



# Small and Independent Grocers Partnering with GreenChill

December 8, 2020

# Questions and Webinar Feedback

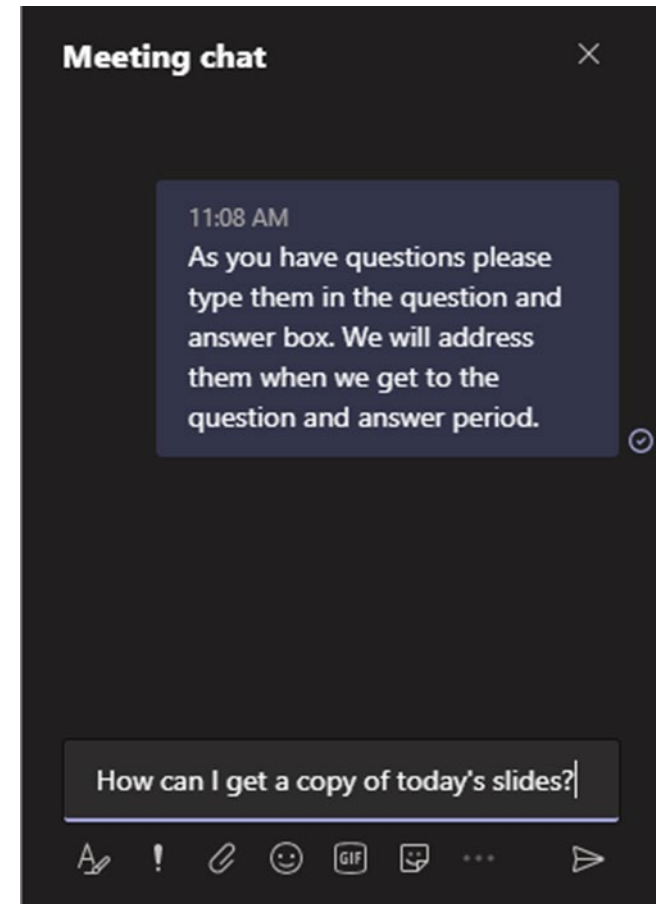


## Question and Answer Session

- Participants are muted
- Questions will be moderated at the end
- To ask a question, enter your comment into the chat box

## Feedback Form

- We value your input!
- The link to a feedback form will appear in the chat window



# Webinar Materials



## Recording and Slides

- Webinar is being recorded
- Materials will be posted on the GreenChill website under Events and Webinars: [www.epa.gov/greenchill](http://www.epa.gov/greenchill)
- To receive notification when materials are posted email: [EPA-GreenChill@abtassoc.com](mailto:EPA-GreenChill@abtassoc.com)

# Program Overview

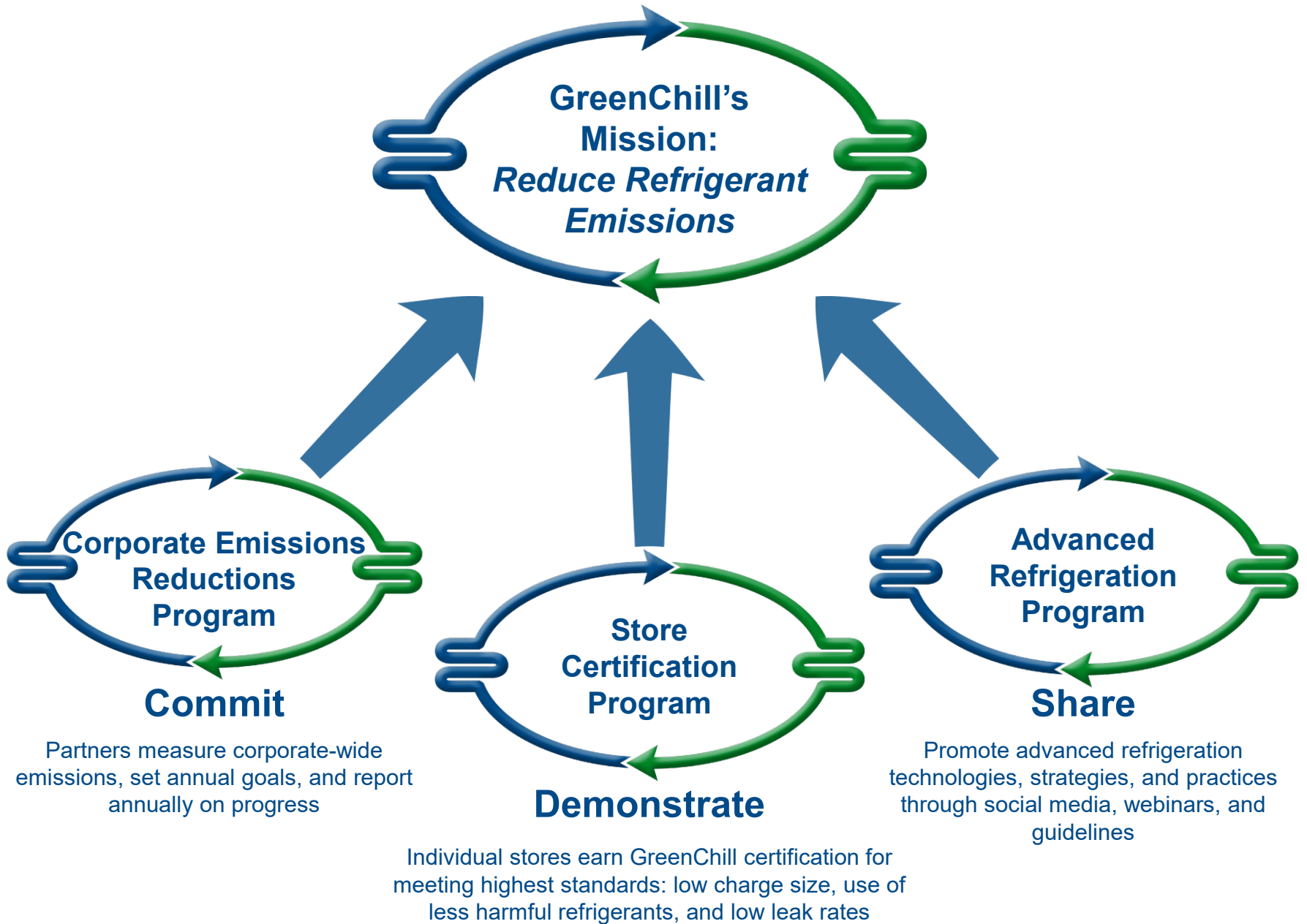


**GreenChill is a voluntary partnership program that works collaboratively with the food retail industry to reduce refrigerant emission and decrease stores' impact on the ozone layer and climate system**

GreenChill works to help food retailers:

- Lower refrigerant charge sizes and eliminate leaks
- Transition to environmentally friendlier refrigerants
- Adopt green refrigeration technologies and best environmental practices

[www.epa.gov/greenchill](http://www.epa.gov/greenchill)



# 2020 Ozone Layer Protection Milestones



In March 2020, EPA published a new site to highlight achievements made possible because of the Clean Air Act Title VI - Stratospheric Ozone Protection

**Ozone Layer Protection Milestones of the Clean Air Act**

**Strat City, USA**  
Explore how successful ozone layer protection is a part of our everyday life through this [interactive webpage](#).

Throughout 2020 we will be highlighting the many achievements made possible because of the [Clean Air Act Title VI - Stratospheric Ozone Protection](#).

**From Discovery to Recovery:** Follow our highlights for in-depth information on how we protect the stratospheric ozone layer.

### Overview

2020 is a milestone year for [ozone layer protection](#) in the United States. In the thirty years since Congress amended the Clean Air Act (CAA) to add Title VI: Stratospheric Ozone Protection, EPA has worked with many partners to develop and implement flexible, innovative, and effective approaches to [phase out ozone-depleting substances \(ODS\)](#) and heal the ozone layer. By restoring the ozone layer, we reduce the risks of skin cancer and cataracts.

Ozone-depleting substances have been used in many household, industrial, and military applications. In response to significant concern for our ozone layer, through the [Montreal Protocol](#) and CAA Title VI, the United States has been substituting ODS with [safer alternatives](#). At the same time, global demand for refrigeration and cooling technologies continues to expand. Most transitions to safer alternatives have been seamless for consumers who use these products in their daily lives.

Today, we see signs that the [ozone layer](#) is healing. For Americans, full implementation of the Montreal Protocol is expected to [result in the prevention](#) of no less than 280 million cases of skin cancer and at least 45 million cases of cataracts in the United States alone. This remarkable success is due to the important and cooperative achievements that continue to be made by people, programs, and organizations working together to protect the Earth's ozone layer.

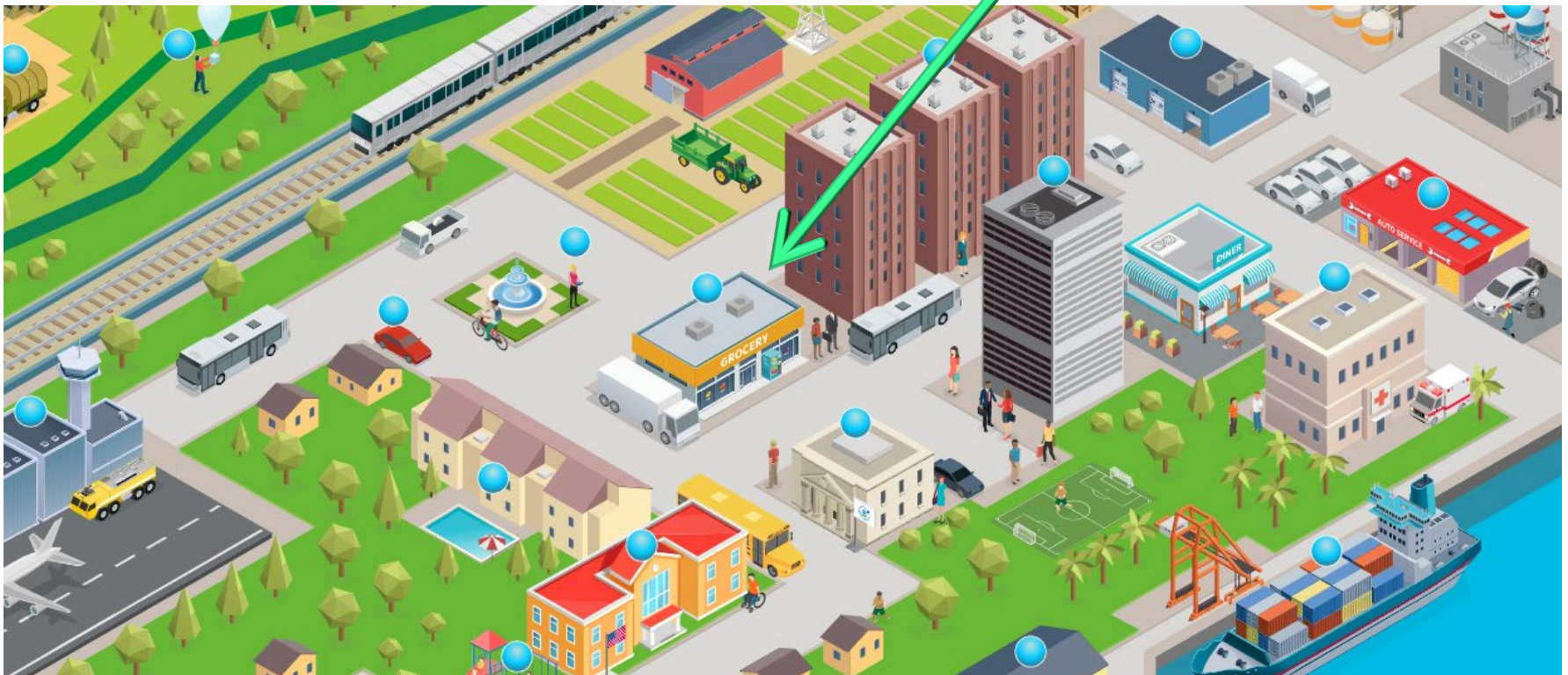
[www.epa.gov/ozone-layer-protection-milestones-clean-air-act](http://www.epa.gov/ozone-layer-protection-milestones-clean-air-act)

# Strat City, USA



An interactive webpage where users can explore how ozone layer protection affects many aspects of everyday life.

GreenChill is highlighted



# Learn More



[www.linkedin.com/groups/1426947/](https://www.linkedin.com/groups/1426947/)

[www.epa.gov/greenchill](https://www.epa.gov/greenchill)

[GreenChill@epa.gov](mailto:GreenChill@epa.gov)





**Today's speakers...**

# Jennifer Stoltz



## Jennifer Stoltz

General Manager

Cook County Whole Foods Co-op

Grand Marais, Minnesota

Phone: 218-387-2503

Email: [jennifer@cookcounty.coop](mailto:jennifer@cookcounty.coop)



**Jennifer** has worked at Cook County Whole Foods Co-op since 2009. She wears many hats including operations, chief financial officer, and human resources. In 2013 she oversaw an expansion that doubled the size of the store. When planning the new store, she strove to build the most energy efficient building possible and were awarded ENERGY STAR Certification in 2016 with a score of 100. Jennifer also oversees refrigeration maintenance and was honored to receive EPA's GreenChill Best Emissions Rate as a small partner two years in a row.

# Brett Frazer



## **Brett Frazer**

Facilities Manager - 5+ years

City Market, Onion River Co-op

Burlington, VT

Phone: 802-861-9749

Email: [bfrazer@citymarket.coop](mailto:bfrazer@citymarket.coop)



**Brett** has been at City Market since 2011. He has been the Facilities Manager since 2015.

# Kevin Danahy



## Kevin Danahy

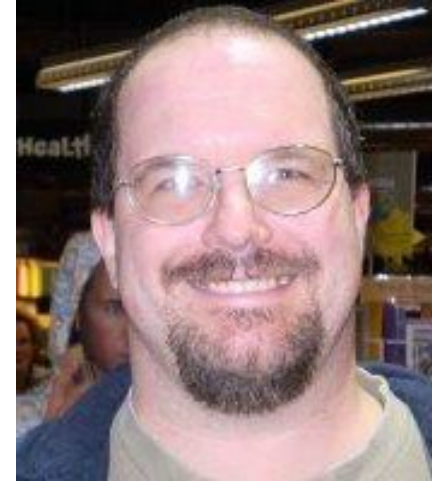
Facilities Team Lead - 13+ years

City Market, Onion River Co-op

Burlington, VT

Phone: 802-861-9760

Email: [kdanahy@citymarket.coop](mailto:kdanahy@citymarket.coop)



**Kevin** has worked as a repair and maintenance technician since 2005. He started working at City Market in 2007; he is now the Facilities Team Lead for their Downtown store and has an EPA Section 608 Refrigeration Technician certification.



# Cook County Whole Foods Co-op



# Storefront



Located in Northeast Minnesota on Lake Superior. Cook County population is only 5,200 and 90% of the land is publicly owned. Our refrigeration company is 120 miles away in Duluth, Minnesota.

# Overview



- Location: Grand Marais, Minnesota
- Single Store
- 6,600 Square Feet (SF)
- 3,865 SF Retail
- \$5.4 Million Sales
- 40 Employees
- Products: Full-service grocery store with a grab-and-go deli. Carries fresh, sustainably raised, local and organic options.





The first step we've taken to reduce refrigeration repairs and leaks is to schedule quarterly maintenance.





The next step is to maintain a quality relationship with our refrigeration technician. I have him on speed dial, and he's always willing to pick up the phone. He also does a thorough job of explaining work that he has performed and what maintenance we should do between visits.

# Rack System



We update equipment as needed. After a large leak, we installed a more sensitive leak detector in our rack system.

I'm also willing to learn new skills. Our technician has directed me on how to fix an issue during a facetime call.





We have built redundancies into our system. We only need two compressors to run our refrigeration but have three as backup in case one malfunctions.

# Solar Array



We strive to be a leader in environmentally sustainable practices.

We installed an array of solar panels in 2016 and converted all our store lighting to light emitting diode (LED) in 2019.

# GreenChill Recognitions



- 2019: Best Emissions Rate (Small Partner)
- 2018: Best Emissions Rate (Small Partner)





## City Market, Onion River Co-op



# City Market, Onion River Co-op



# City Market, Onion River Co-op Overview



- Location: Burlington, Vermont
- Number of stores: 2 (2001 & 2017)
  - Sales floor space: 12,000 SF & 14,000 SF
  - Combined sales \$53.8M
  - 12,000+ members
- A community-owned food cooperative with two locations open daily in beautiful Burlington, Vermont. We offer a large selection of local, organic, and conventional foods, and thousands of Vermont-made products.





# Pre-Partnership Challenges



## Partner Since 2014

- Lack of knowledge/experience
- Focus on preventative maintenance (we weren't ready yet)
- Store was very busy with a small facilities crew
- Communications problems between shifts
- Customer perception of leak checks

# First Steps 2014-2015



- EPA 608 Certification and Basics of Refrigeration class
  - New knowledge of environmental impact made partnership a higher priority
- First Refrigerant Management Plan 2015
  - Keep it simple
  - Modest goals
  - Get buy-in from refrigeration techs
  - Start early January to ensure buy-in before reporting deadline

# Small Store Challenges 2015



- Small changes in refrigerant charge mean significant changes in emission percentage
- Leak past a temporary plug during renovations
- Modest goals and a simple plan made it easy to add best practices

# GreenChill Partnership Resources 2016



- Suggested topics list included reference to guideline papers
  - Leak Prevention and Repair Guidelines
  - Maintenance for Leak Prevention
- We added specific actions to the plan
  - Emergency service for large leaks found during coil cleaning
  - Service within 24 hours for small leaks
  - Increased monitoring during renovations
- Not all topics apply to small stores

# Establish Relationship with a Specific Tech



- Asking questions makes leak detection a priority
- Tech gives feedback (professional customer service)
- Easier to raise concerns that “Might be nothing”
- Emissions:
  - 14.9% in 2014
  - 2.9% in 2016

# Refrigerant Level Data Collection



- Collect liquid level charts weekly
- Comparing charts over a longer interval makes downward trend stand out
  - GreenChill recommends refrigerant detector in the compressor room
  - Expensive detector is a hard sell at budget time
- Chart patterns change seasonally
  - Archive allows us to compare this year with past years to prevent false positives

# New Store! 2017



- Transcritical carbon dioxide (CO<sub>2</sub>) system
  - Very low global warming potential (GWP)
  - Higher system pressures
  - Safety valve vents to atmosphere
  - Emission % goes up
  - Hard to chase the last 3%-to-0
  - GreenChill converts emissions into metric tons of CO<sub>2</sub> equivalent
- Produce emits CO<sub>2</sub> (false positives during leak checks)

# Today: Equipment Challenges 2019-2020



- Refrigerant leak in subzero case
  - Minor leak at low suction pressure
  - Leak rate increases with higher pressure during hot gas defrost
  - Difficult to find the leak as refrigerant dissipates before tech can search
  
- We have updated the Refrigerant Management Plan
  - Include system-specific procedures which reduce the amount of time spent finding leaks
  - Concentrate the most effort on preventing emissions of high GWP refrigerants



# GreenChill Recognitions



- 2017: Best Emissions Rate (Small Partner)
- 2016: Exceptional Goal Achievement
- 2016: Superior Goal Achievement
- 2015: Superior Goal Achievement



# In Conclusion



## Here's what worked for us:

- Take Basic Refrigeration classes
- Keep the first Refrigerant Management Plan simple, then build on it
- Use monitoring software to track refrigerant levels
- Get friendly with a specific repair tech
- CO<sub>2</sub> systems create different challenges than a hydrofluorocarbon system
- Leak check subzero cases during defrost



# Contacts and Additional Information

## Contact Information

- Brett Frazer  
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- Kevin Danahy  
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- Jennifer Stoltz  
Cook County Whole Foods Co-op  
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## GreenChill Contact Information

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## Upcoming Webinars

Date	Webinar Topic
2/2	Food Lion's Experience with two U.S. Environmental Protection Agency Programs: GreenChill and ENERGY STAR

Join our webinar invitation list or request today's slides: [EPA-GreenChill@abtassoc.com](mailto:EPA-GreenChill@abtassoc.com)

Access past webinar slides: [www.epa.gov/greenchill/events-and-webinars](http://www.epa.gov/greenchill/events-and-webinars)