

Small Hydro Program Questions & IESO Responses

Purpose of Document

The intent of this document is to make public any questions and IESO responses, in regards to the Small Hydro Program, for the purposes of transparency and to assist the understanding of other potential applicants who may have questions similar to those previously asked.

This document will be updated as new questions are received by the IESO.

Questions & Responses

Question 1

The IESO received questions regarding the manner in which the Small Hydro Program settlement process accounts for market revenues that occur. The IESO is providing this posting as an example to clarify the treatment of market revenue associated to a Facility and how their monthly payment for the output from their facility is derived.

Response

Market Revenue and Contract Revenue – LDC Connected and Financially Settled

The IESO recognizes that for those facilities that are connected and settled directly by the local distribution company (LDC) that their Facility is connected to, may not directly see information that identifies the level of market revenue associated to the output of their facility, as the LDC will make a payment that is always equal to the Contract Price.

For those Facilities that have an existing contract with the IESO there is no change in the settlement process between Exhibit B1 & B2 as it relates to how a Supplier will receive payment from the LDC. Both existing IESO contracts and the SHP contract represent a contract for differences.

The LDC will provide/calculate market revenue for each interval (hourly or 5-minutes), using the market price (currently HOEP) and a facilities energy production. They will also calculate the Contract Energy Payment (as per Exhibit B) using the Contract Price and the market price for the same intervals. The sum of these two calculations will be the net facility revenue (or the monthly payment for the output from their facility). While it is possible that the Contract Energy Payment could be negative in an interval (if the market price is higher than the Contract Price), the net payment could never be negative.

Here is a simplified example, for a single hour:

| | | |
|-------------------|--------------------|-------------|
| Contract Price | (CP) | \$100 / MWh |
| HOEP | (MP _i) | \$35 / MWh |
| Contract Capacity | (CC) | 2 MW |
| Delivered Energy | (DE _i) | 2.1 MWh |

$$\begin{aligned} \text{Market Revenue (Paid by the LDC)} \\ &= (2.1 \text{ MW} \times 1\text{hr}) \times \$35 / \text{MWh} \\ &= \$73.5 \end{aligned}$$

$$\begin{aligned} \text{Contract Energy Payment (as per Exhibit B of the SHP Contract, or Exhibit B-2 of the SHP-AR} \\ \text{Contract) (Paid by the LDC)} \\ &= (\text{CP} - \text{MP}_i) \times \text{Min} (\text{DE}_i, \text{CC} \times 1\text{hr}) \\ &= (\$100 / \text{MWh} - \$35 / \text{MWh}) \times \text{Min} (2.1 \text{ MWh}, 2 \text{ MW} \times 1\text{hr}) \\ &= \$65 / \text{MWh} * 2 \text{ MWh} \\ &= \$130 \end{aligned}$$

$$\begin{aligned} \text{Net Facility Revenue (monthly payment) (Paid by the LDC)} \\ &= \$73.5 + \$130 \\ &= \$203.5 \end{aligned}$$

Market Revenue and Contract Revenue – LDC or Grid Connected and IESO Financially Settled

For those Facilities that have an existing contract with the IESO there is no change in the settlement process between Exhibit B1 & B2 as it relates to how a Supplier will receive payment from the IESO. Both existing IESO contracts and the SHP contract represent a contract for differences.

The IESO will provide/calculate market revenue for each interval (5-minutes), using the market price (currently HOEP) and a facilities energy production. This process is completed via the IESO Market Settlements processes and payments are included on the IESO Settlement Invoice.

The IESO Contract Management process will calculate the Contract Energy Payment (as per Exhibit B) using the Contract Price and the market price for the same intervals. This payment is made as per the contract requirements.

The sum of these two calculations will be the net facility revenue (or the monthly payment for the output from their facility). While it is possible that the Contract Energy Payment could be negative in

an interval (if the market price is higher than the Contract Price), the net payment could never be negative.

Here is a simplified example, for a single hour:

| | | |
|-------------------|--------------------|-------------|
| Contract Price | (CP) | \$100 / MWh |
| HOEP | (MP _i) | \$35 / MWh |
| Contract Capacity | (CC) | 2 MW |
| Delivered Energy | (DE _i) | 2.1 MWh |

Market Revenue (Paid by the IESO and included on the Settlement Invoice)

$$\begin{aligned} &= (2.1 \text{ MW} \times 1\text{hr}) \times \$35 / \text{MWh} \\ &= \$73.5 \end{aligned}$$

Contract Energy Payment (as per Exhibit B of the SHP Contract or Exhibit B-2 of the SHP-AR Contract) (Paid by the IESO Contract Management process as per the contract)

$$\begin{aligned} &= (\text{CP} - \text{MP}_i) \times \text{Min} (\text{DE}_i, \text{CC} \times 1\text{hr}) \\ &= (\$100 / \text{MWh} - \$35 / \text{MWh}) \times \text{Min} (2.1 \text{ MWh}, 2 \text{ MW} \times 1\text{hr}) \\ &= \$65 / \text{MWh} * 2 \text{ MWh} \\ &= \$130 \end{aligned}$$

Net Facility Revenue (received in two distinct payment processes) (Paid by the IESO)

$$\begin{aligned} &= \$73.5 + \$130 \\ &= \$203.5 \end{aligned}$$

Question 2

The IESO received a question regarding the need to provide a Performance Security with the SHP Application.

Response

The Performance Security is only a requirement under the Small Hydro Program Contract and is described within Article 5 of the contract. The Performance Security is not a requirement of the SHP Application.