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ONTARIO ENERGY BOARD

# Ontario Energy Board

## Distributed Generation: Rates and Connection

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## Ontario Power Authority Comments

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OEB BOARD SECRETARY	
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Licensing	
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## **BACKGROUND**

The Board initiated a consultation process regarding Distributed Generation (“DG”) on July 13, 2007, with the aim of developing a rates and connection policy framework. Board staff has retained EES Consulting Inc. (“EESC”) to provide technical expertise in this area and have released EESC’s “Discussion Paper on Distributed Generation (DG) and Rate Treatment of DG” (“the EESC Paper”) for comment. Board Staff have also released its Staff Discussion Paper on Distributed Generation: Rates and Connection (“Board Staff Paper”), which identifies issues requiring comment.

Certain aspects of DG were discussed in the Board’s earlier consultation process regarding Rate Design for Electricity Distributors (EB-2007-0031). OPA was a participant in that proceeding and provided comments with regard to use-of-system rates for DG.

## **OPA COMMENTS AND RESPONSES**

The OPA is mandated through the Electricity Act to “engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources.” DG projects, when connected to the distribution system, can make a significant aggregate contribution to security of supply for Ontario consumers and to achieving the government’s objectives for clean and renewable energy supply in the future. The OPA sees this consultation process as a positive step in addressing barriers to development.

In general, the OPA is in agreement with EESC recommendations that rates charged to DG customers should be designed to reflect the true costs to provide service, net of benefits; should be simple and easy to understand and administer; and should not create artificial barriers. The OPA’s comments in this matter will encompass the issues of Recovery of Connection Costs; Separate Rate Classification; Benefits; and Other aspects.

### **Recovery of Connection Costs**

The OPA proposes an LDC connection cost financing approach which would allow DG customers to pay their connection costs over time, in the same manner as other LDC load customers.

The Board Staff paper states that the status quo, by which generation customers pay directly and load customers pay through rates, addresses the following objectives: (1) minimizing cross-subsidization; (2) minimizing the level of connection costs; and (3) minimizing electricity distributors’ exposure to stranded costs. In EB-2007-0031, the OPA noted that the current rate treatment of DG customers can result in over-payment. This situation arises through the ongoing requirement that the generators pay their connection costs up front in addition to payment of the rates applicable to load

customers, which were designed to recover their connection costs over time. At that time, the OPA also noted some inequities depending on the connection methodology selected, as had been discussed in Compliance Bulletin 200703, dated April 27, 2007. While it is appropriate to employ a rate methodology for DG customers that is comparable to that for load customers, the rates themselves should be separately calculated. The status quo is inappropriate and does not reflect the costs to serve these generator customers, nor does it reflect the benefits to the system that these generator customers provide.

The current treatment of connection costs has the result of creating a situation where the LDC is at best, indifferent from a financial perspective to the development of new DG. This presents a barrier to entry for the generator. A generator connecting directly to the system, and covering its own connection costs provides no financial benefit to the Distributor, and could be viewed by the LDC as an administrative burden. A change to the status quo regarding connection costs has the potential to remove the utility's indifference to new DG and reduce barriers to entry.

The Distribution System Code ("DSC") provides for this option at sections 3.1.5 and 3.1.6, which 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.*

The DSC permits the LDC to define a basic connection charge which could be recovered from the rate class through rates. Connection facilities beyond this basic amount could be recovered from the individual generator either through a connection charge or through a fixed or variable rate, as appropriate.

By adopting this approach, the LDC would be permitted to earn a regulated return on the connection assets, thus removing indifference to the development of DG. The cost of these facilities would be financed at the advantageous rates applicable to utilities, which would be reflected in the rates charged to generators. Overall costs to the generators would therefore be comparable to those of load customers and would not result in any cross-subsidization.

Board Staff's paper requests input into the effects of socialization of connection costs on the economics of DG projects. The OPA submits that by containing the impacts of these costs to a designated rate class, as discussed below, the costs are not fully "socialized", in that they are not borne by all LDC customers. The LDCs are simply paid by the generators for the connection costs over time.

The OPA proposal should not result in an increase in uneconomic DG projects. Considerable risk is borne by the generator through the capital investment required. The benefit to the generator would be that of lower financing costs for connection facilities available through the LDC's financing arrangements. The impact of this effect, when compared to the total capital and operating costs of the generation facilities is relatively small. Given that the risk of uneconomic DG projects going forward should not be appreciably impacted by this proposal, the risk of stranded costs to the LDC should be the same as that experienced with utility assets in place to serve any industrial or commercial load customer.

Board Staff further questions if the proposed approach would affect the incentive for distributors to design economic connections. The OPA notes that LDCs are currently motivated to design economic connection facilities in such a manner as to minimize customer rate impacts. There should be no incentive to change this practice among LDCs through the connection cost financing approach.

### **Separate Rate Classification**

The OPA submits that a separate rate classification is required in order to operationalize the connection cost financing approach for DG. The creation of a separate rate classification for DG customers as discussed below will remove inequities and further the objective of minimizing cross-subsidization. A separate rate classification will result in DG rates that reflect only the costs applicable to this rate class and remove the cross-subsidization of load customers' assets.

The EESC Paper recommends the creation of a separate rate classification for DG customers with generation capacity > 500 kW and where the DG customer generates more than 10% of its total load. According to EESC, the 500 kW threshold allows for special treatment of the large DG customers, while limiting the administrative burden of identifying all DG customers.

The OPA agrees with Board Staff that creation of a separate rate class will support a cost-based approach and facilitate the implementation of credits that would reflect the benefits associated with such generation, but submits that limiting this treatment to customers above 500 kW capacity perpetuates barriers to entry currently experienced by smaller generators. As demonstrated in the OPA comments in EB-2007-0031, the impacts of the current rate treatment are more pronounced for smaller generators. Specifically, these generators receive a smaller proportion of revenues than larger generators due to the relative size of the current fixed charge to the revenues received.

Currently, approximately 50% of the distributed generation in Ontario is provided by smaller generators and the amount of energy provided by DG is forecast to grow by approximately 500% over the next 15 years. These smaller generators contribute to the system benefits noted in the EESC paper, namely: delay or replacement of need for additional generation or transmission and distribution lines; reductions in utility peak demand; reduction in transmission losses; improved system security; and improved

reliability. Current rates for these customers are designed to recover the costs to provide distribution service to load customers, but do not credit DG customers for the benefits they provide. It is the OPA's submission that rates charged to all DG customers generating more than 10% of their total load should encompass both the costs to provide service and the benefits provided to the system.

In support of the government's objective to encourage investment in small generation projects, the OPA has recently introduced its Renewable Energy Standard Offer Program ("RESOP"), which provides small electricity generators a standard pricing regime and a streamlined process. Under the RESOP pricing regime, generators are compensated for the benefits provided to the system in two ways:

- a component of the base pricing formula which credits the generators for reductions in transmission losses; and
- a variable component to reward generators for performance during peak demand periods, when generation is most needed and thus more highly valued.

The OPA notes the concern that benefits should not be "double-credited" to a participant. In the event that the proposed rate treatment is adopted, the OPA will adjust its pricing for new projects under this program in order to be consistent.

The OPA sees merit in the creation of a separate class of DG for > 500 kW as proposed by the EESC paper. Benefits attributable to larger generators are more easily identifiable, and it would be appropriate to establish these on a case-by-case basis as part of the standardized connection agreement between the distributor and the DG customer, as proposed by EESC.

The OPA suggests that it would be appropriate to create another class of DG for customers generating more than 10% of their load at less than 500 kW. Costs and benefits attributable to these customers could be treated using a standardized methodology to reduce administrative burden.

The EESC paper raises concerns regarding the reliability of load data for modelling the standby rate classification, specifically with regard to the lack of metering to record the generator's output. Under such circumstances the treatment of such customers as load, and billing accordingly, may be necessary. The OPA proposes that inclusion in the DG rate class could be limited to customers with metering capability, which would have the effect of encouraging investment in metering in order to participate.

### **Benefits**

EESC identifies two conceptual methods that could be used to identify the benefits of load displacement generation; a marginal cost approach; and an incremental approach. The OPA takes no position on the use of either method, but notes that use of marginal costs as is already calculated for CDM programs may represent slightly less of an administrative burden than the incremental cost approach. As more experience in determining and quantifying benefits is achieved, the methodology may be refined.

These avoided costs should be credited to the DG rate class and attributed to all customers as recipients of these benefits.

In addition to these general benefits, larger generators (over 500 kW) may have additional benefits that are specifically attributable to the individual generator. Another methodology to calculate benefits may be appropriate for these generators on an individual basis. EESC notes in particular the potential benefits in a fast growing area with a constrained distribution system. Crediting larger generators for these case-specific benefits would provide an additional incentive to invest in DG where it is most needed.

### Other

Another significant barrier to the realization of DG potential in Ontario is the LDC queuing process. Through experience with the RESOP, the OPA has learned that the current queuing criteria are not appropriate, and that the threshold for a generator to obtain queue position should be more material and onerous. To date, a significant number of generators have obtained queue position by obtaining a completed Connection Impact Assessment through their LDCs, but have made no further progress toward project connection. This has the effect of preventing generators lower down in the LDC queue from gaining position as the connection queue is fully subscribed.

The queuing issue highlights the need to develop a mechanism that will encourage LDCs to rationally expand their distribution systems to accommodate new customers. There is no solution to address limitations on feeder capacity in the current environment. A transparent and fair methodology to encourage LDCs to expand their systems to accommodate customers willing to pay for such connections is a starting point.

The OPA proposes that the OEB should amend the DSC to establish the execution of the Connection Cost Recovery Agreement as the appropriate queue position trigger, such that generators will have to make a significantly greater commitment to connection, in order to be allocated position to have access to the limited distribution system capacity available. To deal with the legacy queues of LDCs, the OPA would support a further DSC amendment that would require current LDC queue position holders to execute the CCRA within a reasonable timeframe (e.g. 3 – 4 months) of the coming into force of such an amendment. The implementation details of a new queuing procedure would require further discussion, and would need to ensure transparency and fairness so that generators could assess their risk in pursuing projects with connections to points that were in high demand.

The OPA would then review its procurement program rules to ensure that the contract issuance process is aligned with this OEB Code amendment.

## **Summary**

The OPA submits that its proposed LDC connection cost financing approach, in conjunction with the creation of a separate rate class is appropriate for distributed generators for the following reasons:

- The approach creates an incentive for LDCs to facilitate DG, in allowing them to earn a regulated return on the connection facilities;
- It reduces generators' barriers to participation;
- It does not result in socialization of costs, as costs are contained within the rate class which causes them; and
- Reduces cross-subsidization between DG and load customers.

To further stimulate the construction of generation projects, rather than just the issuance of queue positions and Standard Offer Program contracts, the OPA recommends that the OEB amend its DSC to move the queue position trigger to the execution of the Connection Cost Recovery Agreement, from the current requirement of completion of the Connection Impact Assessment.

The combined impact of the OPA's proposals will remove current barriers to participation and facilitate investment in DG, in furtherance of government objectives.

The OPA wishes to thank the Board for this opportunity to provide its comments on this issue, and would be happy to provide further clarification if needed.

