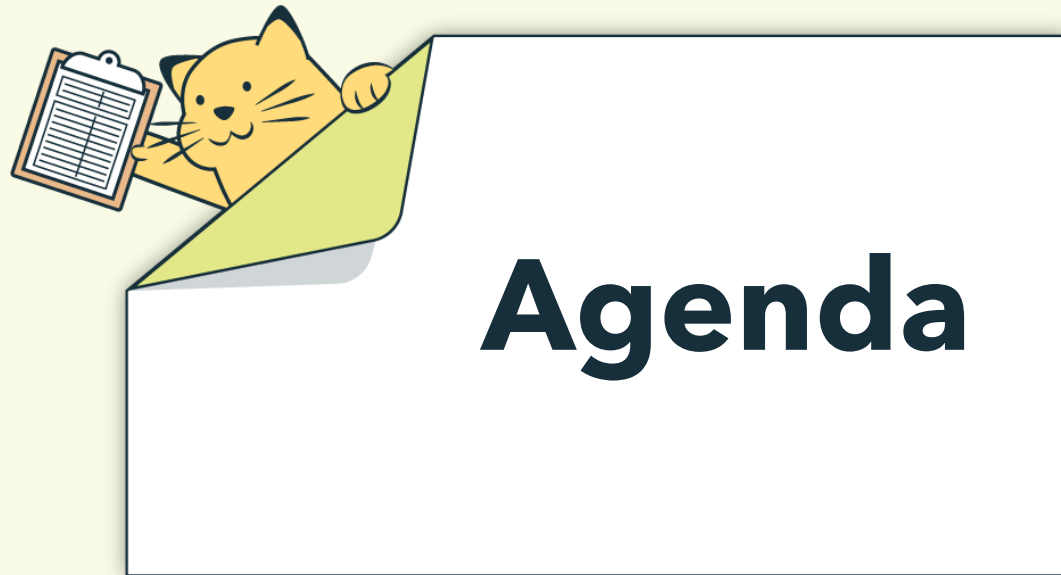


# Beyond Utility Bills - Track anything with Custom Commodities and Units



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- ✓ Why track something in the EnergyCAP Platform?
- ✓ Tracking data in UtilityManagement
- ✓ Case Study: University Dairy Farm
- ✓ Tracking data in CarbonHub
- ✓ Case Study: Emissions from cattle



CATALYST '24

**Why track something in the  
EnergyCAP Platform?**

## Why track something in the EnergyCAP Platform?

- ✓ How much am I spending on and using of a certain resource?
- ✓ Where am I spending and using the most?
- ✓ When am I spending/using more than I normally do?
- ✓ How much emissions do my business activities produce?
- ✓ How much should I plan to use and spend next year?
- ✓ If I made this change, would I use and spend less?



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**What do you need to track  
data in UtilityManagement?**

# What do you need to track data in UtilityManagement?

## Account

- Vendor
  - Rate



## Meter

- Commodity
  - Unit of Measure

## Example: University Dairy Farm

- Feed (3 new commodities/meters)
  - Grain (ton - weight)
  - Hay (bale - count)
    - Custom unit
  - Corn Silage (bushel - volume)
    - Custom unit with conversion (9.3 gallons)

# Demo



# Commodity Categories

- Category: Feed (ton - weight)
  - **All commodities within a category must have same roll-up (reporting) unit**
- ✓ Grain (ton - weight)
- Hay (bale - count)
  - New advanced conversion: **Bale of Hay to Tons of Hay**
- Corn (bushel - volume)
  - Advanced conversion: **Bushel of Corn to Tons of Corn**

# Two kinds of conversions

## 1. Unit conversion

1. Scientific (ton  $\rightarrow$  kg, ft<sup>2</sup>  $\rightarrow$  m<sup>2</sup>, etc.)
2. Within same unit category (weight, area, etc.)
3. Don't need to know what is being converted

# Two kinds of conversions

## 1. Unit conversion

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## 2. Advanced conversion (equivalence)

1. "A" tons of "B" is equivalent to "C" cubic meters of "D"
2. Across unit categories or same category, different commodity, or both.
3. Need to know what is being converted

# Advanced Conversion: Hay

## How Much Does a Round Bale of Hay Weigh?

A 4'x4' round bale of legumes like alfalfa weighs about 600 lbs (272 kg). A 4'x5' bale weighs 950 lbs (430 kg). A 5'x5' bale weighs 1,200 lbs (540 kg) and a 5'x6' bale weighs 1,500 lbs (680 kg). Grass bales, like timothy, weigh 20% less than alfalfa bales. Moisture content can affect bale weight by as much as 25 percent.

Round Bale Weight Chart – Pounds and Kilograms			
Length Width	Height Diameter	Weight lbs.	Weight kg
4'	4'	600	270
4'	5'	950	430
5'	5'	1200	540
5'	6'	1500	680

1 bale of hay =  
1,200 lbs of hay

## Advanced Conversion: Corn

The exact weight of a bushel of corn can vary depending on the type of corn and other factors, but traditionally, a bushel of corn is equivalent to 56 pounds or 25.4 kilograms. This is the standard bushel used in the United States. Aug 26, 2015



Quora

<https://www.quora.com/How-many-ears-of-corn-are-i...>

How many ears of corn are in a bushel? - Quora

**1 bushel of corn =  
56 lbs of corn**

# Demo



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**What do you need to track  
data in CarbonHub?**

# What do you need to track data in CarbonHub?

## Emissions Source

- GHG Factor



## Example: University Dairy Farm

- Emissions from cattle
  - 500 cattle
    - New type (commodity)

Cattle are the No. 1 agricultural source of greenhouse gases worldwide. Each year, a single cow will belch about 220 pounds of methane. Jun 27, 2019



UC Davis

<https://www.ucdavis.edu> › food › news › making-cattle...

Cows and Climate Change | UC Davis

- 220 lbs of CH<sub>4</sub> per cow per year → 0.27 kg of CH<sub>4</sub> per cow per day
  - Custom factor

# Demo

# Questions?



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**Session survey**