon sider the definition of the Line Connection pool in a future proceeding and either propose a modified definition, or be prepared to provide satisfactory reasons if it proposes to continue with the current definition”. The Board also recognized issues arising from the definition of Line Connection and Network assets in its decision on Transmission System Code Phase 1 policy changes under Proceeding RP-2002-0120.

Alternatives for the definition of the Line Connection pool were considered, as described in Section 3.0 of this Schedule. Since re-structuring of the Line Connection pool directly impacts the Network pool, in that any assets that are not part of the Line Connection pool are included in the Network pool, this Exhibit describes the impacts to both pools as a result of the cost allocation options considered.

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 set the context for discussion of the issues surrounding Network and Line Connection pool options. A simplified illustrative diagram of transmission lines in a power system is provided in Figure 1 to assist in the setting the context.

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”.

- 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.

During the Board Proceeding RP-1999-0044, discussions pertaining to the Line Connection Pool focused on the treatment of Dual Function Lines. Briefly, these discussions centered on the issue of whether or not those customers that utilize Dual Function Lines to connect to a Network station should have to pay Line Connection Service charges. Thus, for example, should Customer C3 in Figure 1 pay Line Connection Service charges for using the Dual Function Line between Station “E” and junction (g)?

In the final Decision on RP-1999-0044, the Board concluded it did not have adequate evidence to assess the validity of any alternative definition of the Line Connection pool to that then offered by Hydro One Transmission. As a result, the Board, while accepting the definition of Line Connection pool for the purpose of setting initial transmission rates,
stated that it expected the definition of the Line Connection pool to be reconsidered in the
next cost allocation and rate design proceeding.

During Board Proceeding RP-2002-0120 regarding policy changes to the Transmission
System Code, the Board also raised the issue of radial lines being reinforced in such a
way as to become local loops. As illustrated in Figure 1, radial lines can be reinforced
and reconnected in such a way that a line connection, or a portion thereof, becomes a
local loop that provides some limited Network benefits, while continuing to provide its
primary function as a Line Connection asset.

For the purpose of this Application, 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 2005, and with due consideration of any Board decisions
regarding the treatment of specific assets.

3.0 NETWORK AND LINE CONNECTION POOL OPTIONS

Cost allocation options to address the issues raised in Section 2 were explored with
stakeholders as part of the process described in Exhibit A, Tab 16, Schedule 1.

The stakeholdering process reaffirmed the preference for retaining the three rate pools
approved by the Board during the previous proceeding, while recognizing the need for a
new Wholesale Meter pool. However, stakeholders did indicate a willingness to explore
the allocation of costs between the Network and Line Connection pools, options for
which are discussed below:
(i) Split Dual Function Line

The cost allocation option preferred by stakeholders, and proposed in this submission, is to split the Dual Function Line (“DFL”) costs between the Network Pool and Line Connection Pool. Splitting of DFL costs is based on the capacity of the line in relation to the customer demand it carries, calculated as per the methodology described in Exhibit G1, Tab 2, Schedule 1.

In RP-1999-0044 the Board raised a concern with the disparity between customers supplied at Network stations versus customers supplied via a DFL. The concern was that customers connected directly to a Network station do not pay Line Connection charges if they own the line connecting them to the Network station, whereas customers connected to a Network stations via a DFL do pay a Line Connection charge even if they own, or have fully paid for the line assets tapping the DFL. This option addresses the OEB’s concern by attributing a portion of the DFL costs to the Line Connection function. As such, the DFL itself contributes to Line Connection costs, and therefore all customers connected to a DFL rightly pay Line Connection charges regardless of the tapping configuration, the length of the tap, or indeed whether the tap is customer-owned.

Dual Function Lines represent only about 7% to 8% of the total Net Book Value of transmission assets. Splitting of the Dual Function Line assets between Network and Line Connection results in about 22%, or $120 million, in the Net Book Value of Dual Function Line assets shifting from the Network Pool to the Line Connection pool. The impact on revenue requirement is less than $23 million, or about 3.1%, of the Network Pool’s revenue requirement shifting to the Line Connection Pool.

This option does not result in any shifting of customers between the rate pools. Customers who currently pay a Line Connection charge will continue to do so, and
customers who do not currently pay a Line Connection charge will not pay Line Connection under this option.

A number of other options for redefining the Network and Line Connection pools were discussed during stakeholdering. Stakeholders had varied concerns with these alternatives, however, they are included below to highlight the scope of the options considered, and to provide an opportunity for addressing some of the issues raised by the OEB in RP-1999-0044.

(ii) Split Dual Function Line and Network Station Costs

An option for addressing the Board concern identified in RP-1999-0044 with the disparity between customers connected to Network stations and Dual Function Lines would be to allocate a portion of Network station costs between the Network and Line Connection pools so that even customers connected at a Network station would have to pay for Line Connection service. This option would require all transmission customers to pay both Network and Line Connection Service charges, and conceptually is not substantially different then having a single charge for all line assets, which was rejected by stakeholders both in RP-1999-0044 and in the consultation process for this Application.

This option would likely also be of concern to transmission customers who own their own Line Connection to a Network station since they would have to pay a Line Connection service charge although making minimal use of Line Connection assets within the Network station.
(iii) Dual Function Lines are Network Assets

This option would classify Dual Function Lines as Network assets. As such, the use of a Dual Function Line does not, in itself, result in a transmission delivery point attracting Line Connection Service charges. This approach would suggest that existing customers connected to Dual Function Lines with line connections shorter than a “threshold length”, would not attract Line Connection Service charges since many of the line taps to Dual Function Lines make minimal use of Line Connection assets. The same threshold length would apply to short line connections to Network stations. Customers who own the line connecting them to a Dual Function Line would also not attract Line Connection charges.

The complexity associated with precisely and fairly defining the “threshold length” was a concern raised by stakeholders. Another concern raised was the increase that would result as there would be fewer transmission delivery points in the Line Connection pool. This change would result in a shift of total charges from large LDCs to small LDCs and end-use transmission customers, who would typically remain in the Line Connection Pool due to the configuration of the lines connecting them to the Network.

(v) Dedicated Line Connection Pool

Under this “shallow” Line Connection pool option, only the portion of Line Connection facilities that connect a single transmission delivery point would be included in the Line Connection Pool. The costs associated with the shared portion of radial lines used to connect two or more transmission delivery points and the costs associated with Dual Function Lines, would be included in the Network Pool. Under this approach the cost of radial lines less than a “threshold length”, and connecting a single transmission delivery point, would also be included in the Network Pool.
Although this option would eliminate the disparity identified by the Board with respect to
the payment a Line Connection charges between customers supplied from Network
stations versus those supplied from Dual Function Lines, stakeholders raised a number of
concerns with this option including:

- Cost causality and fairness issues related to Network pool customers having to pay
  for Line Connection assets shared by only a few customers.
- Complexity associated with precisely and fairly defining the “threshold length” for
  line assets that would be included in the Network pool.
- The potential for uneconomic system expansion decisions driven by the desire to
  connect to shared connection assets in a manner that avoids capital contribution costs
  and Line Connection pool charges.

4.0 SUMMARY OF ASSET VALUE AND REVENUE REQUIREMENT

The revenue requirement for the Network pool excludes $12 million in revenue forecast
to be collected in each of 2007 and 2008 from the Export Transmission Service charges,
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
for the proposed option of splitting the Dual Function Line costs, are provided in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Book Value ($ Million)</th>
<th>Revenue Requirement ($ Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3,851.0</td>
<td>703.9</td>
</tr>
<tr>
<td>2008</td>
<td>4,003.8</td>
<td>712.9</td>
</tr>
</tbody>
</table>
The Net Book Value (at mid-year) and revenue requirement for the Line Connection Pool are provided in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Book Value ($ Million)</th>
<th>Revenue Requirement ($ Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1,026.7</td>
<td>180.3</td>
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<tr>
<td>2008</td>
<td>1,060.2</td>
<td>183.7</td>
</tr>
</tbody>
</table>

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