



Building on Success: 22+ Years of Partnership and Progress





CFS Product Categories

- Refrigerators and Freezers
- Hot Food Holding Cabinets
- Dishwashers
- Griddles
- Fryers
- Steam Cookers
- Ice Makers
- Ovens
- Coffee Brewers
- Electric Cooktops



energystar.gov/cfs

Questions?
Send email to CFS@energystar.gov

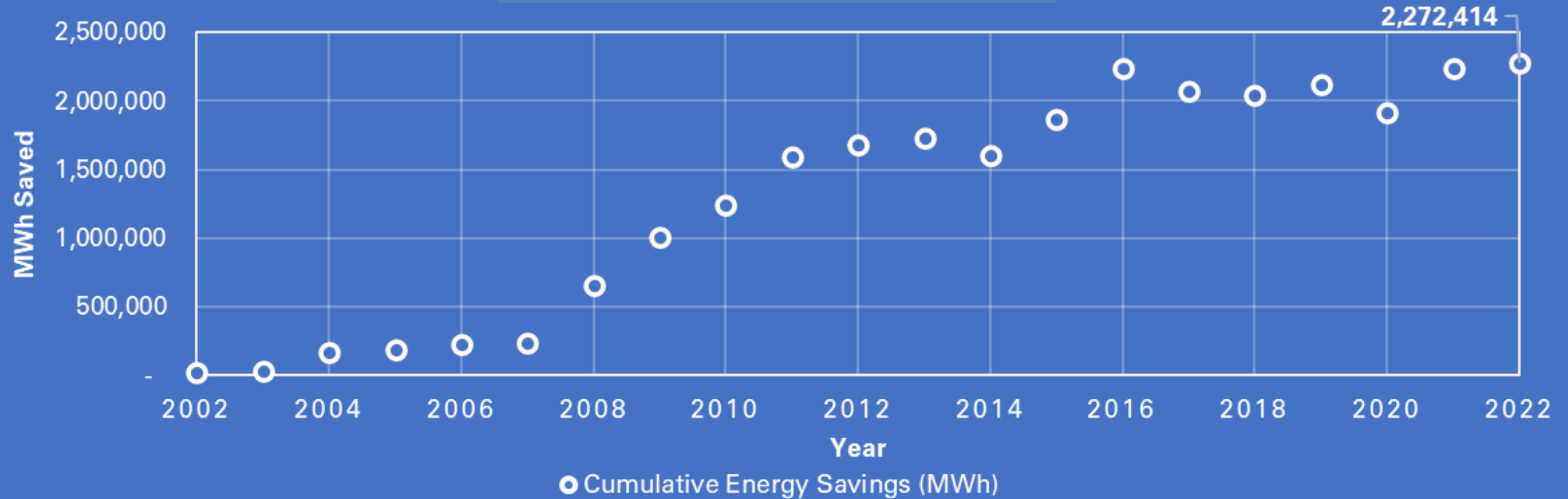




Annual MWh Saved Over 22+ Years

1 MWh = 1,000 kWh

Annual MWh Savings

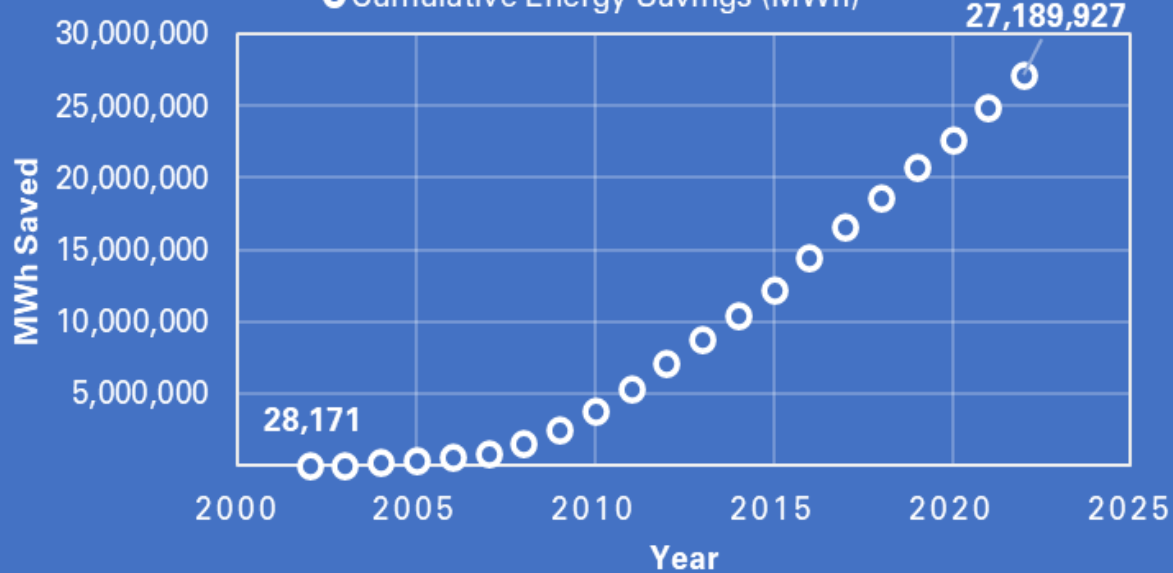




Cumulative MWh Saved and MT CO₂ Emissions Avoided Over 22+ Years

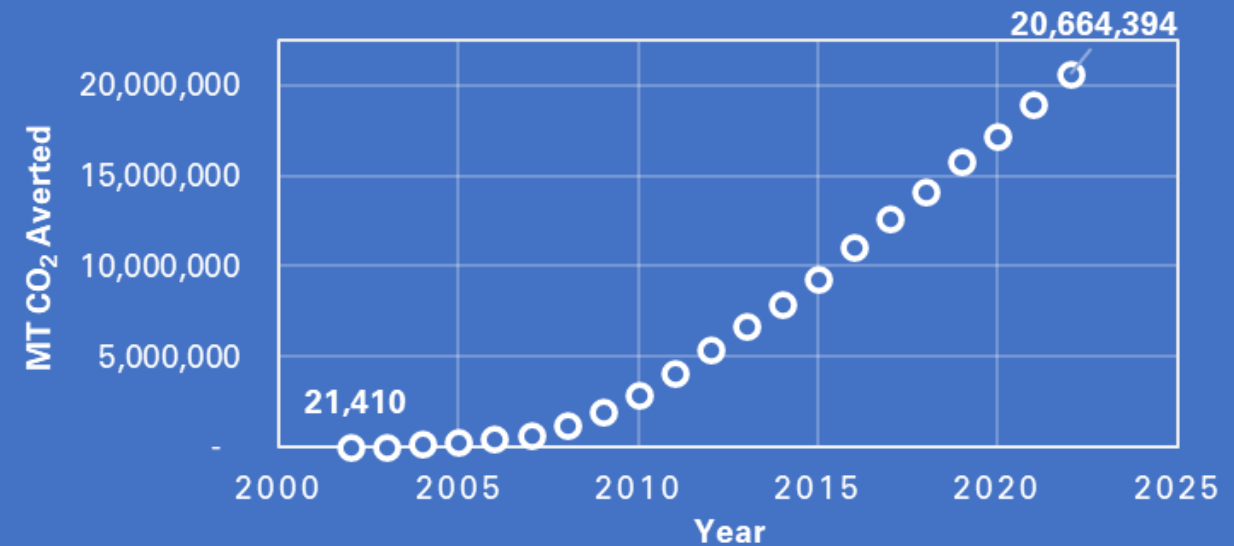
Cumulative MWh Saved

● Cumulative Energy Savings (MWh)



Cumulative MT CO₂ Emissions Avoided

● Cumulative Avoided Emissions (Metric Tonnes CO₂)



Between 2001 and 2022, ENERGY STAR has offset **20,664,394** metric tons of CO₂.



This is equivalent to **149.5 million trees** sequestering CO₂ in an area roughly the size of **188,283 football fields**.



Opening Remarks



Paul M. Gunning
Director, Office of Atmospheric Protection
Office of Air and Radiation
U.S. Environmental Protection Agency





The Early Years Panel



How the CFS Sector Became Part of ENERGY STAR



Charlie Souhrada





David Zabrowski



Charles Hon



Dipak Negandhi



Andre Saldivar



Timeline: Specification Additions and Revisions

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CRE	V1.0								V2.0				V3.0				V4.0					V5.0	
Steamers			V1.0																				
Fryers			V1.0								V2.0					V3.0							
HFHC			V1.0								V2.0												
ACIM								V1.0					V2.0					V3.0					
Dishwashers							V1.0						V2.0								V3.0		
Griddles								V1.0			V1.1										V1.2		
Ovens								V1.0						V2.0	V2.2							V3.0	
Coffee Brewers																V1.0		V1.1					
Cooktops																							V1.0

	Specification Addition
	Specification Revision



Example Timeline for Specification Development

- Market research April 2002 – September 2002
- Draft spec development September 2002 – April 2003
- Stakeholder meetings May 2003
- Finalize & release V1.0 spec June 2003 – August 2003
- Expand scope (Large Vat Fryers) August 2010 – April 2011
- Tighten specs September 2015 – December 2015



Component Inspection Approach

“For commercial **dishwashers**, commercial **ovens**, and commercial **steam cookers**, a **component inspection method** is available as an alternative to verification testing for ENERGY STAR partners enrolled through a certification body specifically approved to administer this program. Please refer to ENERGY STAR **Directive 2019-02, Component Inspection of ENERGY STAR® Commercial Food Service Products** for additional information about the component inspection method.” - [Verification Testing Responsibilities by Product Category 2023 \(energystar.gov\)](https://www.energystar.gov/verification-testing-responsibilities-by-product-category-2023)



Pivotal Partnerships: ASTM F26 Committee





Partnerships with industry to promote energy efficient technology

- Test method development
 - **ASTM F26 Committee collaboration**
- Program development
 - **Component Inspection Approach**

Cumulative energy savings were achieved through the help of you, our partners, industry specialists, and interested stakeholders.



American Society for Testing and Materials (ASTM) F26 Committee on Food Service Equipment

Test Methods That Form the Basis for ENERGY STAR Product Specifications

- F2144-17 Standard Test Method for Performance of Large Open Vat Fryers
- F1361-20 Standard Test Method for Performance of Open Vat Fryers
- F1521-22 Standard Test Method for Performance of Range Tops
- F1275-14 Standard Test Method for Performance of Griddles
- F1484-99 Standard Test Method for Performance of Steam Cookers
- F1496-13 (2019) Standard Test Method for Performance of Convection Ovens
- F1696-20 Standard Test Method for Performance of Stationary-Rack, Door-Type Commercial Dishwashers
- F1920-20 Standard Test Method for Performance of Rack Conveyor Commercial Dishwashing Machines
- F2093-18 Standard Test Method for Performance of Rack Ovens
- F2140-11 (2019) Standard Test Method for Performance of Hot Food Holding Cabinets
- F2861-20 Standard Test Method for Enhanced Performance of Combination Ovens in Various Modes
- F2990-12 (2018) Standard Test Method of Commercial Coffee Brewers



ASTM INTERNATIONAL
Helping our world work better

American Society for Testing and Materials (ASTM) F26 Committee on Food Service Equipment

Commercial ENERGY STAR Specifications that Reference ASTM Standards and Specifications

- Ovens: Convection; Combination; Rack
- Steamers: Boiler-less; Boiler-based
- Griddles: Single-sided; Double-sided
- Coffee Brewers (Batch Type)
- Fryers: Standard Vat; Large Vat
- Hot Food Holding Cabinets
- Dishwashers: Undercounter; door; conveyor; PPU; flight
- Electric Cooktops



American Society for Testing and Materials (ASTM) F26 Committee on Food Service Equipment



ASTM INTERNATIONAL
Helping our world work better



American Society for Testing and Materials (ASTM) F26 Committee on Food Service Equipment

Additional thoughts on ASTM
partnership with ENERGY STAR





Pivotal Partnerships: Product Brand Owners & Utilities



Partnerships with industry to promote energy efficient technology

- **Specification development**
 - Product scoping
 - Data assembly calls
 - Written comments

Cumulative energy savings were achieved through the help of you, our partners, industry specialists, and interested stakeholders.



Noted technological advancements made in the pursuit of energy efficiency

- **Refrigeration equipment** | Low-GWP Refrigerants, Variable speed compressors, Lighting
- **Dishwashers** | Heat Recovery, Insulation
- **Ovens** | Combis, Gaskets, Controls, Insulation
- **Cooktops** | Induction
- **Ice makers** | Low-GWP Refrigerants, Variable-speed compressors
- **Hot food holding cabinets** | Gaskets, Controls, Insulation
- **Steamers** | Gaskets, Insulation, Closed system design
- **Griddles** | Thermostatic controls, Insulation
- **Fryers** | Heat exchangers, Heat transfer technology
- **Coffee brewers** | Energy-saving modes, Temperature uniformity, Insulation

Possible Products for ENERGY STAR Scoping

Future Scope Expansion for Existing ENERGY STAR Equipment Categories

- Refrigerated Preparation or Buffet Tables
- Blast Chillers
- Blast Freezers
- Teppanyaki griddles

CFS Equipment Scoping List

- Braising pans/tilt skillets
- Rapid cook/accelerated cooking ovens
- Demand Control Kitchen Ventilation (DCKV)



Outstanding Partners





Partnerships with industry to promote energy efficient technology

- **Awards**
 - Partner of the Year
 - Emerging Technology

Cumulative energy savings were achieved through the help of you, our partners, industry specialists, and interested stakeholders.



ENERGY STAR AWARDS

Celebrating Superior Achievements in Energy Efficiency



<https://www.energystar.gov/awards>



CONGRATULATIONS!

ENERGY STAR Sustained Excellence Winners





CONGRATULATIONS!

ENERGY STAR Partner of the Year Winners



BEVERAGE-AIR.



Partner of the Year Applications for 2024

- Apply by **November 15, 2023** (Wed)
- Online through My ENERGY STAR Account (MESA): <https://energystar.my.site.com/MesaLogin>
- Templates available: https://www.energystar.gov/about/2024_energy_star_award_applications
- Timeline:
 - **February 2024** - award determinations complete and applicants notified
 - **End of March 2024** - winners announced, embargo lifts, and digital promotion begins
 - **April 2024** - **in-person** event celebrating ENERGY STAR award winners; additional details to be posted [HERE](#) when available
- Questions? Email awards@energystar.gov



ENERGY STAR

Emerging Technology Award

“The ENERGY STAR Emerging Technology Award is given to innovative technologies that meet rigorous performance criteria to reduce energy use and lower greenhouse gas emissions, without sacrificing features or functionality.”



2015-2016 Demand Control Kitchen Ventilation (DCKV)



2016-2017 Innovative Refrigerant Systems



2017-2018 Solid-State Refrigeration





2020-2022 Adaptive Commercial Refrigeration Equipment

Key Criteria:

1. Are closed, self-contained commercial refrigeration products using variable speed compressors with sensor-driven control systems capable of capacity modulation.
2. Outperform the measured Annual Energy Consumption for the Federal Minimum Standard by 25%.
3. Contain refrigerant and foam with a Global Warming Potential (GWP) less than 15.
4. Are approved for use and available for sale in the U.S. market.

Recognized Technology Recipients:

- **Beverage-Air**
- **Hussmann Corporation**
- **Victory**



BEVERAGE-AIR



VICTORY



Beyond ENERGY STAR Specifications



Partnerships with industry to promote energy efficient technology

- **Stakeholder engagement**
 - Workshops at the NRA Show
 - Educational resources
 - Webinars

Cumulative energy savings were achieved through the help of you, our partners, industry specialists, and interested stakeholders.



Workshops at the NRA Show

2018: Leveraging ENERGY STAR for CFS and the Utility-Distributor Connection for Midstream Rebates

- **Speakers:** Richard Young (FSTC), Frank Inoa (Arby's), Cathy Ellickson (PRIDE), Kevin Kochman (KCL), Jeff Clark (NRA), Laura Thomas (CEE), Tianna Byrtus (PSE), Melisa Marks (SoCalGas), Courtney Baum (DNVGL on behalf of DTE Energy)

2019: Midstream Success Stories

- **Speakers:** David Zabrowski (Frontier Energy), Jennifer Parsons (National Grid in MA & RI's midstream program), Kyle Coumas (Energy Solutions), Nick Rudofski (Consumer's Energy), Tianna Byrtus (PSE), Melisa Marks (SoCalGas)



May 20, 2018
Chicago, Illinois



ENERGY STAR® Commercial Food Service Stakeholder Workshop
Manufacturers | Utilities | Vendors | Suppliers | Consultants

Sunday, May 20, 2018 // 1:00-3:00pm (CDT) // McCormick Place, Lakeside Center, Room E258



Educational Resource: CFS Midstream Programs Guide



Featured Best Practices:

- Program planning with neighboring utilities
- Dealer/Distributor recruitment & network development
- Report incentives to ENERGY STAR's Utility Program Support Team
 - Contact: eeaccountmanager@energystar.gov

Midstream program (working definition): Programs focusing incentive dollars at dealers and distributors rather than directly to end users with the goals of reaching a wider audience, increasing program participation, streamlining program administration, and increasing access to ENERGY STAR certified and high efficiency equipment.



Taking it Virtual: CFS Workshop 2022

EPA hosts the CFS ENERGY STAR Workshop (Virtual)

[ENERGY STAR and Why it Matters: Benefits of ENERGY STAR Certified Equipment](#)

- Speaker: **Tanja Crk**, U.S. EPA

[Advanced Cooking: Perspectives from Chefs, Kitchen Designers, and Operators](#)

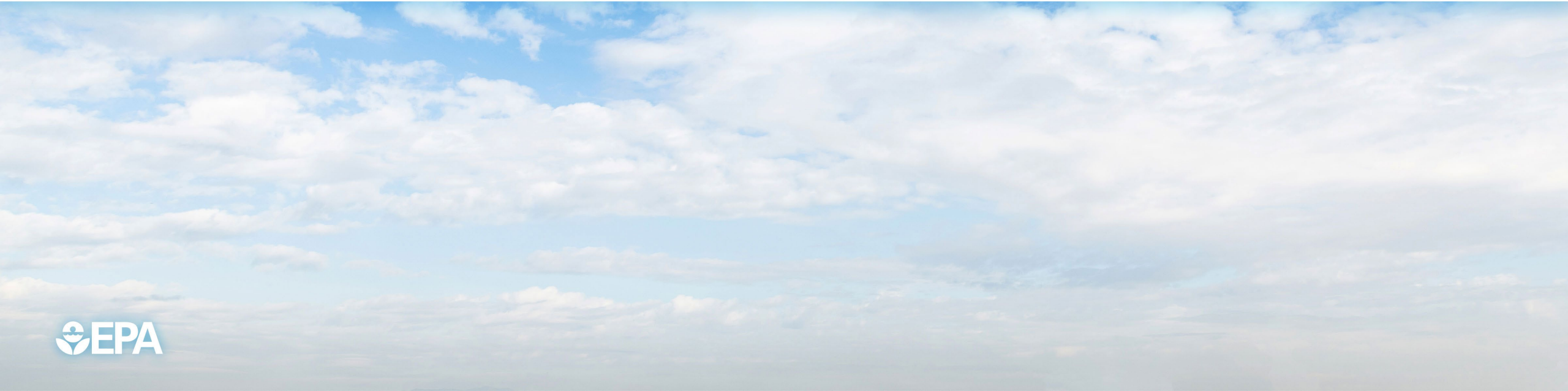
- Speakers: **Anthony Coschignano**, Assistant VP Auxiliary Services, Swarthmore College // **Chef Christopher A. Galarza**, Founder/Culinary Sustainability Consultant, Forward Dining Solutions LLC // **Tarah Schroeder**, Executive Principal Ricca Design Studios // **Kahlil Wells**, Associate Director of Co-ops Meal Plans and Special Projects, Stanford University

[Decarbonization in the Commercial Kitchen: Utility Opportunities and Manufacturer Solutions](#)

- Speakers: **Andre Saldivar**, Senior Engineer, Southern California Edison Foodservice Technology Center (FTC) // **Scott Heim**, President, Middleby Ventless Cooking Solutions, Bluezone® Air Purification and Evo America // **Nikki Dube**, Marketing & Outreach Specialist, Con Edison and Orange & Rockland



In Closing...



ENERGY STAR Program

- A **market transformation program** which works with a network of partners to remove market barriers to energy efficient technology adoption by increasing awareness, availability, and uptake of energy efficient options
- Program provides relevant **resources** to help our partners
 - Respond to demand for new products through scoping efforts
 - Train staff, sales representatives, and others through webinars, seminars, and marketing materials
 - Amplify the sale of certified products through rebate offers from utility partners
- Program is **flexible**, responding to changes in the market quickly
- Program stands for **energy efficient technology**, tracking innovations with the industry:
 - Induction cooktops
 - Refrigerants, adaptive refrigeration systems
 - Component inspection approach
 - Utility midstream incentive programs



How can partners and stakeholders help?

- Partnership purpose
 - Sell more energy efficient products
- Test method development
 - Collaboration at ASTM
- Performance data from partners
 - ENERGY STAR will issue “data assembly” calls
 - Objective is to receive more accurate data more quickly
- Educational component to increase demand
 - Reach purchasers & encourage participation from dealers and distributors
- Be malleable, innovative, & engaged
 - Provide written & verbal comments during scoping and specification development
 - Cross-promote ENERGY STAR at trade shows, social media, company websites
- Apply for the ENERGY STAR Partner of the Year award!



Tanja Crk, EPA
Crk.Tanja@epa.gov
Product Manager
Commercial Food Service

Adam Spitz, ICF
adam.spitz@icf.com
CFS Industry Specialist
Commercial Food Service

Questions?

Visit:
energystar.gov/cfs

Annie Williams, ICF
annie.williams@icf.com
Energy & Sustainability Engineer

[View ENERGY STAR CFS Certified Products](#)



Sign up for our bi-annual newsletters by sending an email to cfs@energystar.gov

Thank You!

