ENERGYCOMPASS!design
for Municipalities

Sustainable Buildings Canada

TAF

Compass for Municipalities

A special thank you to The Atmospheric Fund for providing the funding that made this project possible!

Compass for Municipalities

- The goal of *Compass for Municipalities* is to allow non-technical municipal staff to complete a high-level review of energy models for compliance with municipal Green Development Standards and energy performance requirements.

- The project builds on the Energy Compass energy model benchmarking and analysis platform

- Web based **energycompass.design**

Compass for Municipalities

- Compass is **not** modelling software. Compass reads the output files from industry standard modelling software, interprets and aggregates the internal data to be more accessible for users

- Energy Model result files submitted by applicants are uploaded to Compass

- Compass analyzes the results files and produces an *Energy Modelling Compliance Report*

Compass for Municipalities

The *Energy Modelling Compliance Report includes:*

- Key Variable Summary
  Presents key modelling variables in a standardized table for easy review

- Rule Based Review
  Identifies any issues and presents next steps / follow up

Compass for Municipalities

- Users can also explore aggregate data of all projects uploaded by the municipality
  - Display different metrics
  - Filter by project meta data
  - Download data for external reporting and analysis

Getting Started

- Your municipality needs to be registered on the platform
- An administrator from your municipality will be assigned to control access to other users
- Send an email to support@energycompass.design to get your municipality registered on the platform

Getting Started

- Once your municipality has been registered, you will be able to sign up using the link on the home page
- As the first user at your municipality your account will also need to be approved by Compass staff
- Other users will need to be approved by one of your municipality's administrators to gain access to the platform

Project Management

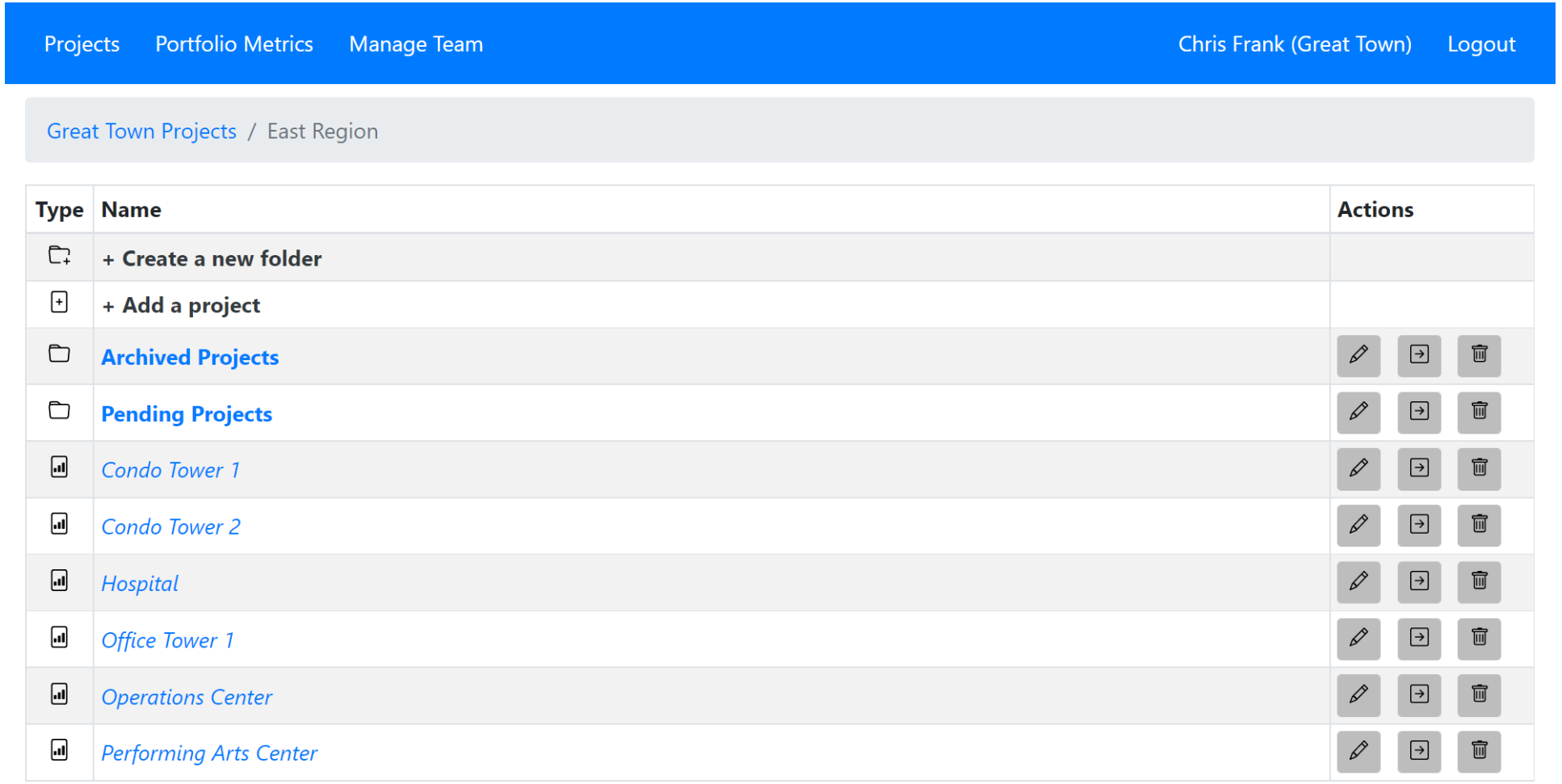
- *Folders* are used to organize projects
- *Projects* should correspond to a physical building
- *Versions* are used to represent different iterations of a project
  - Comparing different design options
  - Tracking design progress (RZA → SPA → IFC → As-built)

Project Management

- The results files from the proposed and, if applicable, the reference model are uploaded to the tool

- Compass supports the most popular energy modelling software:
  - DOE2 (eQuest, CAN-QUEST)
  - IES-VE
  - EnergyPlus

Project Management (demo)



Energy Modelling Compliance Report

Key Variable Summary

- Presents key modelling variables in a standardized table for easy review

- The values should be compared against those provided in the submitted project documentation

Energy Modelling Compliance Report

Rule Based Review

- Establishes a set of rules and checks for common energy modelling issues:
  - Input and output variables fall within expected ranges
  - Reference models match Proposed models as necessary
  - Mandatory requirements are met
- Visually flags issues in the report
- Provides a description of the issues and next steps / follow up

Energy Modelling Compliance Report (demo)

Projects Portfolio Metrics Manage Team Chris Frank (Great Town) Logout

Key Variable Summary

Project Details

Project Name	Office Tower 1
Version Name	SPA
Location	150 Main Street, Great Town, Ontario

Building Properties

Area	4,479	m^2
Volume	13,652	m^3

Enclosure Details

	Roof Area (m^2)	Skylight Area (m^2)	WWR
Roof	1,671	0	0%

	Wall Area (m^2)	Window Area (m^2)	WWR
North	665	117	18%
East	1,200	277	23%
South	442	27	6%
West	926	312	34%
Total	3,233	733	23%

	U-value (S.I) $W/m^2 \cdot K$	R-value (S.I) $m^2 \cdot K/W$
Walls Above Grade	0.250	4.003
Walls Below Grade	0.926	1.080
Windows	1.874	0.534

Projects Portfolio Metrics Manage Team Chris Frank (Great Town) Logout

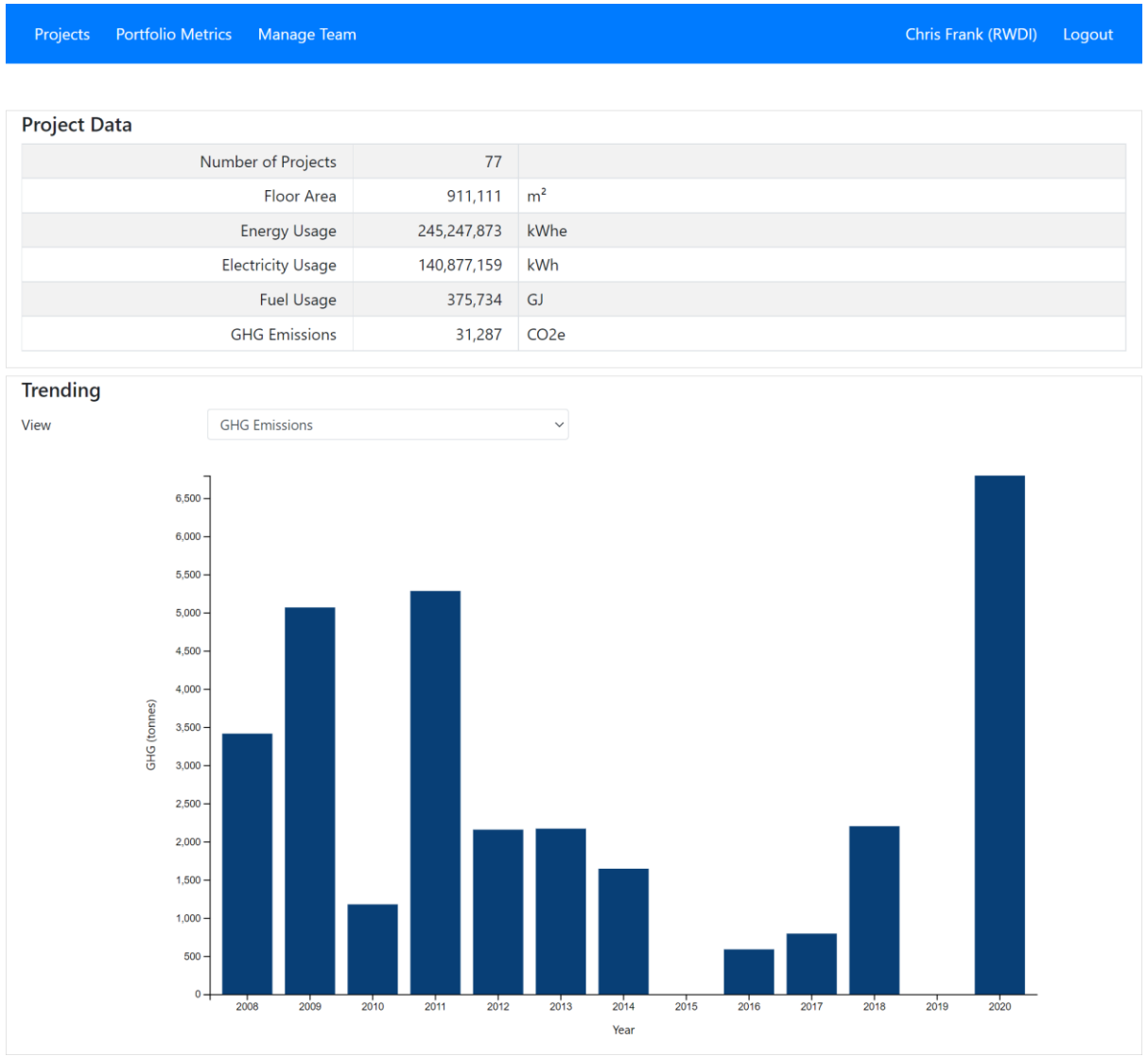
Rule Based Review

#001	**Check:** Reference Model Presence **Result:** Reference Model provided. **Submitter Comment:**	✓	
#002	**Check:** Reference Model Match: Area **Result:** Proposed/Reference Model area does not match. Corrections Required **Submitter Comment:**		!
#003	**Check:** Reference Model Match: Volume **Result:** Proposed/Reference Model volume does not match. Corrections Required **Submitter Comment:**		!
#004	**Check:** Reference Model Match: Occupancy **Result:** Proposed Model occupancy matches Reference Model. **Submitter Comment:**	✓	
#005	**Check:** Reference Model Match: Equipment Power **Result:** Proposed/Reference Model equipment power does not match. Corrections Required **Submitter Comment:**		!
#006	**Check:** Value Within Range: Lighting EUI **Result:** Lighting EUI within expected range. **Submitter Comment:**	✓	
#007	**Check:** Value Within Range: Plug Loads EUI **Result:** Plug Loads EUI within expected range. **Submitter Comment:**	✓	
	Check: Value Within Range: Space Heating EUI		

Portfolio Metrics

- An aggregate view of projects uploaded by your municipality
- Display:
  - Count, Floor Area, Energy Usage, Fuel Mix, GHG emissions/savings
- Filter projects by:
  - Year, Building Type, Floor Area
- View trending over time
- Download data for external analysis and reporting

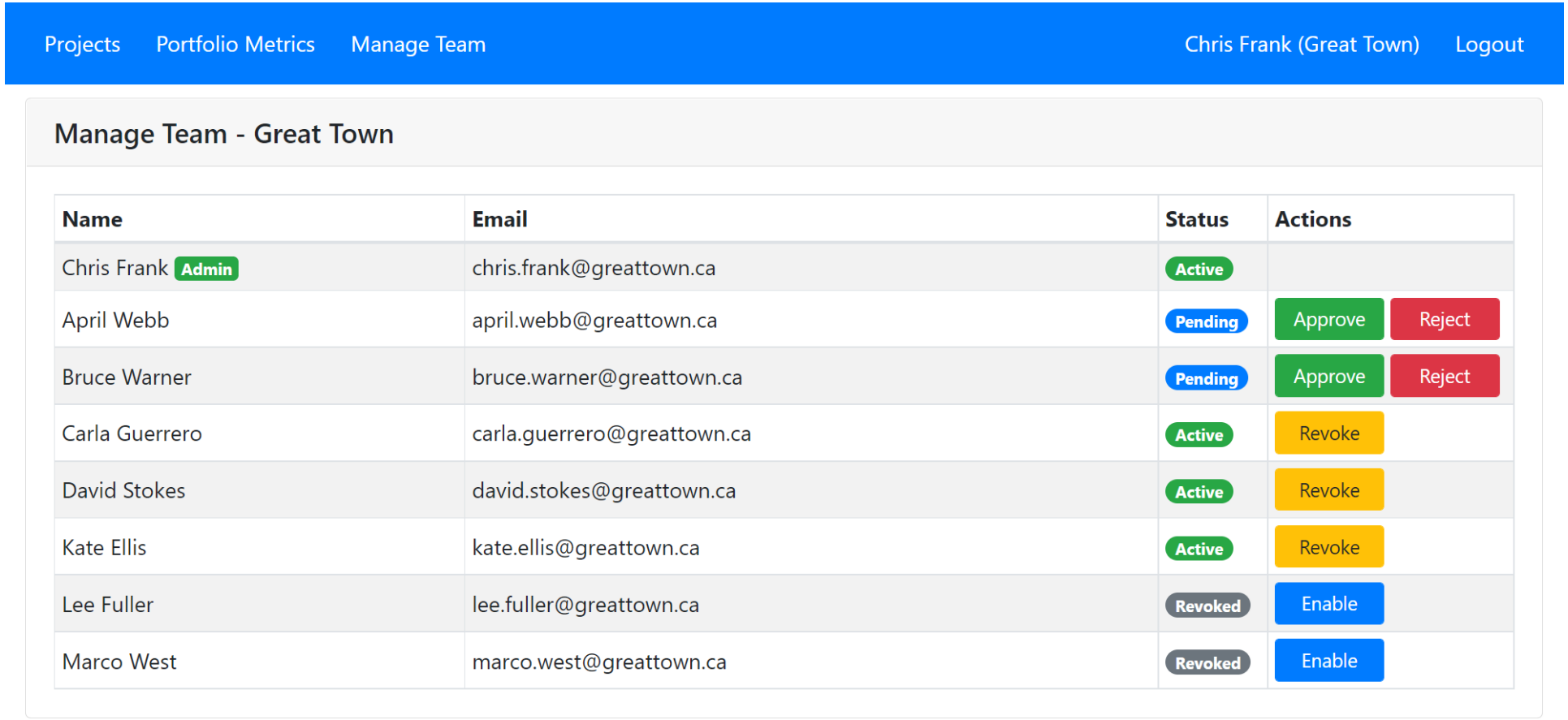
Portfolio Metrics (demo)



Team Management

- Your municipality's administrator must approve all other users before they gain access to the platform
- The administrator can also revoke a user's access
- The *Manage Team* page is only visible to administrators

Team Management (demo)



Support

- Send all support requests to:

support@energycompass.design

ENERGYCOMPASS!design
for Municipalities

Sustainable Buildings Canada

TAF