Payment Acceleration - Interest Payments

Interest is included in the Payment Acceleration proposal to help ensure that no financial incentives exist to submit unreasonable Meter Data and that the time value of money is accounted for when Market Participants initially overcharge or undercharge due to estimated Meter Data, updates to SQMD Meter Data, and price adjustments on Initial Invoices generated semi-monthly at T+7B.

The CAISO has proposed that initially, **interest be calculated only** for the **first** (T+38B) and **second** (T+76B) **true-up** Invoices. The T + 18 month and T+ 35 month True-Up invoices are exempt from interest calculations.

Since the planned implementation of payment acceleration is six months after MRTU start-up, the CAISO will have time to evaluate Settlements and market data prior to the first T + 18 month statement and determine whether or not interest charges are necessary beyond the second true-up Invoice.

Interest will be charged or paid through **two new Charge Codes** (6999, 7999) in the CAISO Settlements system. These charges are **based on deviations between** the **True-Up** invoices and the **Initial** Invoices.

Also, the new Charge Group these charge codes are under **is neutral**; therefore, the two charge codes must add up to zero for each True-Up Bill Period. To ensure neutrality, interest calculations are based on the **net amounts** of the True-Up and Initial invoices **excluding all one-sided charges.**

Accounting neutrality is based on the following:

> Total Receivables (What ISO collects from Market Participants) **=**
> Total Payables (What ISO pays out to Market Participants) **MINUS**
> 1-sided Charge Groups (ie. GMC, FERC) which ISO keeps.

Therefore, excluding the 1-sided charge codes from the Receivables & Payables Invoice totals will ensure the following for each Billing Period:

> Total AR = Total AP

All interest calculations are **balanced** (excluding rounding) since deltas in the True-Up Invoices are equal once the 1-sided charge codes have been removed from the totals.

Interest calculated on the first and second True-Up invoices **will appear** on the **next available** Initial invoice.

Interest calculations are based on 4 factors:

1. The deltas between **Net Amounts** of monthly True-Up Invoices and semi-monthly Initial Invoices.
2. The number of days between **Due Dates** of monthly True-Up Invoices and semi-monthly Initial Invoices.
3. The Quarterly FERC Interest the Due Dates fall under.
4. In the event that Due Dates cross calendar Quarters, interest calculated in the previous quarter will be compounded in the following quarter.

Because **True-Up** Invoices are based on a **full month** of statements and the **Initial** Invoices are based on statements ranging from 1-15 and 16 to the End of Month; the deviation between the True-Up Invoice and each semi-monthly Initial Invoice must be determined.

The following formulas are used to determine the delta between the **NET AMOUNTS** of the monthly True-Up Invoices and semi-monthly Initial Invoices.

Net Amt of Initial Invoice 1-15 = A
Net Amt of Initial Invoice 16 - EOM = B
Net Amt of 1st True-Up Invoice = C
Net Amt of 2nd True-Up Invoice = D

A / (A+B) = A% -- Initial Invoice 1-15 % of Total
B / (A+B) = B% -- Initial Invoice 16-EOM % of Total

C * A% = Delta between 1st True Up and Initial Invoice 1-15
C * B% = Delta between 1st True Up and Initial Invoice 16-EOM

D * A% = Delta between 1st and 2ND True Ups times % Total of Initial Invoice 1-15
D * B% = Delta between 1st and 2ND True Ups times % Total of Initial Invoice 16-EOM

Interest calculations between the 1st and 2nd True-Up Invoices are based on the Net Amount of the Second True-Up invoice because that is the delta between the two invoices. Also, the interest period is the number of days between the Due Date of the 1st and 2nd True-Up Invoices.

For example, take the following Net Amounts:

A Init Invoice 1-15 = $60,000
B Init Invoice 16 – EOM = $40,000
C 1st True-Up Invoice = $10,000
D 2nd True-Up Invoice = $-6,000

If you plug in the numbers to the previous formulas you will get the following:

60000 / (60000+40000) = 60% = A%
40000 / (60000+40000) = 40% = B%

10000 * 60% = 6000 = Delta between 1st True Up and Init Invoice A
10000 * 40% = 4000 = Delta between 1st True Up and Init Invoice B

-6000 * 60% = -3600 = Delta between True Ups times % Total of Initial Invoice 1-15
-6000 * 40% = -2400 = Delta between True Ups times % Total of Initial Invoice 16-EOM

For 1st True-Up Invoices, interest charged or paid is calculated from it's due date back to the due date of each semi-monthly Initial Invoice.

For 2nd True-Up Invoices, interest charged or paid is calculated from it's due date back to the due date of each semi-monthly Initial Invoice.

Please note: when the Due Dates between the True-Up and Initial Invoices span Calendar Quarters then interest must be calculated between Invoice Due Dates, Beginning of Quarter Dates and End of Quarter Dates. This will allow for changes in FERC interest rates between quarters as well as calculation of compound interest.

Beginning of Quarter Dates are: January 1st, April 1st, July 1st, October 1st
End of Quarter Dates are: March 31st, June 30th, September 30th, December 31st

Interest rates will be calculated in accordance with FERC's regulations for the calculation of interest for refunds specified in 18 C.F.R. § 35.19a (a)(2)(iii). These rates can be obtained from FERC at http://www.ferc.gov/legal/acct-matts/interest-rates.asp. If the interest period spans multiple quarters the interest rate will be prorated for the period of days in each quarter.

Also, if the due dates span multiple quarters, under clause (iii)(A), the interest shall be compounded quarterly.

Table 1.6 provides an example of interest payments that are calculated when the interest period spans multiple quarters.

In this example the FERC rate is 5% for Due Dates between January 1st and March 31st and 6% for Due Dates between April 1st and June 30th. Calculations are rounded to the nearest penny.

A total of $100,000 was billed for the month of December ($60,000 from 1-15 and $40,000 from 16-31st)

However, the Net Amount of $10,000 for the 1st True-up Invoice indicates an **undercharged** amount; therefore, an interest **allocation** (cc7999) is calculated.

The 2nd True-Up Invoice of $-6,000 indicates an **overcharged** amount between the 2nd True-Up and 1st True-Up invoices; therefore, the Market Participant will receive an interest **distribution** (cc6999).

Table 1.6 – Compound Interest Payment Example

Trade dates	Initial Invoice # 1 Issued on Dec 24, 2009 Due Date = Jan 4, 2010	1st True-up Invoice (Dec 1 – Dec 31) Issued on February 26, 2010 Due Date = March 5, 2010 FERC Q1 Interest rate 5% Daily rate = .00013699	2nd True-up Invoice (Dec 1 – Dec 31) Issued on April 21, 2010 Due Date = April 28, 2010 FERC Q2 Interest rate 6% Daily rate = .00016438
Dec 1 – 15			
Dec 16 - 31	Initial Invoice # 2 Issued on Jan 12, 2010 Due Date = Jan 20, 2010		
SC# 1	Initial Invoice # 1 Net Amount = $60,000 No interest charged or paid. (60,000+40,000)/60,000 = 60% Initial Invoice # 2 Net Amount = $40,000 No interest charged or paid (60,000+40,000)/40,000 = 40%	Net Amount = $10,000 Delta from Initial Invoice # 1 = $10,000 * 60% = $6000 Interest for period Jan 4 – Mar 5 (61 days * 6000 * .00013699) = **$50.14** Delta from Initial Invoice # 2 = $10,000 * 40% = $4000 Interest for period Jan 20 – Mar 5 (45 days * 4000 * .00013699) = **$24.66** Total Interest = **$74.80** Because it is greater than zero then it is an interest allocation and is on charge code 7999.	Net Amount = $-6,000 Delta from 1ST True-Up * %Total of Initial Invoice #1 = -6000 * 60% = $-3600 Interest for period Jan 4 – Mar 31 (87 days * -3600 * .00013699) = **$-42.91** Delta from 1ST True-Up * %Total of Initial Invoice #2 = -6000 * 40% = $-2400 Interest for period Jan 20 – Mar 31 (71 days * -2400 * .00013699) = **$-23.34** Interest for period Apr 1 – Apr 28 (28 days * -6000 * .00016438) = **$-27.62** Compound Interest for period Apr 1 – Apr 28 (28 days * -66.25 * .00016438) = **$-.30** Total Interest = **$-94.17** Because it is less than zero then it is due to the Market Participant on charge code 6999.