

**Ontario Energy Board**

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# **Board Staff Discussion Paper**

**on Issues Related to the Connection of  
Micro-Embedded Generation Facilities**

**EB-2012-0246**

December 20, 2012

## INTRODUCTION

Prior to the introduction of the Ontario Power Authority's (the "OPA") microFIT program in 2009, there was little generation connected to the distribution system. Distributors primarily focused on the delivery of electricity to end use consumers (i.e., the distribution system was not designed to connect a substantial amount of distributed generation).

Since the OPA's microFIT program was introduced, a significant amount of renewable micro-embedded generation has been connected to the distribution system and connections have been required at a faster pace than initially expected. Given recent directives to the OPA on April 5, 2012 and July 11, 2012 to continue with the microFIT program, the Ontario Energy Board (the "Board") believes it is time to review whether the current charges, technical requirements and rules in the Distribution System Code (the "DSC") related to the connection of micro-embedded generation facilities remain appropriate.

On May 15, 2012, the Board issued a letter (the "May Letter") announcing a consultation process to review issues related to the connection of micro-embedded generation facilities. The May Letter identified six items as matters to be included in the review and invited input from stakeholders in relation to any additional issues that stakeholders felt may need to be addressed as part of the consultation process.

The purpose of this discussion paper is to provide a more detailed discussion of the six matters identified for review in the May Letter as well as the additional issues that were raised by stakeholders in response to the May Letter.

Stakeholders are invited to comment on any of the issues or questions raised in this discussion paper in order to provide the Board with a thorough analysis of the issues, the alternatives for dealing with the issues, and their preferred outcome, if any. While this discussion paper identifies a number of questions on which input from stakeholders is specifically requested by Board staff, stakeholders should feel free to comment on all aspects of the discussion paper.

Stakeholders should include in their comments not only a detailed description of each proposal or option (including the steps necessary for implementation, where applicable) but also the underlying rationale and principles that support the proposal or option. Stakeholders should also include any supporting documentation for their proposals or their options with their written comments.

## STAKEHOLDER COMMENTS ON THE MAY LETTER

The Board received limited feedback from stakeholders on the May Letter. No stakeholders objected to any of the issues identified. However, two additional issues were proposed by stakeholders to be added into this consultation.

Cambridge and North Dumfries Hydro Inc. (“CNDH”) proposed that the Board reconsider its direction to distributors that distributors not charge for consumption by microFIT generators. CNDH commented that the consumption is not trivial and that the Board should consider adopting the OPA’s microFIT settlement provisions whereby payments to generators are “net of station load.” This issue will be dealt with in section 4 below.

The Canadian Solar Industries Association (“CanSIA”), Green Energy Coalition (“GEC”) & ecoPerth proposed that this consultation should also deal with Hydro One’s “7 per cent of peak” rule, which has been adopted by other distributors in Ontario. They argue that the “7 per cent of peak” rule has unduly constrained the ability of many microFIT projects to connect to distribution systems. Hydro One’s “7 per cent of peak” (and other rules) are intended to limit “the amount of PV solar generation that can be connected to their distribution system in order to preserve reliability and quality of supply to existing load customers and distributed generators.”<sup>1</sup> The rules limit “microFIT PV solar penetration on the utility’s F- and M-class feeders to 7% and 10% of the peak feeder load.”<sup>2</sup>

The Government of Ontario’s [\*Two-Year Review Report\*](#) of the FIT and microFIT programs included a recommendation to maintain the rule pending the results of additional studies. As far as Board staff knows, no further studies have been completed and Board staff is not proposing that the Board conduct any of these studies. This issue will therefore not be included in this consultation process.

PURE Energies also submitted comments on the May Letter. Most of PURE’s comments related to the challenges associated with the connection of micro-embedded generation facilities. Many of PURE’s comments favoured standardizing aspects of the connection process for micro-embedded generation facilities (i.e., standardized connection charges and continuation of standardization for the connection agreement and the monthly service charge).

## MATTERS FOR DISCUSSION

### 1. Offer to Connect Process

#### Background

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<sup>1</sup> Kinetrics Inc., “Technical Review of Hydro One’s Anti-Islanding Criteria for MicroFIT PV Generators,” November 22, 2011: <http://bit.ly/GOP0ZL>

<sup>2</sup> *Ibid.*

Applicants for a microFIT contract are required to obtain an offer to connect from their distributor before a microFIT conditional offer of contract is issued to them by the OPA. The OPA requires this “to ensure that potential connection issues are identified as early as possible in the application and contracting processes and will better align projects with available connection capacity.”<sup>3</sup>

Certain distributors have been receiving high volumes of applications for offers to connect micro-embedded generation facilities. In some cases, it appears that some project proponents have been seeking an offer to connect for a number of projects even though they only intend to develop a small number of the projects submitted. As a result, distributors are expending resources (with the costs recovered from ratepayers) on reviewing projects that are unlikely to materialize.

In the past, some distributors have argued that they require additional tools to address the high volume of requests for offers to connect micro-embedded generation facilities.

### **Board Staff Discussion**

With the continuation of the microFIT program, it appears that distributors and applicants for micro-embedded generation facilities could benefit from having a tool to better manage the large volume of requests that a distributor receives to connect micro-embedded generation facilities.

One option for discouraging speculative requests for an offer to connect a micro-embedded generation facility is to allow distributors to charge for the offer to connect. Some arguments for why a distributor should be allowed to charge for an offer to connect a micro-embedded generation facility include:

- a) payment demonstrates that the applicant is committed to connecting a micro-embedded generation facility;
- b) a charge reduces incentives for applicants to lock up more capacity than they plan or are able to utilize; and
- c) willingness to pay a charge demonstrates that the applicant is a viable applicant.

However, charging a micro-embedded generation facility for an offer to connect is not currently permitted under section 6.2.6 of the DSC, which states that “the distributor shall not charge for the preparation of the offer to connect.”

Board staff sees three potential options in relation to distributors charging for an offer to connect micro-embedded generation facilities:

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<sup>3</sup> OPA, Rule change for new microFIT applications, February 9, 2011:  
<http://microfit.powerauthority.on.ca/version-1-newsroom/rule-change-new-microfit-applications>

- a) keep the status quo (i.e., leave the DSC as it is and do not allow distributors to charge for preparing an offer to connect);
- b) amend the DSC to allow distributors to charge for the provision of an offer to connect; or
- c) amend the DSC to allow distributors to charge for offer to connect on a fully-refundable basis (i.e., if the micro-embedded generation facility is connected then the amount is applied towards the connection costs).

While Board staff is not taking a position at this time on a preferred approach, Board staff does note that the approach taken should achieve the following desirable outcomes:

- improve the connection to application ratio;
- allow distributors to focus resources on only those applications where the customer is serious about the generation project which, in turn, would facilitate processing and issuing offers to connect in a more expeditious manner; and
- avoid imposing inappropriate or excessive costs on applicants for micro-embedded generation facilities.

## Questions

- 1.1. Of the options listed above, which one, if any, represents the best way for distributors to manage the offer to connect process? Are there other options? Please explain your answer.
- 1.2. Are there any other issues (e.g., distributor resources allocated to processing applications) associated with the offer to connect process that needs to be addressed? If yes, please describe them.

## 2. Appropriateness of Timelines in the DSC (sections 6.2.6 and 6.2.7) for Micro-Embedded Generation Facilities

### Background

An issue that has arisen numerous times relates to the ability of some distributors to process applications for connections within the timelines set out in the DSC. For the purposes of this discussion paper, this issue relates to the timelines set out in sections 6.2.6 and 6.2.7 of the DSC.

Section 6.2.6 of the DSC requires a distributor to make an offer to connect, or provide reasons for refusing to connect, a micro-embedded generation facility within:

- 15 days of receiving the application if the micro-embedded generation facility is located at an existing customer connection; or
- 60 days of receiving the application if the micro-embedded generation facility is not located at an existing customer connection.

In either case, the distributor must give the applicant at least 30 days to accept the offer to connect and the distributor is not permitted to revoke the offer to connect until the 30 day period has expired.

The DSC also requires the distributor to connect the applicant's micro-embedded generation facility to its distribution system within 5 days of an applicant:

- informing the distributor that it has received all necessary approvals;
- provided the distributor with a copy of the authorization to connect from the Electrical Safety Authority;
- entered into a Connection Agreement in the form set out in Appendix E of the DSC; and
- paid the distributor for the connection costs, including costs for any necessary new or modified metering.

In 2011, Hydro One Networks Inc. ("Hydro One") applied to the Board for a six month exemption from the required timelines in sections 6.2.6 and 6.2.7 of the DSC to connect micro-embedded generation facilities to its distribution system (EB-2011-0118).<sup>4</sup> Hydro One stated the volume of requests to connect micro-embedded generation facilities was well beyond its expectations and that it expected the volume of connection requests to continue to increase.

The Board granted a limited exemption from sections 6.2.6 and 6.2.7 of the DSC to Hydro One until April 11, 2012 (i.e., 6 months from the date of the Decision and Order).<sup>5</sup> The decision also required Hydro One to file a monthly compliance report with the Board. The monthly compliance reports show that Hydro One has been able to achieve compliance with the terms of the exemption but has been unable to achieve compliance with all of the obligations of the DSC.

On August 3, 2012, Hydro One filed for an extension to the six-month exemption from the obligations in sections 6.2.6 and 6.2.7 of the DSC (EB-2012-0343).<sup>6</sup> In the application, Hydro One states that it hopes this consultation "will result in Code amendments that set out more achievable timelines, eliminate the 100% compliance targets, and align more closely with the Code's treatment of new load connections."

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<sup>4</sup> See: <http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/266550/view/>

<sup>5</sup> See: <http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/301014/view/>

<sup>6</sup> See: [http://www.hydroone.com/RegulatoryAffairs/Documents/EB-2012-0343/HONI\\_DSC\\_Extension\\_20120803.pdf](http://www.hydroone.com/RegulatoryAffairs/Documents/EB-2012-0343/HONI_DSC_Extension_20120803.pdf)

In its application, Hydro One states that it:

continues to maintain, as it did in EB-2011-0118, that the timelines and 100% targets in sections 6.2.6 and 6.2.7 of the Code are not practically achievable, as even during low-volume periods, compliance has not been achieved. Hydro One also stated in that proceeding that the Company's ability to comply with the targets in the Code are further hampered by an unpredictable and sometimes volatile applications stream, especially given the ongoing development and relative immaturity of the OPA's programs.

On November 8, 2012, the Board approved Hydro One's request for an exemption from sections 6.2.6 and 6.2.7 of the DSC. The exemption will end August 3, 2013 or six months after the conclusion of the Board's consultation in EB-2012-0246, whichever is earlier.<sup>7</sup>

### **Board Staff Discussion**

While the focus of this issue to date has been Hydro One because of its request for an exemption, the issue may also apply to other distributors. As a result, Board staff would benefit from feedback from distributors and generators on this issue to determine whether changes may be necessary and what those changes would be (i.e., different timelines).

Board staff have identified three potential options for dealing with this issue. One option is to amend the DSC to allow for distributors to meet the timelines required in the DSC 90% of the time. This would be akin to the requirements in section 7.2 of the DSC regarding the connection of new services. The second option is to amend the DSC to allow distributors to have a longer period of time to make an offer to connect in certain circumstances. The third option is a combination of the first two options (i.e., meeting DSC timelines 90% of the time and more time to make an offer to connect).

### **Questions**

- 2.1 What non-regulatory factors (e.g., the amount of resources distributors have allocated to processing applications) are preventing distributors from developing and executing a process to meet the DSC requirements?
- 2.2 Are the current timelines in the DSC (sections 6.2.6 and 6.2.7) appropriate for the connection of micro-embedded generation facilities?
- 2.3 Of the three options listed above, which is preferred by stakeholders? Please explain the reasons for the preferred option.

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<sup>7</sup> See:

<http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/372206/view/>

- 2.4 What changes, if any, could be made to the timelines to better enable distributors to process the volume of applications being received for the connection of micro-embedded generation facilities?
- 2.5 Is there a reason the timelines should be different for micro-embedded generation facilities and other customers? If so, explain why.

### **3. Standard Form Connection Agreement in the DSC ([Appendix E](#))**

#### **Background**

Section 6.2.7 of the DSC states that connection agreements for micro-embedded generation facilities shall be in the form set out in Appendix E of the DSC. The standard form connection agreement includes provisions dealing with technical requirements, liabilities, compensation, and billing. The DSC does not make any allowances for modifications or amendments to the standard form connection agreement for micro-embedded generation facilities.

In the past, some distributors have argued that the connection agreement in Appendix E of the DSC should be revisited, especially in relation to insurance and liability.

#### **Staff Discussion**

Board staff requires more information about this issue from stakeholders in order to ascertain whether there is a need to revisit the provisions of the standard form connection agreement in Appendix E of the DSC.

#### **Questions**

- 3.1 What modifications, if any, need to be made to the standard form micro-embedded generation facility connection agreement in Appendix E of the DSC? Please describe the modifications and provide the rationale and supporting documentation for why these modifications are necessary.
  - 3.2 Given that the connection agreement in Appendix E of the DSC for small and mid-sized embedded generation facilities include requirements for insurance, should insurance provisions be included in the micro-embedded generation facility connection agreement? Please explain.
4. **Experience with the Monthly Service Charge (established in [EB-2009-0326](#))**



## Background

In its [Decision and Order](#), issued February 23, 2010, the Board established a “microFIT Generator” service classification and determined that there would be a single, province-wide fixed monthly charge for all distributors in relation to micro-embedded generators that were part of the OPA’s microFIT program. The Board also determined that the following 9 cost elements should be used to form the basis for establishing the monthly service charge:

- Customer Premises - Operation Labour (Account 5070);
- Customer Premises - Materials and Expenses (Account 5075);
- Meter Expenses (Account 5065);
- Maintenance of Meters (Account 5175);
- Meter Reading Expense (Account 5310);
- Customer Billing (Account 5315);
- Amortization Expense – General Plant assigned to Meters;
- Administration and General expenses allocated to Operating and Maintenance expenses for meters; and
- Allocated PILS (only general plant assigned to meters).

The Board also stated that over time, and with empirical information regarding the costs associated with this new class, the Board would be in a better position to consider the effectiveness of the single, province-wide rate in both the promotion of renewable generation and the appropriate allocation of costs. Lastly, the Board stated that if it is determined that the actual costs for micro-embedded generation facilities that are part of the OPA’s microFIT program are significantly different across distributors, then the Board may consider moving to utility specific rates at some point in the future.

To enable it to determine the level of the province-wide fixed monthly charge, the Board ordered distributors to provide the value of each of the cost elements listed above. In the interests of practicality, the Board decided that the calculated rate would be acceptable if it were based on input representing at least one third of the electricity distributors and at least one half of all residential electricity customers in the province. The Board received cost element values sufficient to meet this requirement and used the data to calculate the province-wide fixed monthly charge. On March 17, 2010, the Board issued a Rate Order that set the province-wide fixed monthly charge for all electricity distributors related to the microFIT Generator rate class at \$5.25 per month, effective September 21, 2009.

In the [Report of the Board: Review of Electricity Distribution Cost Allocation Policy](#) (EB-2010-0219), the Board indicated its intention to update the province-wide fixed monthly charge each year. The Board also stated:

In calculating the annual update to the default province-wide microFIT charge, the Board will use the data collected on the microFIT worksheet from all distributors filing a cost of service application, along with the most recent information on record for distributors that are not filing a cost of service application in that year. The costs for distributors that have a Board-approved distributor-specific microFIT charge will also be included as part of these data.

The updated province-wide charge will be communicated by the Board in November of each year. Distributors that do not have a distributor-specific microFIT charge will be expected to request to change their microFIT charge to the updated default province-wide microFIT charge as part of their annual incentive regulation application or cost of service application.

The Board also added the interest and net income expenses related to General Plant assigned to Meters to the 9 cost elements identified in EB-2009-0326.

On September 20, 2012, the Board announced that it had updated province-wide fixed monthly charge based on the cost data of electricity distributors in their most recent Board-approved cost of service applications. The resulting value for the microFIT Generator Service Classification charge was calculated to be \$5.40 per month.<sup>8</sup>

The Board also noted that distributors may request a distributor-specific microFIT charge as part of their cost of service applications. Any distributor that applies for a distributor-specific charge will be required to demonstrate that the experience it has gained provides sufficient and adequate evidence for the proposed charge.

## **Board Staff Discussion**

### *Monthly Service Charge*

The methodology to set monthly charge has been developed recently. Therefore, Board staff is of the view that a comprehensive review of the underlying methodology used to set the province-wide fixed monthly charge is not warranted. Also, as noted above, distributors have the ability to request a distributor-specific microFIT charge as part of their cost of service applications in the event that they feel the province-wide charge is not sufficient to cover their costs. However, Board staff sees value in giving stakeholders the opportunity to provide their views on the underlying methodology used to set the province-wide fixed monthly charge at this time.

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<sup>8</sup> See: [http://www.ontarioenergyboard.ca/OEB/Documents/EB-2010-0219/microFIT\\_Monthly\\_Charge\\_update\\_20120920.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/EB-2010-0219/microFIT_Monthly_Charge_update_20120920.pdf)

### *Charging for Consumption*

With respect to the new issue raised by CNDH regarding charging for consumption by microFIT generators, Board staff is of the view that this new issue falls within the scope of this consultation and would benefit from additional input and information from stakeholders. Subject to further stakeholder input, Board staff's preliminary view is that all customers of a distributor – load or generator – should be required to pay for their own consumption (i.e., user pay).

### **Questions**

#### *Monthly Service Charge*

- 4.1 Given that distributors have the ability to request a distributor-specific microFIT charge as part of their cost of service applications, does the underlying methodology currently used to set the province-wide fixed monthly charge need to be changed? If so, please explain the rationale for any proposed changes.
- 4.2 Is a new specific rate class for non-microFIT micro-embedded generation facilities warranted? Should non-microFIT micro-embedded generation facilities be added to the rate class for microFIT micro-embedded generation facilities?

#### *Charging for Consumption*

- 4.3 How much electricity are micro-embedded generation facilities that are part of the OPA's microFIT program consuming and what are the related costs?
- 4.4 Is there a reason micro-embedded generation facilities that are part of the OPA's microFIT program should not be charged for their own consumption and, instead, the related costs should be recovered from a distributor's load customers? If so, please explain why.
- 4.5 Do similar consumption-related issues exist for non-microFIT micro-embedded generation facilities?
- 4.6 How should the charges for the consumption of electricity be recovered from micro-embedded generation facilities (i.e., the same as a regular customer, through the province wide-fixed monthly service charge for microFIT micro-embedded generation facilities, through some other manner)?

## 5. Variability of Connection Charges

### Background

Under section 6.2.7 of the DSC, a micro-embedded generation facility cannot be connected until the generator pays the distributor for connection costs, including costs for any necessary new or modified metering. However, there appears to be significant variations among distributors in terms of the amounts being charged for the connection of micro-embedded generation facilities.

In EB-2010- 0206, the Board recognized that, to a degree, disparities in connection charges can result from factors such as the type of connection the generator chooses (i.e., connected directly to the distributor's distribution system or indirectly in parallel) or the costs associated with different metering technologies.<sup>9</sup>

On July 22, 2010, the Board issued a letter requesting information on the manner in which distributors determine connection charges for microFIT micro-embedded generation facilities and a description of any policy the distributor has adopted in relation to the charging of connection costs for microFIT micro-embedded generation facilities.<sup>10</sup> The Board received responses from 71 distributors.

Approximately half the responses provided a number for the connection charge. The table below shows the variability of connection charges based on the numbers provided by 36 distributors.

Connection Charge	Percentage of Distributors in this Range
Up to \$500*	50%
\$501 to \$1,000	42%
Over \$1,000	8%

\*Note: The "Up to \$500" category includes 3 distributors that indicated a zero charge for connecting microFIT facilities.

The distributors' responses showed that distributors were charging the connection costs in a variety of ways including, but not limited to:

- (a) connection charges were based on the actual costs for each connection;
- (b) standard connection charges were applied in projects requiring typical connections; however, if a request was identified as non-typical, actual costs were charged;

<sup>9</sup> See:

[http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/205529/view/Board\\_Ltr\\_microFIT%20Connection%20Costs\\_LDCs\\_20100722.PDF](http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/205529/view/Board_Ltr_microFIT%20Connection%20Costs_LDCs_20100722.PDF)

<sup>10</sup> See:

<http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/205529/view/>

- (c) a standard connection charge applied in all cases;
- (d) two standard connection charges applied depending on whether the site was urban or rural;
- (e) no connection charges were levied for a basic microFIT generator connection since the activities required were similar to a basic residential load connection and the costs of making a basic connection are captured in distribution rates; and
- (f) only the cost of the meter was recovered.

## **Board Staff Discussion**

Sections 3.15 and 3.1.6 of the DSC state that:

3.1.5 For non-residential customers, a distributor may define a basic connection by rate class and recover the cost of connection either as part of its revenue requirement, or through a basic connection charge to the customer.

3.1.6 All customer classes shall be subject to a variable connection charge to be calculated as the costs associated with the installation of connection assets above and beyond the basic connection. A distributor may recover this amount from a customer through a connection charge or equivalent payment.

As noted previously, the approach to cost recovery of connection costs in relation to micro-embedded generation facilities varies across distributors resulting in variation in the levels of charges being applied. The question for this consultation is whether there is merit in considering the need for, and benefits of, a standardized approach to charging for connection costs in relation to micro-embedded generation facilities. Board staff believes that the method by which distributors recover these connection charges also merits consideration at this time.

## **Questions**

- 5.1 Is the impact of the variability of connection charges across distributors sufficiently material, from the perspective of the micro-embedded generation customers and the distributor, such that the Board should consider establishing a more prescriptive approach to the methodology for determining connection charges and manner of recovery of connection costs for micro-embedded generation facilities?
- 5.2 Should the Board prescribe a methodology for delineating basic versus variable connection costs for micro-embedded generation facilities? If so, what work is associated with the connection of a micro-embedded generation facility? What should a basic connection include?

5.3 If the Board were to take a more prescriptive approach to connection costs for micro-embedded generation facilities, should the Board:

- a) set a standard amount for a basic connection for a distributor to use;
- b) use an approach similar to that which is set out in section 3.1.4 of the DSC (i.e., identify a minimum basic connection for a micro-embedded generation facility); or
- c) adopt a formulaic approach similar to the approach used in the establishment of Specific Service Charges (i.e., the methodology is the same for all distributors but the costs and the resulting charge are different for each distributor)?<sup>11</sup>

5.4 What other approaches, if any, should the Board consider in relation to the charging and recovery of costs related to the connection of micro-embedded generation facilities?

## **6. Cost Responsibility in Relation to Upstream Infrastructure Upgrades to a Transmitter or Host Distributor**

### **Background**

The May Letter identified cost responsibility in relation to upstream infrastructure upgrades to the system of a transmitter or host distributor as one of the matters for this consultation.

The DSC is currently silent on the issue of cost responsibility for upstream upgrades for not only micro-embedded generation facilities but for all embedded generation (and loads).

### **Board Staff Discussion**

As stated above, there are currently no rules regarding the cost responsibility for upstream upgrades caused by embedded generation facilities in the DSC. The cost responsibility for upstream upgrades related to the connection of micro-embedded generation facilities could be considered unique because it is highly unlikely that a single micro-embedded generation facility would trigger the need for upstream upgrade. Instead, it is the aggregation of many micro-embedded generation facilities connecting to a distribution system that causes an upstream

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<sup>11</sup> A Specific Service Charge ("SSC") is an approved fixed rate charge to a customer for a specific activity or service, or as a penalty. Activities include services that are only available from, or under the control of, the distributor. SSCs are established for activities that are over and above the distributor's standard level of service. SSCs are an integral part of a distributor's approved schedule of rates for the distribution of electricity.

issue. These circumstances make the assignment of cost responsibility for upstream upgrades less clear than in cases of larger embedded generation facilities. For example, it would be straightforward to assign full cost responsibility for a transformer station upgrade required because of a 10 MW embedded generation facility to the generator; however, to do the same to a customer connecting a 10 kW rooftop solar panel may not be straightforward.

Overall, Board staff is of the view that codifying cost responsibility for upstream upgrades caused by micro-embedded generation facilities in the DSC may be warranted. Board staff believes it is worthwhile seeking perspectives on this issue and potential alternative approaches to upstream cost responsibility as it specifically relates to micro-embedded generation facilities. For example, it may be worth considering whether micro-embedded generation facilities should be treated in the same manner as residential loads with respect to upstream costs (i.e., costs recovered through rates rather than through an upfront capital contribution).

However, Board staff recognizes that the issue of cost responsibility for upstream upgrades is broader than the scope of this consultation. Further, issues related to cost responsibility are currently being reviewed by the Board as part of the [Renewed Regulatory Framework for Electricity](#) ("RRFE"). The Report of the Board related to the RRFE stated that:

The Board concludes that a reconsideration of the TSC [Transmission System Code] cost responsibility rules is desirable to facilitate the implementation of regional infrastructure planning and the execution of regional infrastructure plans. The Board believes that a shift in emphasis away from the 'trigger' pays principle to the 'beneficiary' pays principle is appropriate in that regard.

## Questions

- 6.1 Should cost responsibility in relation to upstream infrastructure upgrades to a transmitter or host distributor be codified?
- 6.2 Under the current microFIT rules, have there been any cases of a specific micro-embedded generation facility (or aggregation of micro-embedded generation facilities) triggering the need for an upstream upgrade? If so, how were they resolved?
- 6.3 Should micro-embedded generation facilities be treated differently than larger generation facilities connected to the distribution system with respect to upstream upgrades?

- 6.4 How should the upstream cost impact of micro-embedded generation facilities be addressed (i.e., “trigger” pays, “beneficiary” pays, a fixed cost to every micro-embedded generation facility, rates, or socialize costs)?
- 6.5 How should the review of upstream cost responsibility for micro-embedded generation facilities be best addressed (i.e., wait until the RRFE process is concluded, a separate initiative for all embedded generation, or done as part of this consultation)?