



Connecting your interval data, Part 1



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Agenda



1. Interval data fundamentals
2. Setting up meters & channels
3. Bringing data into EnergyCAP
4. Importing & validating data
5. Live demo
6. Advanced scenarios

Pop quiz!



1. What is interval data and why does it matter?

Pop quiz!



1. What is interval data and why does it matter?
2. How are you utilizing interval data today?

Interval data fundamentals

Why interval data, not just bills

Utility bills

- Monthly totals, one number per period
- Built for cost reporting and budgeting
- Tell you what you spent
- Arrive after the month is over

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Interval data

- Time-based detail, 15-minute or hourly
- Built for operational analysis and demand management
- Tells you when and how energy was used
- Near real-time monitoring and analysis

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Example use cases

- Load profiles: see the daily usage shape
- Peak demand: find the spikes that drive charges
- Operations: catch equipment running off-schedule
- Waste: overnight and weekend usage
- Chargebacks: extend interval data

Part 2 at 11am

Readings: source → computed → summarized

Every imported reading moves through three stages

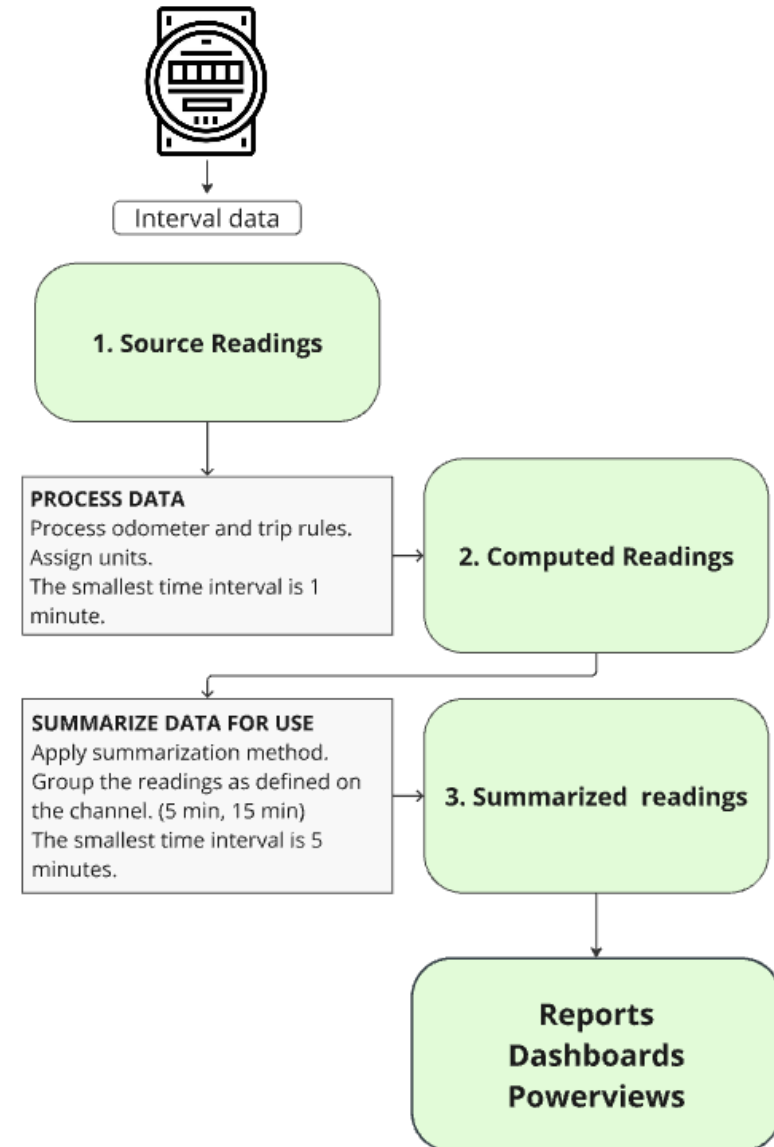
- **Source:** exactly as received, unprocessed by EnergyCAP
- **Computed:** channel rules and units applied, smallest interval one minute
- **Summarized:** the channel's summarization method applied per interval, smallest interval five minutes

Source and computed readings are not snapped to the clock; summarized readings are

- A 15-minute channel lands readings at 8:15, 8:30, 8:45

Summarized readings feed reports, PowerViews, Trend Insights, and dashboard widgets

- Calculated channels also build on summarized readings



Setting up meters and channels

Meters and channels

Meters

- The physical or virtual point of measurement
- One meter can carry multiple channels
- Meters can have either bills, interval data or *both*

Channels

A single stream of readings on a meter

Common fields

- Type*
- Interval*
- Summarization method
- Primary value or demand
- Trip or Odometer
- Min and max readings

**A meter can have only one channel with the same type + interval combination*

New Channel

Cancel

Save

Meter

⚡ Discovery Drive - ELE01

Meter import ID

Not configured

Reading type ?

* Choose

Interval ?

5-minute

Name ?

*

Summarization method ?

Sum

Channel import ID ?

☐

Is Primary Value ?

Description

☐

Channel is calculated ?

Trip

Odometer

Multiplier

Offset

Units

Reading ×

1

+

0

=

* Choose

☐

Final value is always positive ?

Minimum computed reading ?

Maximum computed reading ?

[Learn more about channels](#)

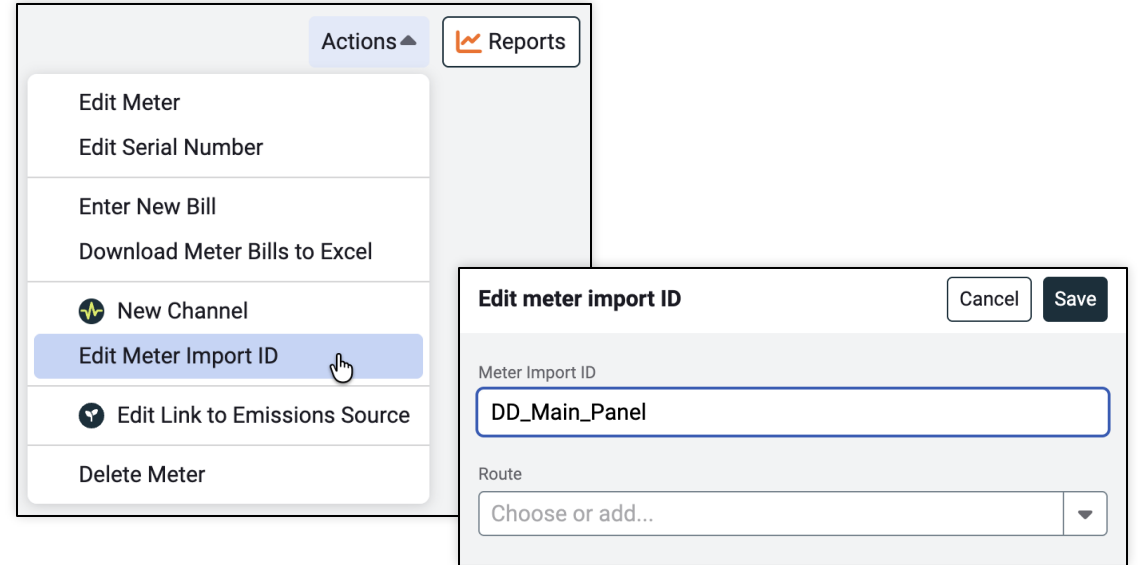
Meter and channel import IDs

Channels must exist on meters before interval readings can be imported on the meter

Use Meter or Channel Import IDs to map your readings to the correct meter and channel in EnergyCAP

Meter Import ID: set on the meter, shared by all of its channels

- Import matches on meter ID + interval + data type (use, demand, etc.)



The screenshot displays the 'Actions' menu in the EnergyCAP interface. The 'Edit Meter Import ID' option is highlighted. A modal dialog titled 'Edit meter import ID' is open, showing a text input field for the 'Meter Import ID' containing 'DD_Main_Panel' and a dropdown menu for the 'Route' with the text 'Choose or add...'. The dialog includes 'Cancel' and 'Save' buttons.

Meter and channel import IDs

Channels must exist on meters before interval readings can be imported on the meter

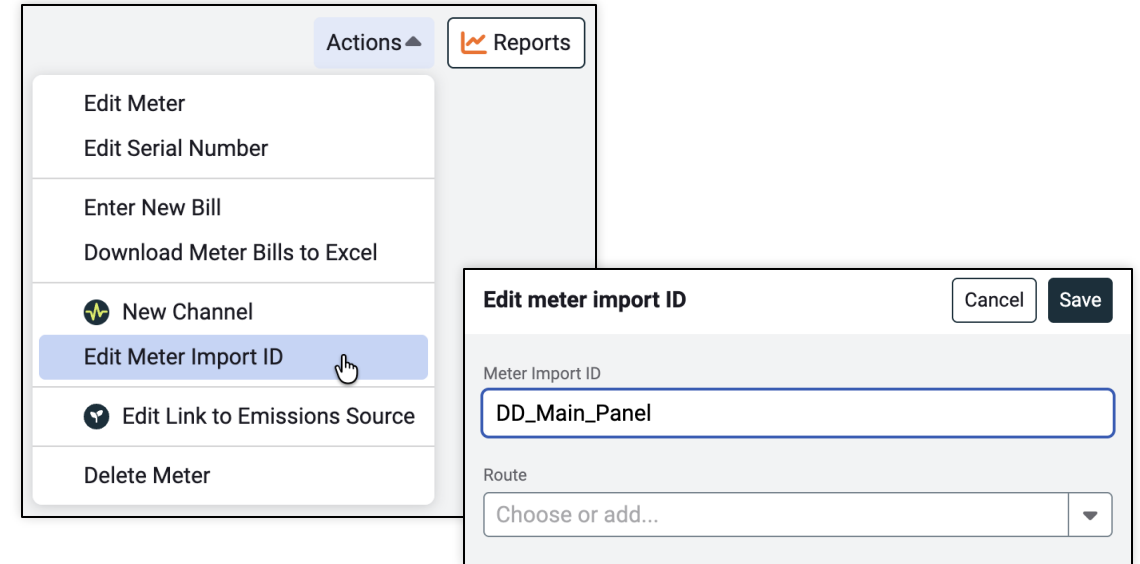
Use Meter or Channel Import IDs to map your readings to the correct meter and channel in EnergyCAP

Meter Import ID: set on the meter, shared by all of its channels

- Import matches on meter ID + interval + data type (use, demand, etc.)

Channel Import ID: set on the channel, unique in the database

- Matches each row directly, no extra detail needed



Actions

- Edit Meter
- Edit Serial Number
- Enter New Bill
- Download Meter Bills to Excel
- New Channel
- Edit Meter Import ID**
- Edit Link to Emissions Source
- Delete Meter

Reports

Edit meter import ID

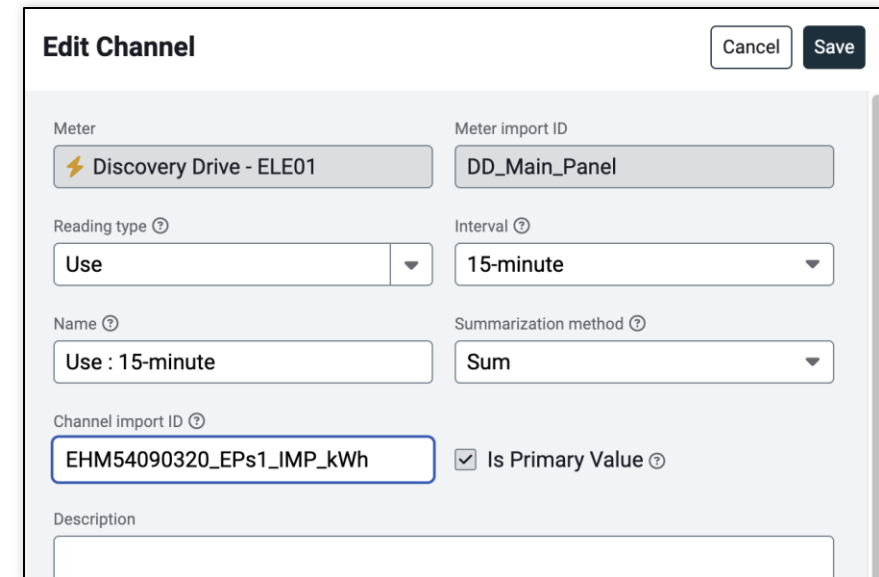
Cancel Save

Meter Import ID

DD_Main_Panel

Route

Choose or add...



Edit Channel

Cancel Save

Meter

Discovery Drive - ELE01

Meter import ID

DD_Main_Panel

Reading type

Use

Interval

15-minute

Name

Use : 15-minute

Summarization method

Sum

Channel import ID

EHM54090320_EPS1_IMP_kWh

☒ Is Primary Value

Description

Bringing data into EnergyCAP

Three ways to get data in

1. File imports

- Manual delimited file (CSV) upload
- Good for one-off or small-scale loads
- Best for a quick start, a small site, or a one-time backfill
- Use an import profile or setup spreadsheet template

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2. File Exchange Automation

- Send files to SFTP or attached to email
- Reformatters available to handle incompatible files
- Imports up to 3x per day
- Best for daily or weekly analysis

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3. Connectors

- Direct integrations with API enabled platforms and devices that communicate over the internet.
 - Individual meters (eGauge, AccuRev, Episensor, Solar PV platforms)
 - Gateways (connecting BACnet and Modbus connected systems to EnergyCAP)
- Best for real-time alerting and analysis

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**Automated by
EnergyCAP**

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Reading Import Profiles

Reusable mapping for recurring, automated imports

- Map your source files to standard fields
- Reuse for subsequent imports
- File needs a row with each and import ID, a timestamp, and a reading value
- Extra columns are ignored unless you map them
- Know whether your file uses a meter or channel import ID

Reading Import Profiles

File-level Settings

- **Timezone:** Specific timezone or meter's timezone
- **Delimiter:** comma, semi-colon, tab, space, other
- **Timestamp format:** one column or two
 - Pick a format or enter custom

Column Mappings

- Meter or Channel **Import ID** (enter ID to pin profile to specific meter/channel)
- **Date and Time**
- **Note**
- **Estimated**
- **Interval:** same for all readings, or select column
- **Reading types** (Use, Demand, etc.)

Edit Import Profile
Cancel
Save

Name
Meter Based Profile

Import file time zone ⓘ
Skip rows ⓘ

Use meter's time zone

1

Delimiter ⓘ
Decimal separator ⓘ

Comma

Period

Timestamp format
Date and time ⓘ

One column
Two columns

yyyy-MM-dd HH:mm:ss

Description

Reading information
Import file columns

Meter Import ID
C
Enter Import ID ⓘ

Date and Time
E

Reading Note ⓘ
Search

Estimated Flag ⓘ
H
E

Interval ⓘ
Same for all readin
5-minute

Interval data type ⓘ
Import file columns

Use
F

Demand
G

+ Add Another Row

Importing and validating data

Importing readings with a profile

Run the import

- Import Readings, select Use a Profile
- Choose a file, or a zip of files that share one profile (CSV and Excel can be mixed, 500 MB limit)
- Select the desired profile or create a profile on the fly

View results

- Reading Imports lists every file with its result
- Each row links to the imported file, the readings, and the error file
- Notification for imports with errors will be sent to system message topic

Handle errors

- Download original file with error messages
- An import cannot be reversed, so correct it forward
- Re-import with the same timestamps to overwrite the bad readings

Reading Imports

Imported

Imported by

Import method

Status

MM/DD/YYYY

MM/DD/YYYY

Search by user

Select

All Statuses

Imported	Imported By	Imported File	Successful	Errors	Status
08/24/2026 9:45 pm	Dave Mosemann	EHM54090321_20260825014543.csv	6 readings	60 errors	Complete with Errors
08/24/2026 9:45 pm	Dave Mosemann	EHM54090320_20260825014531.csv	12 readings	54 errors	Complete with Errors
08/24/2026 9:30 pm	Dave Mosemann	EHM54090321_20260825013033.csv	6 readings	60 errors	Complete with Errors
08/24/2026 9:30 pm	Dave Mosemann	EHM54090320_20260825013031.csv	12 readings	54 errors	Complete with Errors
08/24/2026 9:15 pm	Dave Mosemann	EHM54090321_20260825011531.csv	6 readings	60 errors	Complete with Errors
08/24/2026 9:15 pm					Complete with Errors
08/24/2026 9:00 pm					Complete with Errors
08/24/2026 9:00 pm					Complete with Errors
08/24/2026 8:45 pm					Complete with Errors
08/24/2026 8:45 pm					Complete with Errors

A readings import completed with errors.

1. Import file:

2. Imported on:

3. Imported by:

4. Readings created:

5. Errors:

EHM54090320_20250925000033.csv

09/24/2025 at 08:00 pm

Alberto Guerrero

12

54

View Readings

View Errors

You received this message because you are [subscribed](#) to the **System Message** notification.

	A	B	C	D
1	EHM54090321_P001_kW	8/24/26 21:30	0.216	Error: Channel not found;
2	EHM54090321_P002_kW	8/24/26 21:30	0.046	Error: Channel not found;
3	EHM54090321_P003_kW	8/24/26 21:30	1.036	Error: Channel not found;
4	EHM54090321_P004_kW	8/24/26 21:30	0.044	Error: Channel not found;
5	EHM54090321_P005_kW	8/24/26 21:30	0.1	Error: Channel not found;
6	EHM54090321_P006_kW	8/24/26 21:30	0.192	Error: Channel not found;
7	EHM54090321_P007_kW	8/24/26 21:30	0.259	Error: Channel not found;
8	EHM54090321_P008_kW	8/24/26 21:30	0.185	Error: Channel not found;
9	EHM54090321_P009_kW	8/24/26 21:30	0.148	Error: Channel not found;

Readings lists

Source readings

- From imports log or individual meter
- See source value and computed result
- Select multiple to delete
- Download update spreadsheet to update or delete in bulk

Summarized readings

- Values after summarization
- Filter by channel, type, interval
- Estimated readings tagged with **E**
- Edit or enter individual summarized readings

Channel

Search

▼

Channel type

Search

▼

Interval

All intervals

▼

Timestamp

▼

Filters

0

Reset

Source Readings (Count: 65062)

Sort Actions▼

☐ Channel ↑	Channel Type	Interval	Timestamp ↓	Source Reading ?	Computed Reading	
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 10:15:00 pm	9.539	9.539	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 10:00:00 pm	9.235	9.235	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 9:45:00 pm	9.51	9.51	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 9:30:00 pm	10.453	10.453	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 9:15:00 pm	10.629	10.629	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 9:00:00 pm	10.5	10.5	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 8:45:00 pm	8.931	8.931	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 8:30:00 pm	8.983	8.983	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 8:00:00 pm	9.283	9.283	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 7:45:00 pm	9.308	9.308	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 7:30:00 pm	9.082	9.082	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 7:15:00 pm	9.155	9.155	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 7:00:00 pm	9.056	9.056	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 6:45:00 pm	8.3	8.3	kW
☐ Demand : 15-minute	Demand	15-minute	08/24/2026 6:30:00 pm	9.966	9.966	kW

1 2 3 4 5 6 7 8 9 10 ...

1-50 of 65062 records

Reading: E Estimated

Manually enter and edit readings

- Manually enter a summarized reading to fill gaps or estimate missing readings
- Select channel
- Set date and time
- Summarized value is the value after multipliers and summarization calculations have been applied
- Estimated readings and notes show on charts

New Summarized Reading

Cancel
Save

Meter

Discovery Drive - ELE01

Channel

* Choose

Date

MM/DD/YYYY

Time (HH:mm - 24 hour) ?

Choose

:

Choose

Meter time zone: (UTC-05:00) Eastern Time (US & Canada)

Summarized Reading value ?

*

☐ Estimated

Note

Interval data status

Data status

- Spot meters that have stopped reporting at a glance
- Online:** readings in past 24 hours.
- Delayed:** readings between 24 hours and 7 days ago.
- Offline:** last reading more than 7 days ago.
- No Data:** the meter has not reported any data since it was configured as an interval data meter.

Data completeness

- Compares the last 30 complete days of summarized readings against expected
- Good:** above 95%
- Fair:** 85%–95%
- Poor:** below 85%
- Insufficient Data:** no or not enough data

Interval Data Meters Status

Meter

Topmost place

Meter group

Data status

Data completeness

Reset Filters

Search by name

Search by parent

Search meter grc

All Statuses

All Levels

207 Meters

☐ Meter	Parent	Timestamp	Data status	Data completeness	Trend Insights
☐ ⚡ DD - Unmetered ⓘ	Discovery Drive - Other	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	95.7% Good	On
☐ ⚡ Discovery Drive - ELE01	Discovery Drive	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ DD - 1st Floor	Discovery Drive - 1st Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	96.9% Good	On
☐ ⚡ DD - 2nd Floor	Discovery Drive - 2nd Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	96.9% Good	On
☐ ⚡ DD - 3rd Floor	Discovery Drive - 3rd Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	96.9% Good	On
☐ ⚡ DD - Elevator	Discovery Drive - Other	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ DD - 1st Floor - Mecha...	Discovery Drive - 1st Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ DD - 2nd Floor - Mech...	Discovery Drive - 2nd Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ DD - 3rd Floor - Mecha...	Discovery Drive - 3rd Floor	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ DD - Air Handler	Discovery Drive - Other	08/24/2026 10:45 PM (UTC-04:00)	✓ 26 Minutes Ago	98.7% Good	On
☐ ⚡ 98 Pollock - S03	98 Pollock	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.4% Poor	On
☐ ⚡ 656 Golf Course - S02	656 Golf Course	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.4% Poor	On
☐ ⚡ 288 Burrowes - S02	288 Burrowes	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.4% Poor	On
☐ ⚡ 157 Burrowes - S01	157 Burrowes	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.4% Poor	On
☐ ⚡ 112 Foundry Park - S02	112 Foundry Park	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.2% Poor	On
☐ ⚡ 212 Barnard - S01	212 Barnard	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.4% Poor	On
☐ ⚡ 223 Burrowes - S01	223 Burrowes	07/29/2026 11:45 PM (UTC-04:00)	⚠ A Month Ago	16.1% Poor	On

1 2 3 4 5

1-50 of 207 meters

ⓘ Calculated

Live demo

Advanced scenarios

Calculated channels

Virtual reading based on formula including other channels on the same meter, or fixed constants

Use cases

- Calculating kWh from kW — estimate 15-minute use from average demand readings

✓ Demand : 15-minute / 4

- Summing individual phase demands into a total kW demand channel

✓ (Demand A + Demand B + Demand C)

- Cleaning data — turn small negative readings into zeros

✓ IF(Reading : Hourly < 0, 0, Reading : Hourly)

- Unit or scale conversion using a fixed constant or multiplier

- Filling gaps — use != null to return a fallback value when no reading exists

✓ IF(A != null, A, B)

Good to know

- A meter needs at least one non-calculated channel first
- A channel that already has readings can't be switched to calculated
- Calculated channels are not versioned and have no source readings
- Built on the summarized readings of the channels they reference

Versioning channels

When swapping out meters causing channel settings to change (multiplier, unit, etc.)

1. Create a new version
2. Set effective date
3. Optional
4. Enter final reading (non-computed)
5. For odometer channels, also enter first reading (non-computed)

Add Reading

CancelSave

It's recommended to enter your final reading when creating a new channel version. If you decide to enter your reading at a later time please review the help center. [Learn more about channels](#)

Last reading timestamp is 9.639 kW at .

FINAL READING (OLD VERSION)

Timestamp

Non-computed (source) value

*

Estimated

Note

Add Reading

CancelSave

It's recommended to enter your final reading when creating a new channel version. If you decide to enter your reading at a later time please review the help center. [Learn more about channels](#)

Last reading timestamp is 2.7 kWh at .

FINAL READING (OLD VERSION)

Timestamp

Non-computed (source) value

*

Estimated

Note

INITIAL READING (NEW VERSION)

Timestamp

Non-computed (source) value

*

Estimated

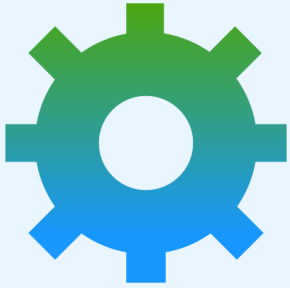
Note

Pop quiz!



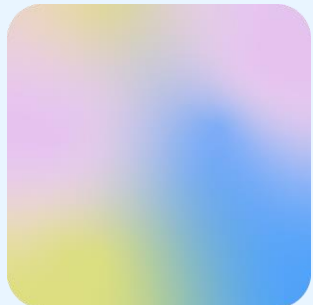
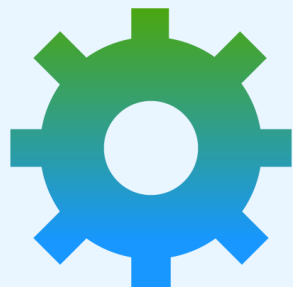
1. What are the 3 types of readings?

Pop quiz!



1. What are the 3 types of readings?
2. What is important about an import ID?

Pop quiz!



1. What are the 3 types of readings?
2. What is important about an import ID?
3. What are the 3 main ways to get interval data into EnergyCAP?

Questions?