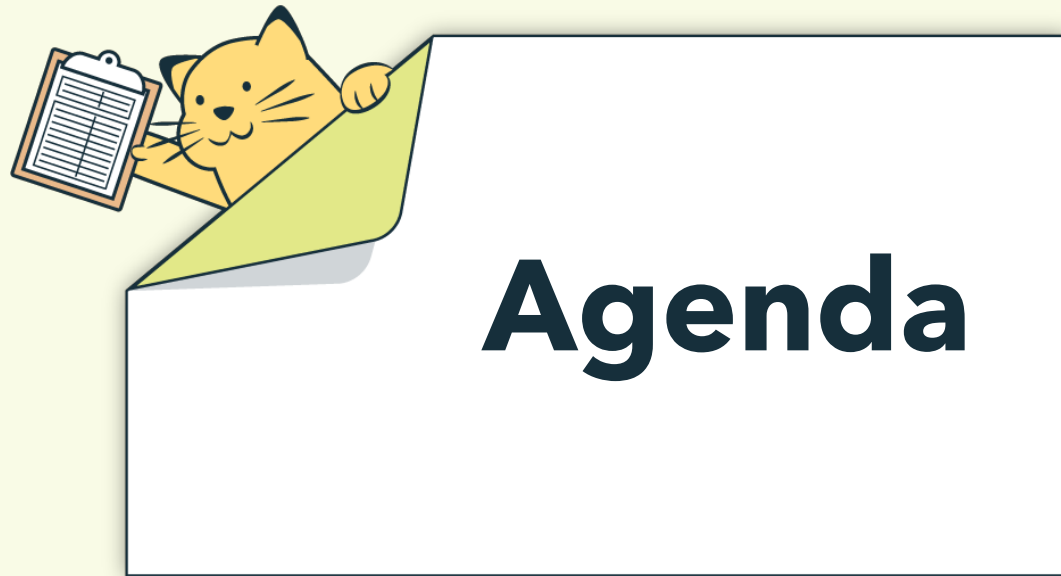# What's New with CarbonHub?

Dave Mosemann

Product Manager

EnergyCAP

Agenda

- ✓ CarbonHub: A Year in Review
- ✓ New hierarchy
- ✓ New ways to enter emissions data
- ✓ New ways to organize and categorize emissions data
- ✓ New ways to view and analyze emissions data

CarbonHub Milestones

Launch: Feb 2023

- Embedded in UtilityManagement (EnergyCAP) Buildings and Meters module

- Meter GHG settings

- Emissions calculated from bills

- Custom GHG factors

- New powerviews, dashboard widgets and reports for GHG

Standalone: Sep 2023

- Separate hierarchy (Collections and Emissions Sources)

- More flexible GHG settings— factors can change over time

- Improved scope 3 entry

- Manage and organize emissions data with records lists

- Improvements to System and Custom GHG factors

- Create custom types

- Bulk data entry with setup spreadsheets

- Notes and attachments

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- Notes and attachments

Since Sep 2023

- Share record lists

- New GHG Factors
  - 2023 eGrid
  - Canada Electric
  - 2023 EPA Emissions Hub
  - USEEIO
  - DEFRA
  - Refrigerants

- Support emissions record entered in currency different than factor

- **BRAND NEW:** Record import formats

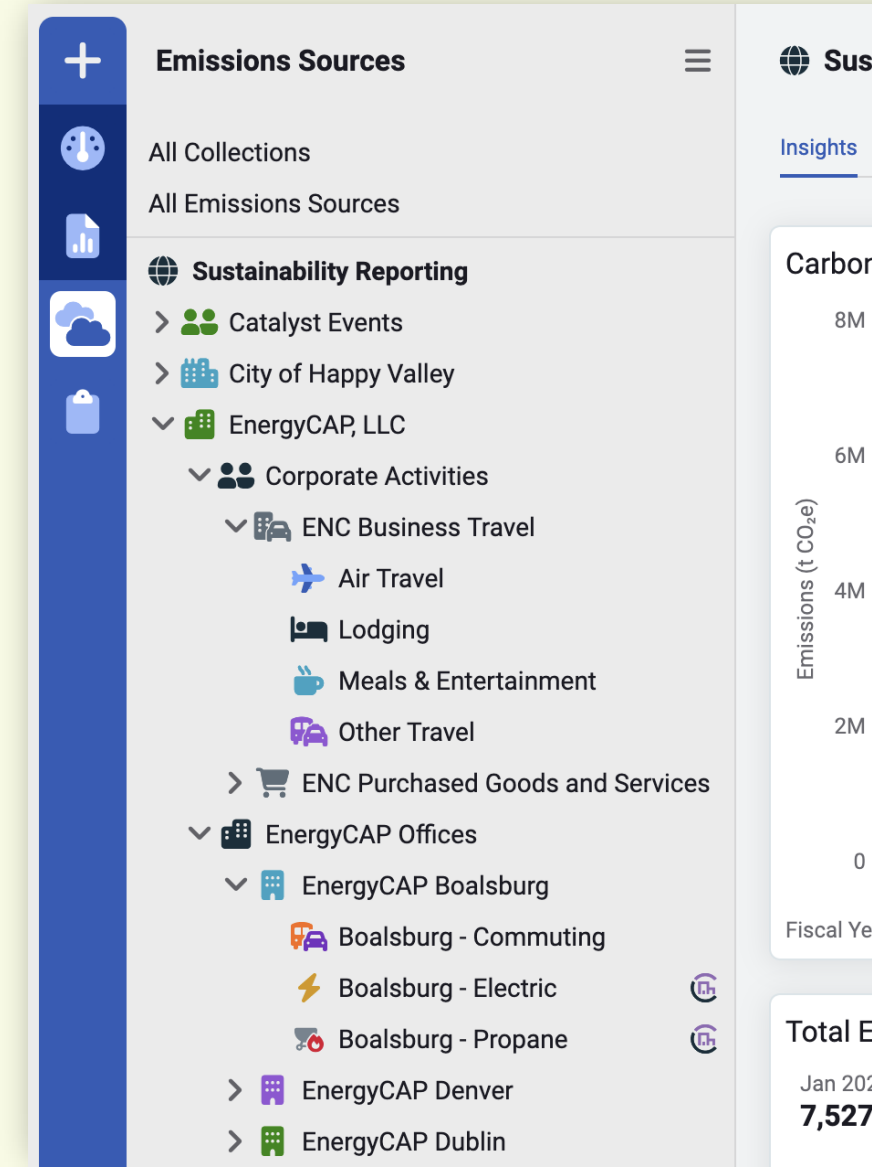- **BRAND NEW:** CarbonHub in Report Designer BI

New, Separate Hierarchy

Collections

- Provide a hierarchy for organizing emissions data independent of facilities or accounting hierarchy in UtilityManagement.

Emissions Sources

- Contains emission data for a specific resource or activity (electric usage, flights).

- Defines the default scope category and GHG factor for new records.

- Can be linked to UtilityManagement meters to calculate emissions data from bills.

ENERGYCAP. · ©EnergyCAP, LLC

Demo

New ways to enter emissions data

Emissions Records

- Manually enter emissions data by use, cost or direct, choose a GHG factors and assign a category.

New Record | Cancel | Save |

77574 | Edit | Close |
Record ID

Emissions source   Supplier ⓘ
✈ Air Travel ▾   Search or add ▾

Create an emission source

Start date   End date ⓘ
✱ MM/DD/YYYY 📅   ✱ MM/DD/YYYY 📅

EMISSIONS DETAILS AND CALCULATIONS

| Use | Cost | Direct/Offset |

Scope category ⓘ
Scope 3 - 06. Business Travel ▾

Learn more about scope categories

Factor ⓘ
Air transport (per USD | USEEIO Commodity Code: 481(▾

Factor details

Cost ⓘ   Currency
✱   0.00   USD ($) ▾

NOTES

Add notes here...

Select file   Browse

Emissions source
✈ Air Travel

Supplier (vendor)
Not Configured

Start date   End date
01/01/2024   04/01/2024

Scope category
06. Business Travel

Factor ⓘ
Air Travel - Medium Haul (>= 300 miles, < 2300 miles)

Quantity
100,000 mi

Cost
$12,000.00

Total emissions   **13.01 t CO₂e**

CO₂ (Carbon dioxide)   12.90 t CO₂e

CH₄ (Methane)   0.00 t CO₂e

N₂O (Nitrous oxide)   0.11 t CO₂e

Entered by: Dave Mosemann
Entered date: 05/13/2024

Modified by: Dave Mosemann
Modified date: 05/13/2024

ENERGYCAP. · ©EnergyCAP,

New ways to enter emissions data

Emissions Records

- Manually enter emissions data by use, cost or direct, choose a GHG factors and assign a category.

Calculated from UtilityManagement bill

- Bills on meters linked to an emissions source automatically create an emissions record.

ENERGYCAP. · ©EnergyCAP,

New ways to enter emissions data, continued

Import emissions records in bulk

- Use setup spreadsheet templates to create/update many emissions records at onced

- Optionally create emission sources on the fly

Record Imports

Manage Import Formats ✦ Import

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
05/14/2024 11:11 am	Dave Mosemann	T setupsheet.xlsx 📥	4 records	0 errors	Successful
05/14/2024 11:04 am	Dave Mosemann	F Flights.xlsx 📥	49 records	0 errors	Successful
05/14/2024 11:02 am	Dave Mosemann	F Flights.xlsx 📥	0 records	49 errors	Complete with Err
05/13/2024 11:54 pm	Dave Mosemann	T setupsheet.xlsx 📥	4 records	0 errors	Successful
05/13/2024 11:38 pm	Dave Mosemann	T setupsheet.xlsx 📥	4 records	0 errors	Successful
04/30/2024 6:23 am	Lalit Agarwal	T setupsheet.xlsx	226 records	0 errors	Successful
04/30/2024 6:21 am	Lalit Agarwal	T setupsheet.xlsx	0 records	226 errors	Complete with Err
04/19/2024 4:09 pm	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
04/19/2024 12:16 pm	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
04/19/2024 12:07 pm	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
04/19/2024 11:29 am	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
04/19/2024 11:26 am	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
03/24/2024 3:22 pm	Lalit Agarwal	T setupsheet.xlsx	42 records	0 errors	Successful
09/11/2023 12:12 pm	Dave Mosemann	T setupsheet.xlsx 📥	1 records	0 errors	Successful
09/11/2023 10:21 am	Dave Mosemann	T setupsheet.xlsx 📥	1 records	0 errors	Successful

1-16 of 16 recor

Imported method: T Template F Format

ENERGYCA

New ways to enter emissions data, continued

Import emissions records in bulk

- Use setup spreadsheet templates to create/update many emissions records at onced

- Optionally create emission sources on the fly

Import emissions data from another system

- Use an import formats to import data exported from another system as emissions records

    - Historical records

    - Accounting systems

    - Facility management systems

- Optionally create emission sources on the fly

Record Imports						Manage Import Formats	✦ Import

Imported		Imported by	Import method ⓘ	Status ⓘ
MM/DD/YYYY 📅 — MM/DD/YYYY 📅		Search by user	Select ▼	All Statuses ▼

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05/13/2024 11:54 pm	Dave Mosemann	T setupsheet.xlsx 📥	4 records	0 errors	Successful
05/13/2024 11:38 pm	Dave Mosemann	T setupsheet.xlsx 📥	4 records	0 errors	Successful
04/30/2024 6:23 am	Lalit Agarwal	T setupsheet.xlsx	226 records	0 errors	Successful
04/30/2024 6:21 am	Lalit Agarwal	T setupsheet.xlsx	0 records	226 errors	Complete with Err
04/19/2024 4:09 pm	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
04/19/2024 12:16 pm	Lalit Agarwal	T setupsheet.xlsx	8593 records	21 errors	Complete with Err
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1-16 of 16 recor

Imported method: T Template F Format

ENERGYCA

Demo

New ways to organize and categorize emissions data

Record lists

- Filter emissions data

  - Date range

  - Collection and emissions source

  - Scope category and GHG factor

  - Type (commodity)

  - Supplier

  - Notes contains

  - Entered by and date

  - and more…

- Save filtered lists to reference later

- Share saved lists

All Records

Download 33,094 records   Import

Record ID	Scope category	GHG factor	Type (commodity)		
Search by ID	Search by catego ▾	Search ▾	All types ▾	Filters ⁰	Save as New

Records (Count: **33,094**, Emissions: **31,876,321.42** t CO₂e)   Export   Co

☐ Record ID		Start Date	End Date ↓	Emissions Source Name	Quantity	Quantity Unit	Emissions (t CO	Scope Ca
☐ 73227		05/01/2024	06/01/2024	Shuttle Miles	76.6	mi	0.00	Scope 3: 0
☐ 73228	📄	05/01/2024	06/01/2024	Event Site	97,732	$	15.54	Scope 3: 0
☐ 73229	📄	05/01/2024	06/01/2024	Hotel Nights	81,375	$	16.28	Scope 3: 0
☐ 73226	📄	05/01/2024	06/01/2024	Registrant Miles Flown	167,423	mi	21.78	Scope 3: 0
☐ 73225	📄	05/01/2024	06/01/2024	Registrant Miles Driven	465	mi	0.15	Scope 3: 0
☐ 73224	📄	05/01/2024	06/01/2024	Employee Miles Flown	34,892	mi	4.54	Scope 3: 0
☐ 73223	📄	05/01/2024	06/01/2024	Employee Miles Driven	825	mi	0.26	Scope 3: 0
☐ 74864		04/01/2024	05/01/2024	Alpha Hotel-ELE	9,161.286071	kWh	2.81	Scope 2: F
☐ 77495		03/08/2024	04/07/2024	London Headquarters-NG0	6,943.89	kWh	1.26	Scope 1: S
☐ 77491		01/06/2024	04/05/2024	East London Plant-SWR03	39.9	m³		Scope 3: F
☐ 77489		01/05/2024	04/05/2024	East London Plant-SWR02	29.45	m³		Scope 2: F
☐ 77487		01/05/2024	04/05/2024	East London Plant-SWR01	4.75	m³		Scope 2: F
☐ 77398		03/01/2024	04/01/2024	SUB-Veterinary Sciences A	2,553.17	ton-hr	0.43	Scope 2: F

Demo

More flexibility in tracking emissions over time

Cost-based to Use-based

Business Travel
- Prior to 2024: emission by $ spent on airfare
- 2024 and beyond: emissions by recorded mileage

Location-based to Market-based

Electricity
- Prior to 2024: RFC east
- 2024 and beyond: PPA (50% wind)

Categories	Year 1	Year 2	Year 3	Year 4	Year 5

Legend:
- Specific method (e.g. supplier-specific method, fuel-based method)
- Average method (e.g. average-data method, spend-based method)
- Lack of data, cannot report
- Not Relevant

Demo

New ways to view and analyze emissions data

Insights

- Understand your emissions data at a glance
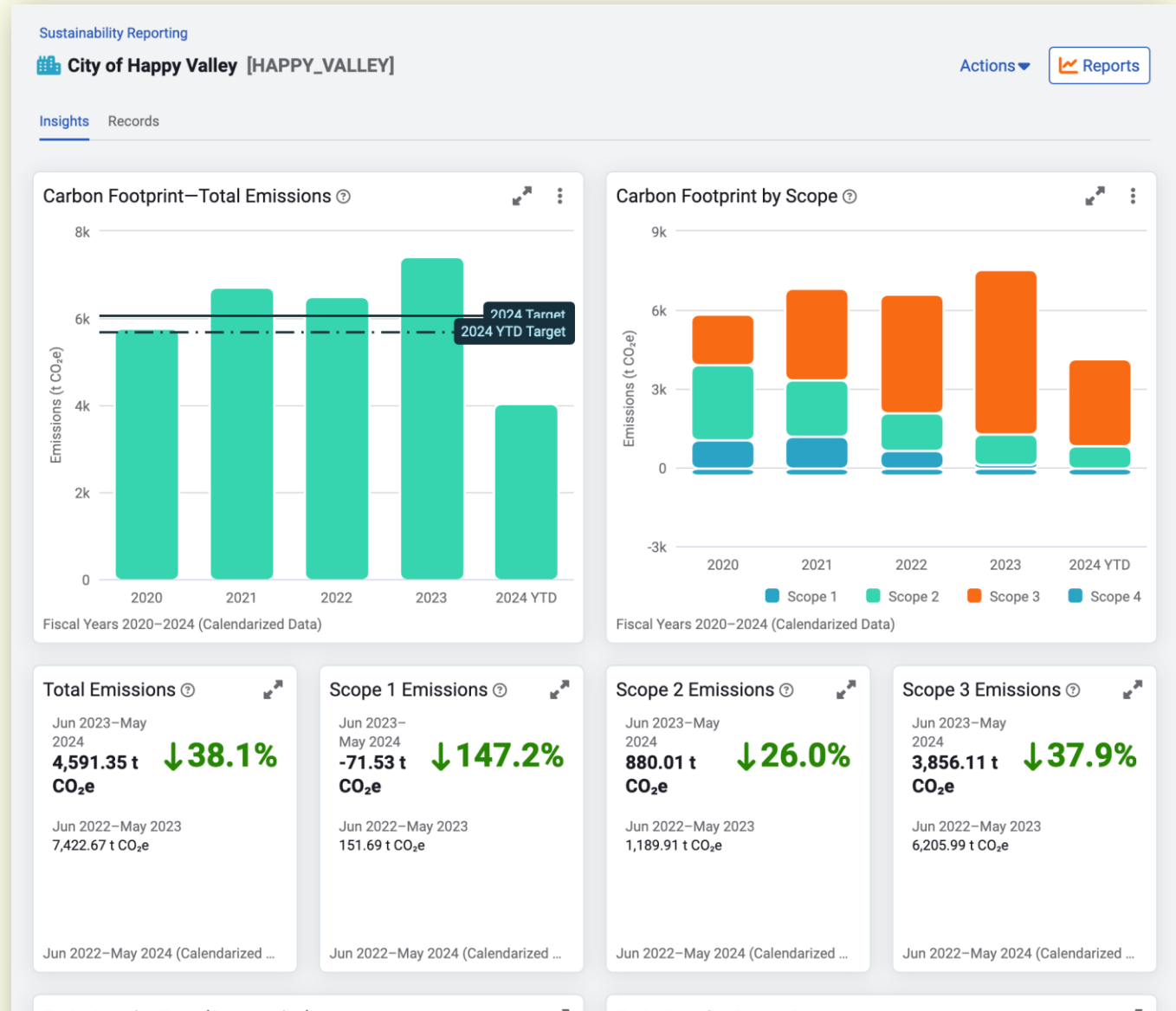
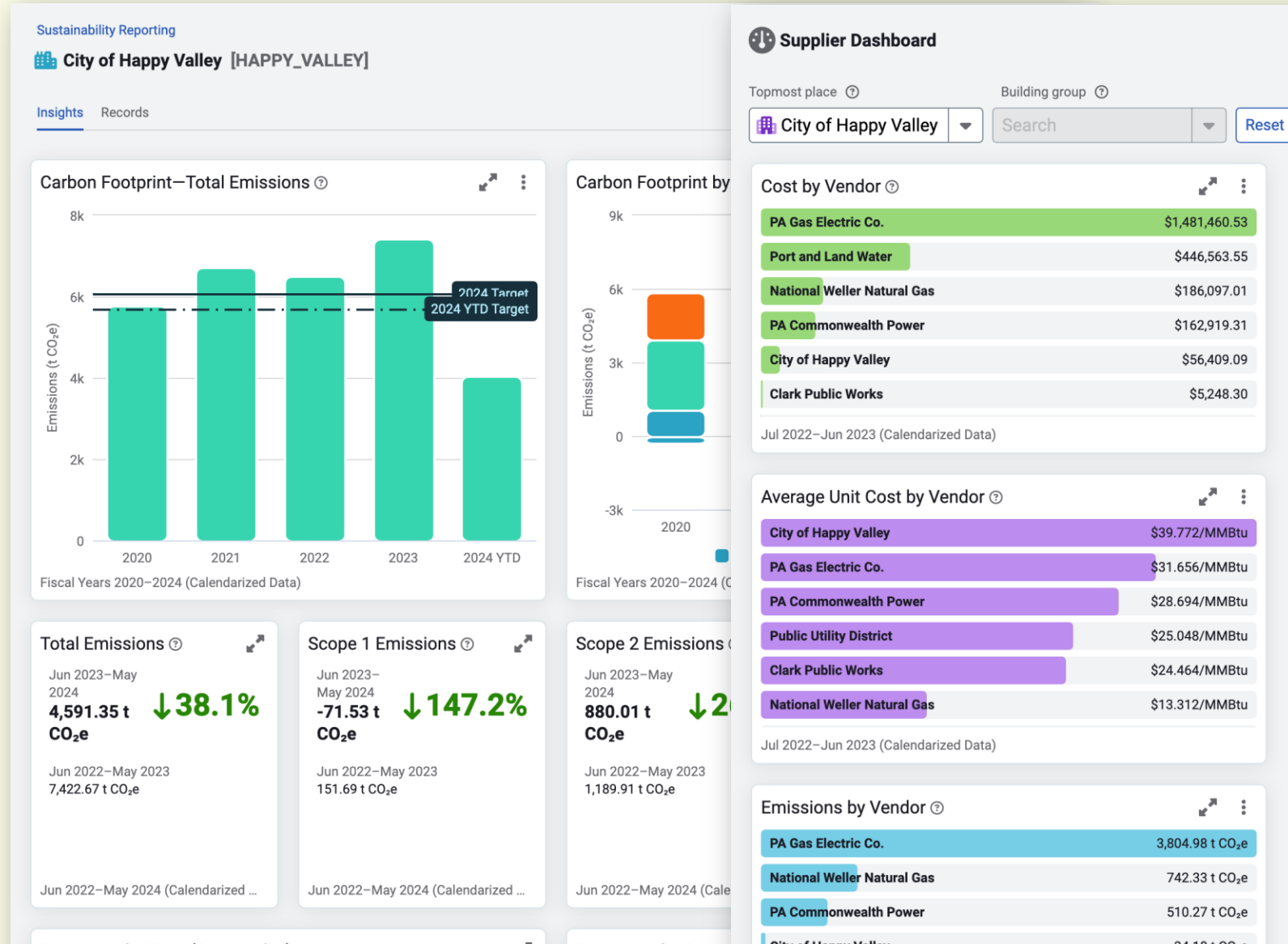- Configured charts for each collection and emissions source

New ways to view and analyze emissions data

Insights

- Understand your emissions data at a glance

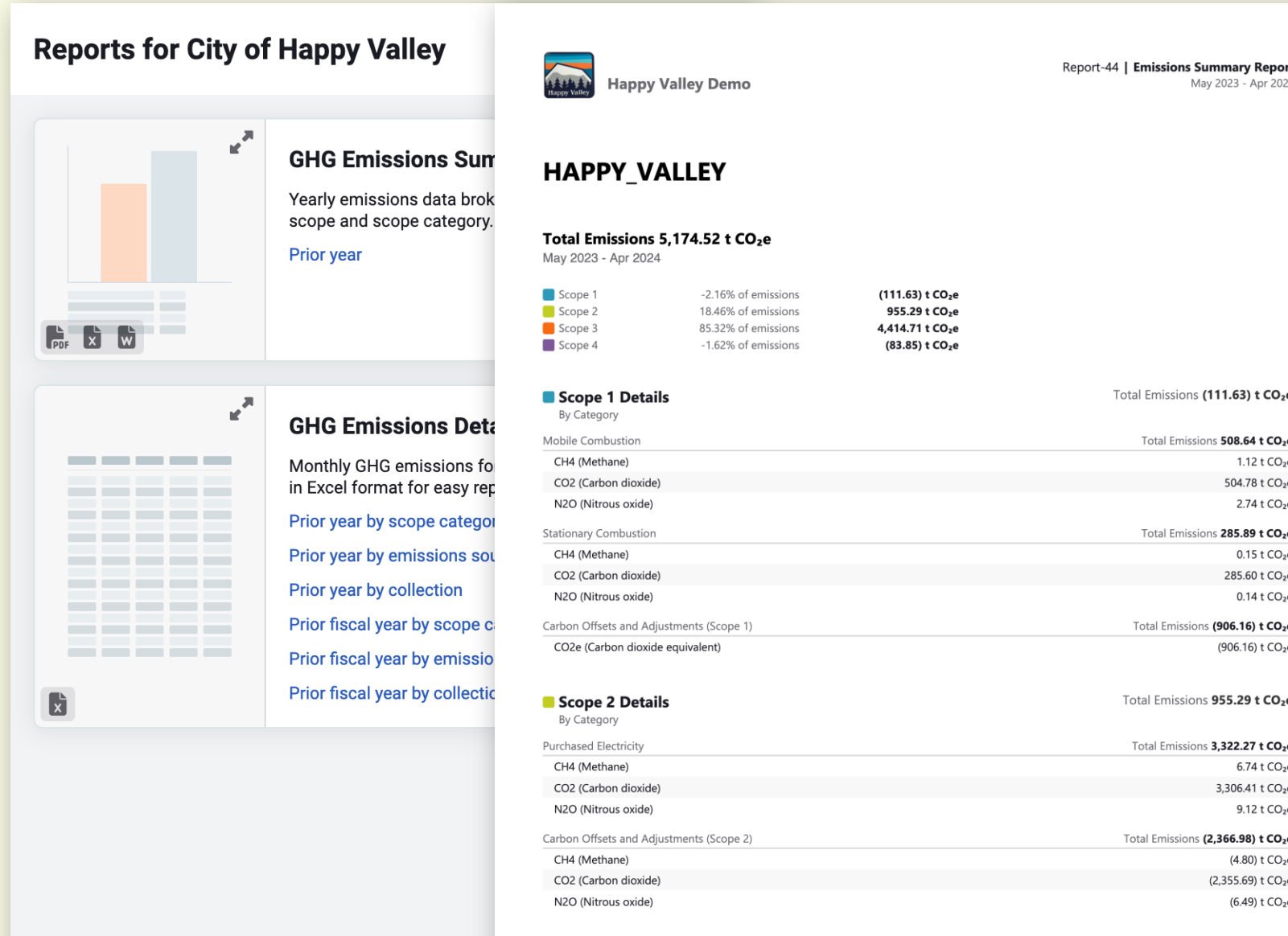- Configured charts for each collection and emissions source

Dashboards

- Dive deeper by configuring your own charts

- Place emissions information next to use and cost information on the same dashboard

New ways to view and analyze emissions data, continued

Reports

- Configured reports for each collection

- Configure your own, save and share, schedule for automatic distribution

Reports for City of Happy Valley

GHG Emissions Sum...

Yearly emissions data brok...
scope and scope category.

Prior year

GHG Emissions Deta...

Monthly GHG emissions fo...
in Excel format for easy rep...

Prior year by scope categor...
Prior year by emissions sou...
Prior year by collection
Prior fiscal year by scope c...
Prior fiscal year by emissio...
Prior fiscal year by collectio...

Happy Valley Demo

Report-44 | **Emissions Summary Repo...**
May 2023 - Apr 202...

HAPPY_VALLEY

Total Emissions 5,174.52 t CO₂e
May 2023 - Apr 2024

Scope 1	-2.16% of emissions	(111.63) t CO₂e
Scope 2	18.46% of emissions	955.29 t CO₂e
Scope 3	85.32% of emissions	4,414.71 t CO₂e
Scope 4	-1.62% of emissions	(83.85) t CO₂e

Scope 1 Details — By Category — Total Emissions **(111.63) t CO₂**

Mobile Combustion — Total Emissions **508.64 t CO₂**
- CH4 (Methane) — 1.12 t CO₂
- CO2 (Carbon dioxide) — 504.78 t CO₂
- N2O (Nitrous oxide) — 2.74 t CO₂

Stationary Combustion — Total Emissions **285.89 t CO₂**
- CH4 (Methane) — 0.15 t CO₂
- CO2 (Carbon dioxide) — 285.60 t CO₂
- N2O (Nitrous oxide) — 0.14 t CO₂

Carbon Offsets and Adjustments (Scope 1) — Total Emissions **(906.16) t CO₂**
- CO2e (Carbon dioxide equivalent) — (906.16) t CO₂

Scope 2 Details — By Category — Total Emissions **955.29 t CO₂**

Purchased Electricity — Total Emissions **3,322.27 t CO₂**
- CH4 (Methane) — 6.74 t CO₂
- CO2 (Carbon dioxide) — 3,306.41 t CO₂
- N2O (Nitrous oxide) — 9.12 t CO₂

Carbon Offsets and Adjustments (Scope 2) — Total Emissions **(2,366.98) t CO₂**
- CH4 (Methane) — (4.80) t CO₂
- CO2 (Carbon dioxide) — (2,355.69) t CO₂
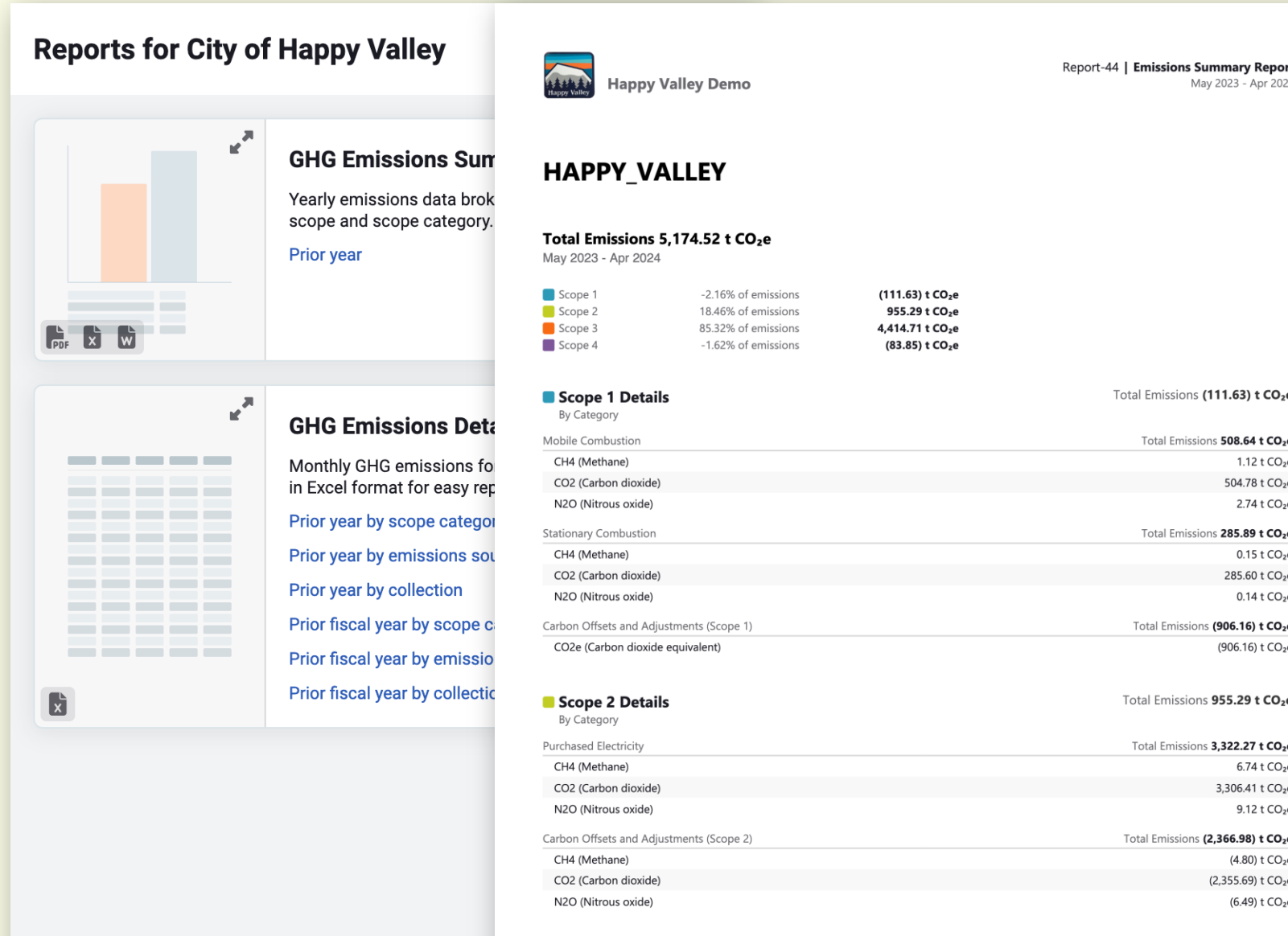- N2O (Nitrous oxide) — (6.49) t CO₂

New ways to view and analyze emissions data, continued

Reports

- Configured reports for each collection

- Configure your own, save and share, schedule for automatic distribution

Report Designer BI

- View emissions data in your favorite business intelligence application

- *Check out Dave Ulmer's session "Solving Problems with Report Designer BI" (Thursday @ 10:45am)*

Demo

New ways to view and analyze emissions data – REPORT BUILDER

Report Builder – Coming later this year

- Pick and label your own columns

- Combine use, cost and emissions data in a single report

- Include custom fields and GL information

- Save, shared and distribute like standard reports

Happy Valley Demo

🔍 ?

Report Builder

Email Dow

Date range	Data type	Rollup ?	Group by ?	
Prior Year ▾	Billing Period ▾	Not filtered ▾	Not filtered ▾	Filters [1] Reset

Happy Valley Campus ?

Sort

Meter ↓	Building	Commodity	Use	Cost (USD $)	Total Emissions (t CO₂e)
Total ?				**106,548.35**	**73.86**
Compton Bookstore - CHW01	Compton Bookstore	Chilled Water	248,345.26 ton-hr	7,640.96	
Compton Bookstore - ELE01	Compton Bookstore	Electric	365,770.00 kWh	40,269.70	12.40
Humanities - CHW01	Humanities	Chilled Water	110,078.14 ton-hr	3,369.51	
Humanities - ELE01	Humanities	Electric	230,210.00 kWh	25,358.10	8.29
Humanities - ELE02	Humanities	Electric	132,042.00 kWh	14,559.62	4.71
Lindon Hall - CHW01	Lindon Hall	Chilled Water	926,397.09 ton-hr	28,479.63	
Lindon Hall - ELE01	Lindon Hall	Electric	116,212.00 kWh	12,818.32	4.39
Lindon Hall - ELE02	Lindon Hall	Electric	538,343.00 kWh	59,252.73	22.26
Student Health Center - CHW01	Student Health Center	Chilled Water	49,462.08 ton-hr	1,514.85	
Student Healther Center East - ELE02	Student Health Center	Electric	41,539.00 kWh	4,604.29	1.58
Student Healther Center West - ELE01	Student Health Center	Electric	133,264.00 kWh	14,694.04	5.01
University Hall - CHW01	University Hall	Chilled Water	403,801.58 ton-hr	12,382.94	
University Hall - ELE01	University Hall	Electric	98,944.00 kWh	10,918.84	3.36

Columns

➕ ↕ Meter

➕ ↕ Building

Column

State Owned

Rename column

Optional

➕ ↕ Commodity

➕ ↕ Use

➕ ↕ Cost

➕ ↕ Total Emissions

Questions?