Reporting Requirements for the Clean Peak Tracking System (CPTS)

DRAFT: Version 1.0, 10/02/2020

PURPOSE

This document establishments Clean Peak Tracking System (CPTS) reporting requirements.

I. USE OF CPTS API

Use of the CPTS API, or other process approved by the Program Administrator is required. See the *CPTS API Guide [to be developed]* for details on working with the API.

II. METER REQUIREMENTS

Interval energy values reported to the CPTS must originate from meters meeting the requirements contained in *Meter Requirements for the Clean Peak Tracking System (CPTS).*

III. INTERVAL PERIODS

The default Interval Period is 15-minutes. Other Interval Periods of 5-minutes, 30-minutes, or 60-minutes may be used after approval by the Program Administrator. Timestamps shall indicate the end of an interval period, e.g., the hours, minutes, seconds for the first interval of a new day will read "00:15:00". The interval precision must be +/- 1 minute.

IV. NET-ENERGY (KWH) AND DIRECTION

A. Over an Interval Period, the net of the Energy Outflow and Energy Inflow shall be reported (Net-Energy (kWh)).
   i. Net-Energy = Energy Outflow – Energy Inflow
B. Energy Direction
   i. Energy Outflows from a Resource to a load or the electrical grid and shall be designated as positive (+)
   ii. Energy Inflows from the electrical grid or another source of energy into a Resource shall be designated as negative (-)
   iii. For storage, positive (+) shall demonstrate a net discharge over the Interval Period, and negative (-) a net charge over the Interval Period.

V. DATA ELEMENTS AND FORMAT

Reports to the CPTS must contain the elements listed and be formatted as specified in Appendix A.

VI. REPORTING FREQUENCY, REPORTING PERIOD AND DEADLINE

A. Reports shall be submitted on a monthly basis. Weekly reporting is available if a shorter reporting period is required, and upon approval of the Program Administrator.

B. The Monthly Reporting Period shall start on the first hour of each month as defined by Eastern Time (ET). Monthly reports must be submitted by 11:59 PM on the 5th day of the month following the Reporting Period.

VII.   CPTS REPORT VALIDATION AND REPORTER COMMUNICATION

Appendix B details the validation checks that will be performed on reports by the CPTS. The Reporter will be notified of the success or failure of each report to pass validation tests via the CPTS API and email.

Appendix A: Reporting Elements and Format

1. System Data

Name	Purpose	Format	Default Value	Notes
System ID	Associates the reported values with the resource in the PTS.	*Int (25868)*	*No Default Value*	System ID is assigned at the time of registration.
Interval Period	Specifies the Interval Period of the values reported (minutes)	Int	15	Other values available if use approved by the CPS Administrator: 5, 30, 60.
Registry Reading	Net cumulative energy metered (kWh)	Float	*No Default Value*	Monthly Net Energy
Registry Date	Last Registry Reading Date for month	DateTime	UTC/ET	Monthly Registry Date

All DateTime Formats will be in UTC/ET Coordinated Universal Time (UTC) or Eastern Time, UTC with minus 4/5-hour offset

2019-11-08T18:11:48-5:00

2. Interval Readings

Name	Purpose	Format	Default Value	Notes
Timestamp	Marks the end of the interval period	DateTime	UTC/ET	
Net Energy	The Net Energy metered over the Interval Period (kWh)	Float	*No Default Value*	

All DateTime Formats will be in UTC/ET Coordinated Universal Time (UTC) or Eastern Time, UTC with minus 4/5-hour offset

2019-11-08T18:11:48-5:00

3. API Example

```json
{"fk_system":492,
    "Interval":15,
    "Frequency":"Monthly",
    "MonthlyNetEnergy": 158489,
    "MonthlyRegistryDate": "2020-06-30T01:13:47.21",
    "IntervalReadings":
    [
        {"NetEnergy":0.0,"Date":"2020-06-01T00:15:47.21-05:00"},
        {"NetEnergy":0.8,"Date":"2020-06-01T00:30:00-05:00"},
        {"NetEnergy":3.9,"Date":"2020-06-01T00:45:12.1-05:00"},
        {"NetEnergy":3.47,"Date":"2020-06-01T01:00:56-05:00"},
        {"NetEnergy":4.63,"Date":"2020-06-01T01:14:08-05:00"},
        {"NetEnergy":1.9,"Date":"2020-06-01T01:30:18.2-05:00"},
        {"NetEnergy":4.5,"Date":"2020-06-01T01:46:00-05:00"},
        {"NetEnergy":9.56,"Date":"2020-06-01T02:00:54-05:00"},
        {"NetEnergy":13.268,"Date":"2020-06-01T02:15:18-05:00"},
        {"NetEnergy":12.790,"Date":"2020-06-01T02:30:05-05:00"},
        {"NetEnergy":8.1,"Date":"2020-06-01T02:45-05:00"},
        {"NetEnergy":4.7,"Date":"2020-06-01T03:00:15-05:00"}
    ]
}
```

Appendix B: CPTS Data Validation and Report Confirmation Checks

Prior to submittal to the CPTS, reports shall pass the following validation tests.

Reporting Deadline Check

1. Report submitted prior to the reporting deadline – 5 days after last day of month.

PTS ID Check

2. PTS ID will be checked against CPS API Key and Organization ID which is captured from the System Reporter for that system.

Interval Data Checks

3. Interval record complete (i.e. are the number of intervals reported equal to the number expected for the month?) *Records = days-in-month * 24 hours per day /[interval (min) / 60 min/hr]*

4. No empty values in any interval

5. First interval record begins at the start of the calendar month

6. Last interval ends the calendar month

7. No duplicate timestamps

8. Interval timestamp format matches that indicated in the report metadata

9. Net-energy interval is reported in the correct format

Registry

10. The registry value is reported in the correct format, unless it has been granted an exception by Program Administrator.

Max Value Checks

11. No reported interval values exceed the maximum possible value. *Max possible POSITIVE value (kWh) = max capacity * [60 / interval(min)]*

Sum Check

1. The sum of net-energy intervals matches the difference in the current Registry Reading and the previous month's Registry Reading to within +/- 2%, unless it has been granted an exception by Program Administrator.