

# **NYSERDA**

## **EmPower/AHP Program Update**

**June 4, 2021**



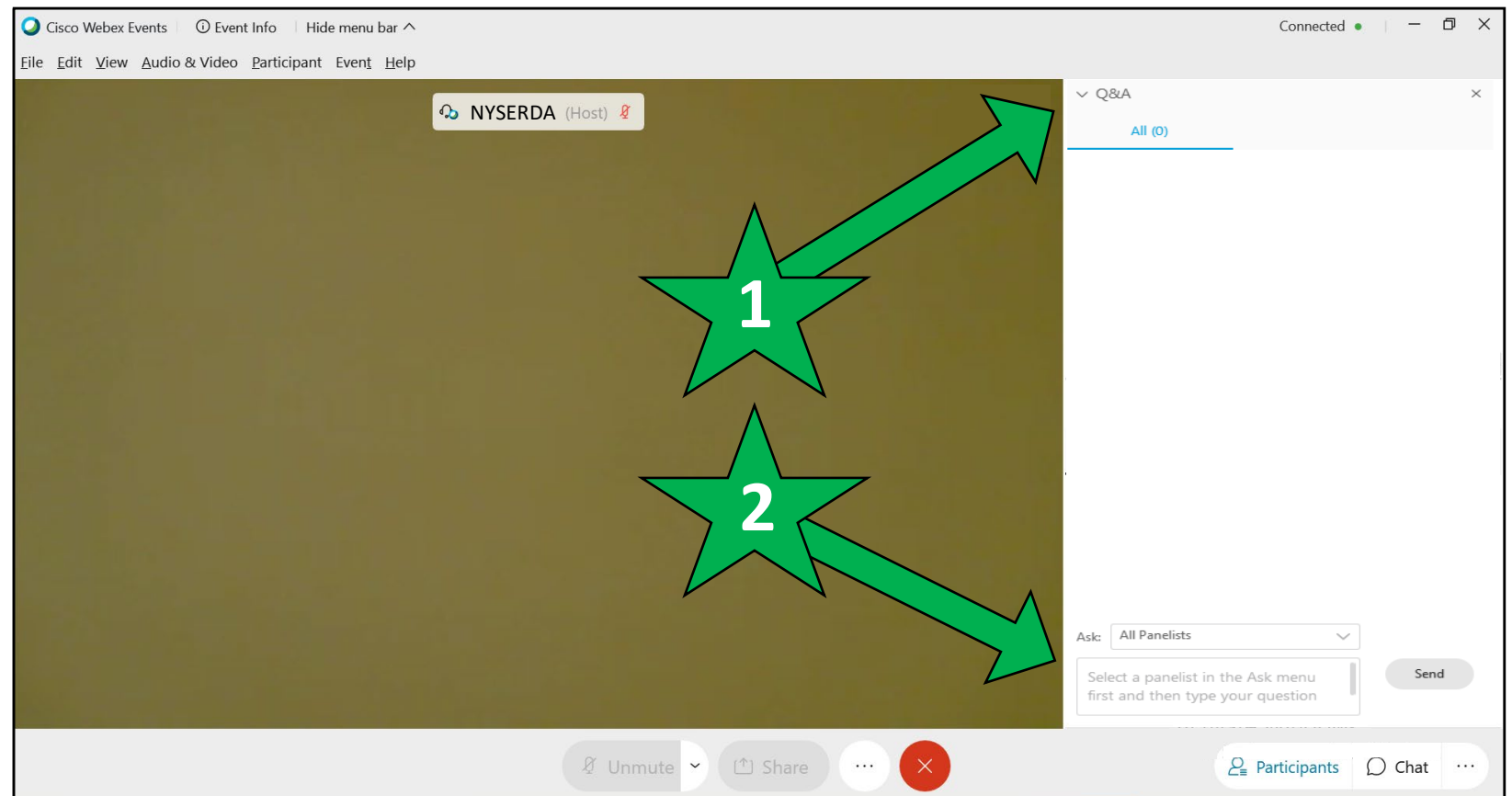
**NYSERDA**

# Q&A - Using Text

1. Locate the Q&A function in the upper right portion of your webinar panel.

Click on the small arrow to the left of “Q&A” to expand the text field.

2. Type your question into the text field and click “send.”



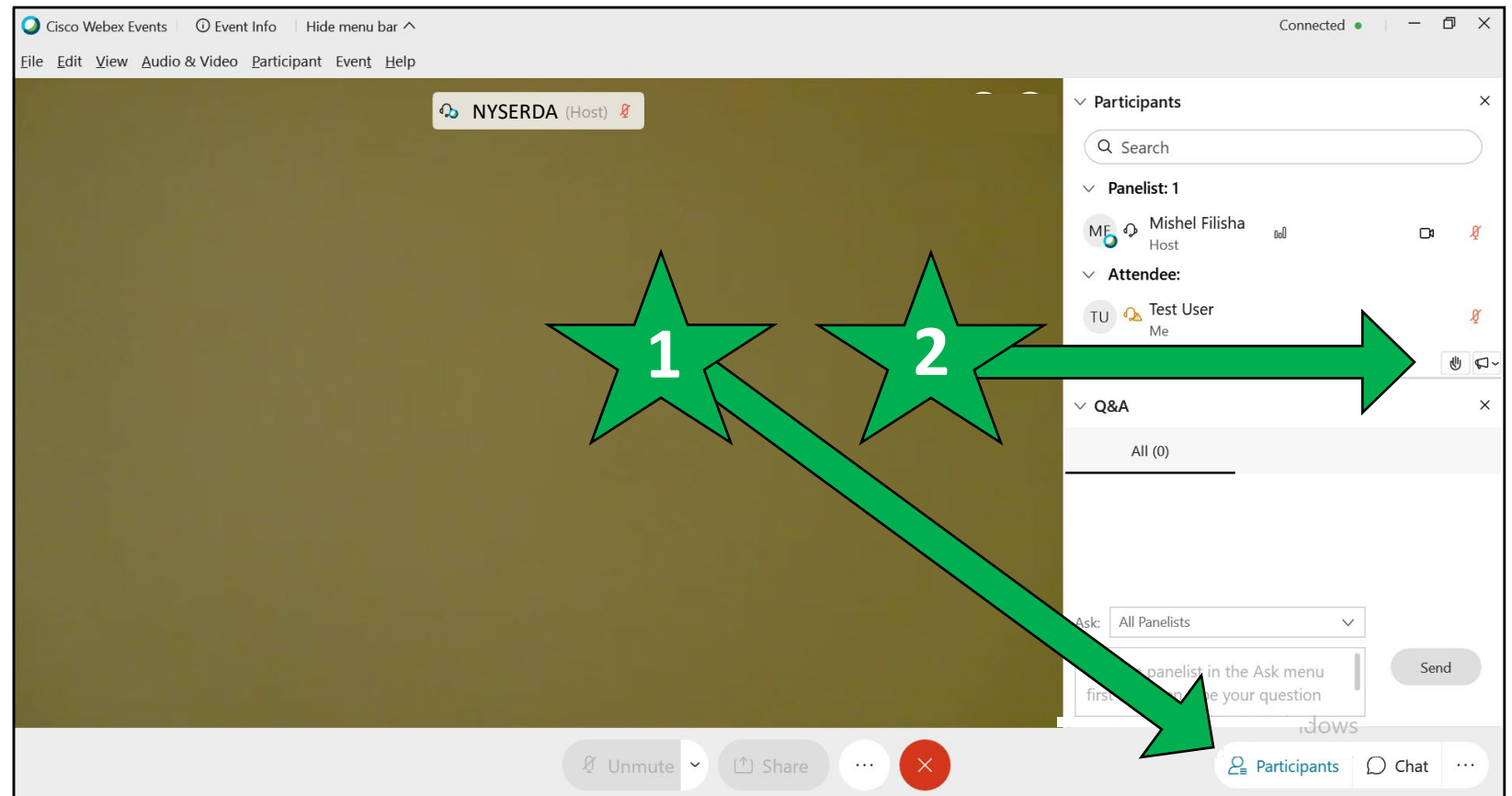
# Q&A - Using “Raise Hand” and Microphone/Phone

1. Open your participant panel using the oval icon near the bottom of your screen.
2. Locate the “raise hand” icon just below and to the right of your name in the participant panel.

Click on the raise hand icon to let us know you have a question.

When the Tech Assistant indicates you are unmuted, you can ask your question verbally through your computer mic or phone.

When you are finished talking, please click on the hand icon again to indicate you are no longer raising your hand.



# Agenda

- BPI Site Supervisor Certificate
- RGGI Update
- Spray foam update
- COVID-19 Safe business practices update
- SQA Update



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# BPI Site Supervisor Certificate

# BPI Site Supervisor Certificate of Knowledge

- **BPI's Testing platform**
  - <https://ssc.bpi.org/>
- **Contractor exam codes**
  - All participating contractors will receive two codes for exam
- **BPI's recorded webinar location**
  - Contractor Resource Manual – [hpwescontractorsupport.com](http://hpwescontractorsupport.com)
  - Program Announcements
  - Bullet under the - 05/25/2021 BPI Site Supervisor Training Now Available

# BPI Site Supervisor Certificate of Knowledge

## 2019-2020 CONTRACTOR RESOURCE MANUAL



## PROGRAM ANNOUNCEMENTS

**5/28/2021** Residential Program Updates  
5/27/2021

**5/25/2021** BPI Site Supervisor Training Now Available

**5/21/2021** Residential Program Updates  
5/20/2021

## **05/25/2021 BPI Site Supervisor Training Now Available**

*Notice that BPI Site Supervisor training and exam is now available*

- BPI Site Supervisor Certificate Informational Webinar Recording

# BPI Site Supervisor Certificate of Knowledge

- Please contact your Account Manager for issues with accessing the Contractor Resources Manual.
- For issues with BPI's training/exam platform please contact Lynn Griffith at [lgriffith@bpi.org](mailto:lgriffith@bpi.org) or 518-698-8203.
- For issues with your exam codes please contact Matthew Houle at [matthew.houle@nyserda.ny.gov](mailto:matthew.houle@nyserda.ny.gov) or 518-862-1090 ext 3286.

# RGGI Funding

# RGGI Funding

- > RGGI Funding remains very limited.
- > Intended for non-electric, fossil fuel heated homes located in municipal electric and non-CEF territories.
- > Contractors should obtain incentive approval prior to starting any potential RGGI project and should not promise incentives on the project. Otherwise, if not approved, the contractor is at risk to cover the incentive.

# COVID-19 Safe Business Practices Update

***Effective May 19, 2021, New York State has adopted updated CDC guidelines related to COVID-19 safe business practices. In keeping with the newly announced standards of practice, contractors participating in NYSERDA's residential programs may choose to adopt this updated and less stringent set of requirements for mask-wearing and social distancing for fully vaccinated people. Requirements for unvaccinated people remain unchanged. Information for applying the CDC Guidance in New York can be found at the following link: [NYS CDCGuidance Summary.pdf](#)***



**NYSERDA**

# Spray Foam Update



# NYS HFC Regulations: Foam Insulation Implications

June 4, 2021 Robb Aldrich, [raldrich@swinter.com](mailto:raldrich@swinter.com)

# NYS Regulation



- Dramatically limits HFCs allowed in foam insulation
  - Bans some HFCs entirely
- Effective Date for foams: January 1, 2021
- Ban is on manufacturing:

*Products... manufactured prior to [Jan 1, 2021] may be sold, imported, exported, transported, distributed, installed, serviced, and used after the applicable prohibition date.*

- [Express Terms - Adopted Part 494: 6 NYCRR Part 494 Hydrofluorocarbon Standards and Reporting](#)

# Best Advice



Advice from manufacturers:

“If you’re working on a building in New York State, buy your insulation (or chemicals) in New York State.”

Finding compliance

- Product info showing
  - literature / cut sheet
  - printed on products
  - SDS
- Contact manufacturer, distributor

# Terminology



HFC: hydrofluorocarbon

- target of ban/restrictions
- GWP of HFC-134a: 1,430

HFO: hydrofluoroolefin

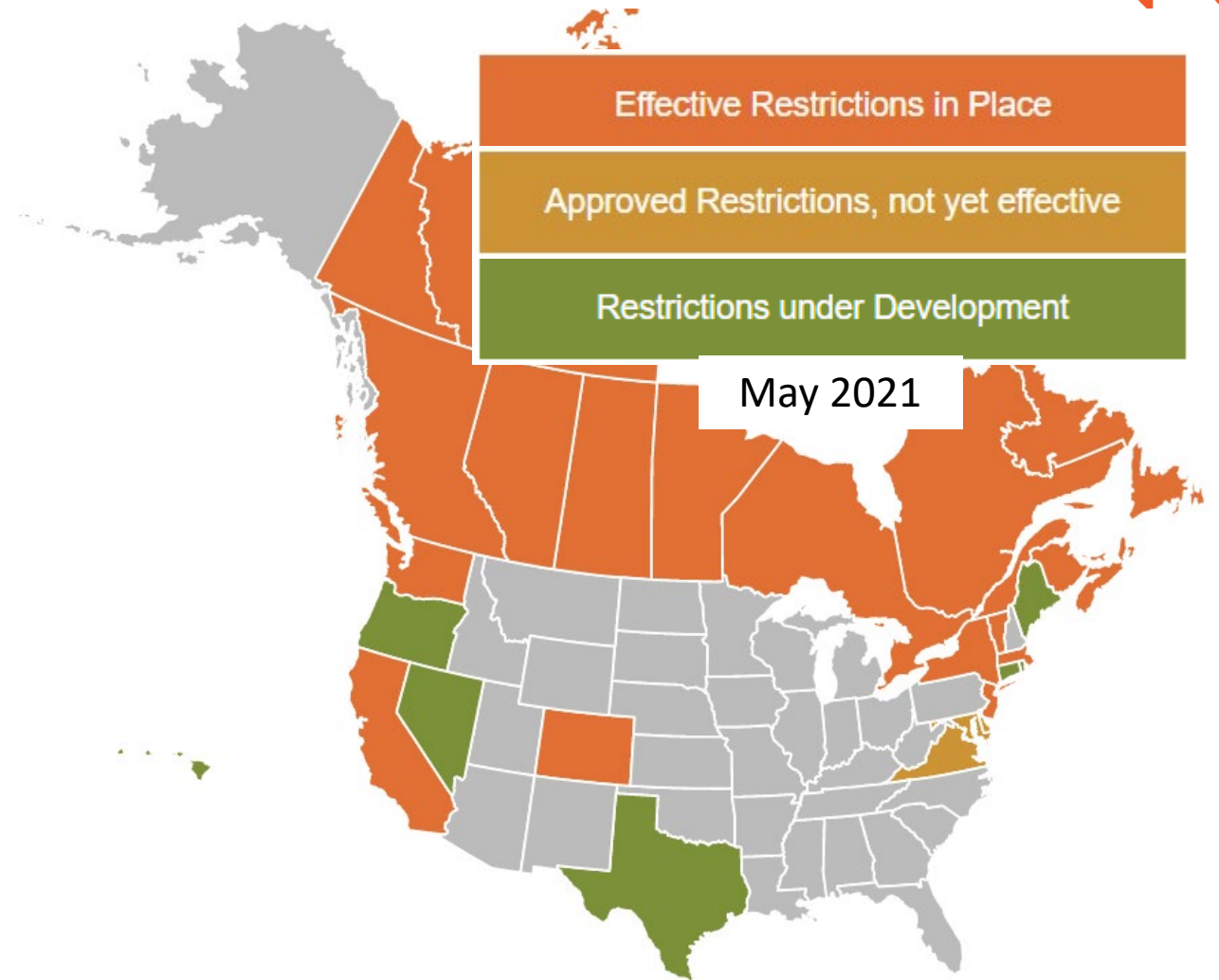
- common blowing agent replacement
- GWP: often single digits

# Just New York State?

NO

Spray foam trade organizations predict whole country in Jan 2023.

<https://polyurethane.americanchemistry.com/State-Phase-Down-of-HFCs/>



# Foam Insulation



## Rigid boards

- EPS (expanded polystyrene)
- XPS (extruded polystyrene)
- Polyisocyanurate

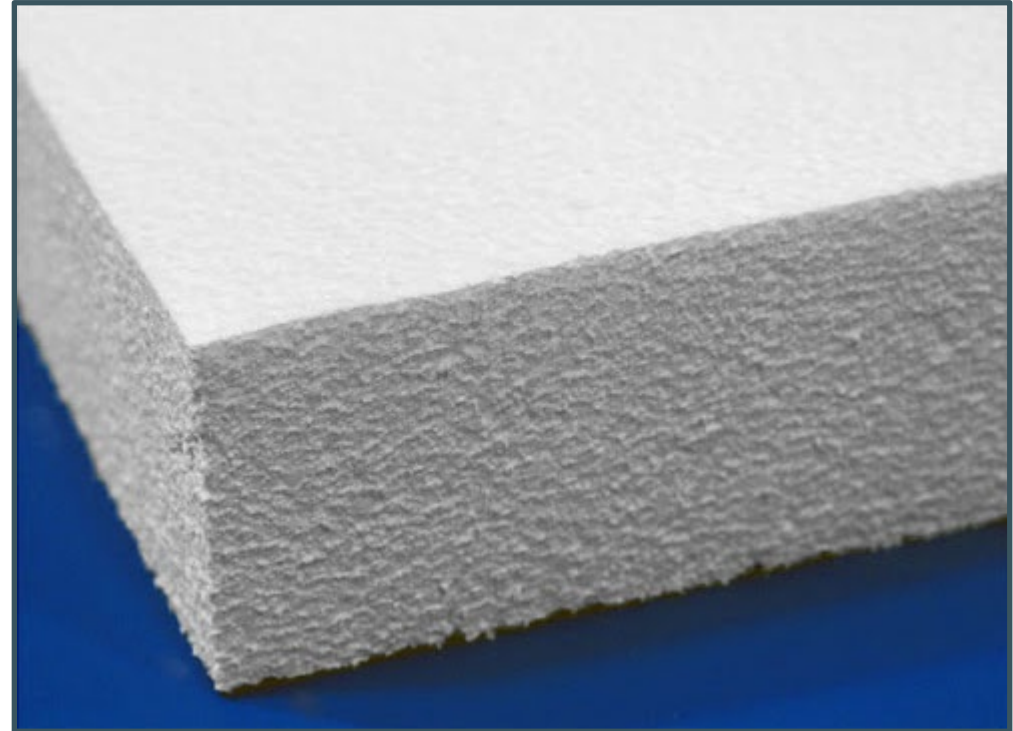
## Spray foam

- 2-component, low-pressure (kits)
- 2-component, high-pressure (trucks/rigs)
- 1-component, cans

# EPS (expanded polystyrene)



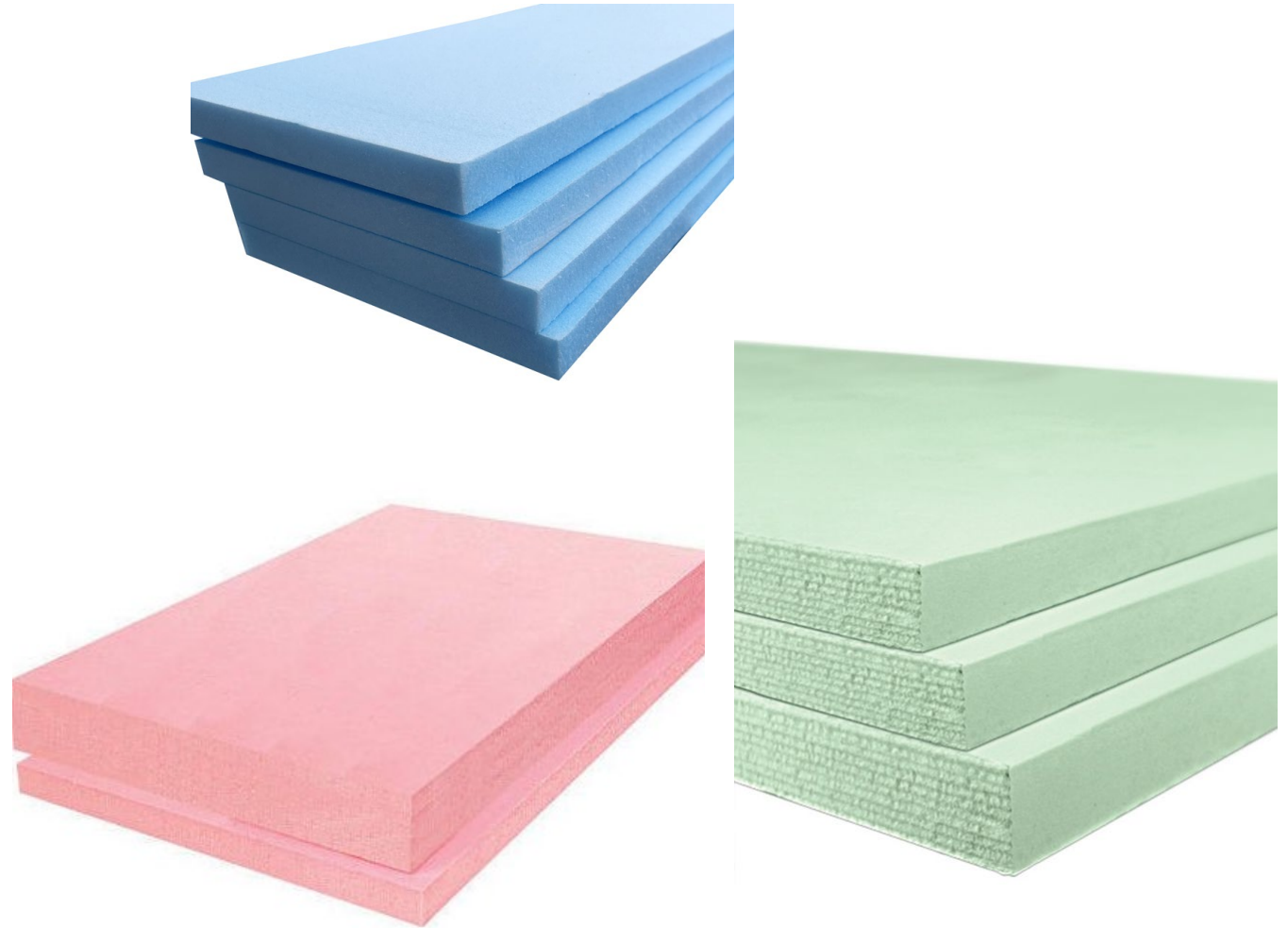
- Very little change – if any
- Most/All EPS uses pentane as a blowing agent



# XPS (extruded polystyrene)



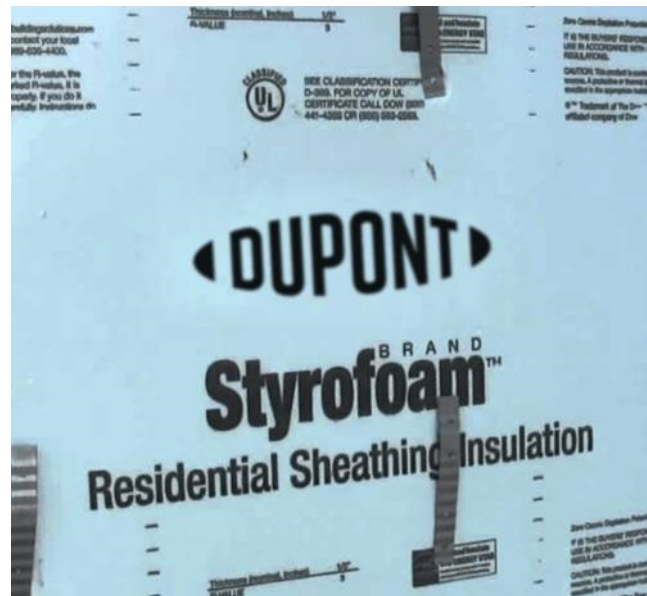
- BIG CHANGE!
- Most / all manufacturers used HFCs and needed to reformulate
- Different solutions, some going to HFO blowing agent



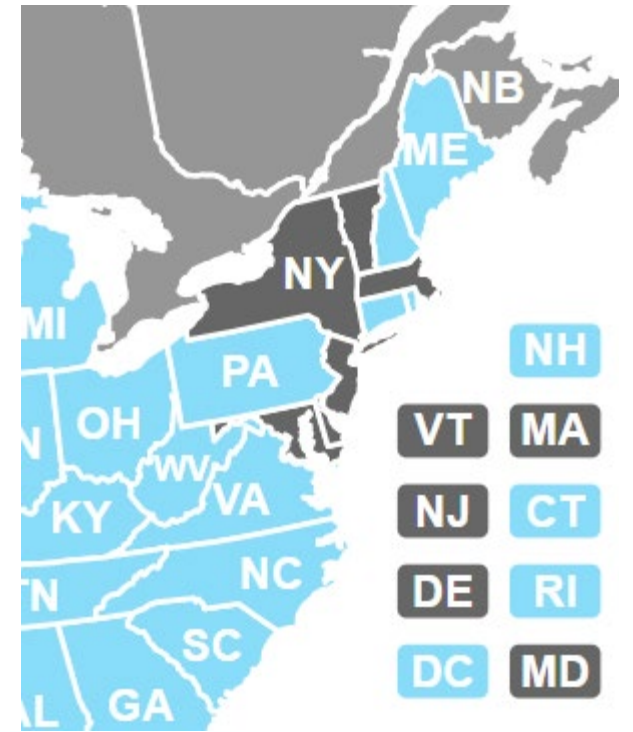
# XPS – DuPont, “Styrofoam”

- “Beyond Blue” (it’s grey)
- Canadian product
  - also grey, not compliant in NYS
- Many states still have (only) blue!

Old



New - compliant



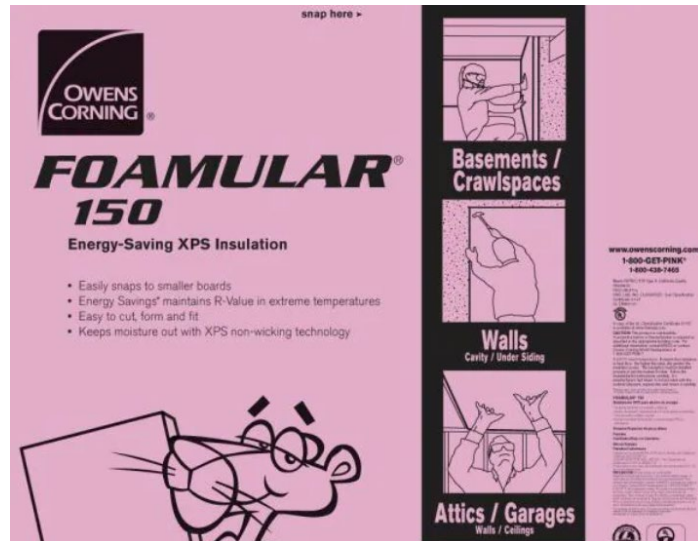
New product may also have a yellow label stating compliance with HFC regs.

# XPS – Owens Corning

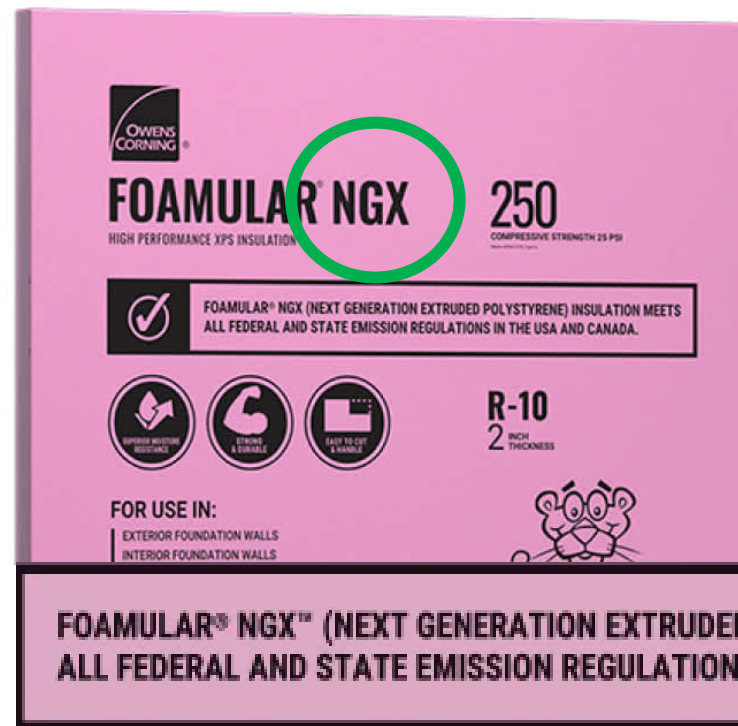


- Still pink: FOAMULAR® NGX™

Old



New - compliant



# XPS – Kingspan, GreenGuard

- Kingspan Greenguard “LG”
- Green, **blue** writing

Current Product



**Kingspan®  
GreenGuard®**

XPS Insulation Board  
Panneau isolant de PSX

ASTM C 578, Type IV  
CAN/ULC-701-05, Type 4

Thickness, inches Épaisseur, po	1/4	3/8	1	1 1/2	2	2 1/2	3	4
R-Value @ 75°F Mean Valeur R à 75°F	3.0	4.0	6.0	7.5	10.0	12.5	15.0	20.0

It means insulation has been tested to the proper R-value, the greater the insulating power. The insulation must be installed properly to get the maximum R-value. Before installing GreenGuard®, obtain installation instructions from your supplier or Kingspan Insulation LLC, Atlanta, GA 30329-1400.

Il signifie que l'isolation a été testée pour atteindre la valeur R appropriée, plus grande la puissance isolante, plus grande la valeur R. Avant d'installer GreenGuard®, obtenez les instructions d'installation auprès de votre fournisseur ou de Kingspan Insulation LLC, Atlanta, GA 30329-1400.

Go to [www.kingspan.com/us](http://www.kingspan.com/us) for the most current compliance information.

Allez à [www.kingspaninsulation.ca](http://www.kingspaninsulation.ca) pour la plus récente information sur la conformité aux normes.

WARNING: This product is combustible. A protective barrier or a thermal barrier is required as specified in the appropriate building code.  
AVERTISSEMENT: Ce produit est combustible. Une barrière protectrice ou thermique est requise, telle qu'appliquée de la code du bâtiment approprié.

Home Innovation  
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GreenGuard est une marque déposée de Kingspan Group plc aux États-Unis.

New LG Product



**Kingspan®  
GreenGuard® LG**

GG25-LG XPS Insulation Board  
GG25-LG Panneau isolant de PSX

ASTM C 578, Type IV 25 PSI  
CAN/ULC-701-05, Type 4

Thickness, inches Épaisseur, po	1/4	3/8	1	1 1/2	2	2 1/2	3	4
R-Value @ 75°F Mean Valeur R à 75°F	3.0	4.0	5.0	7.5	10.0	12.5	15.0	20.0

It means insulation has been tested to the proper R-value, the greater the insulating power. The insulation must be installed properly to get the maximum R-value. Before installing GreenGuard®, obtain installation instructions from your supplier or Kingspan Insulation LLC, Atlanta, GA 30329-1400.

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**WHERE SOLD, COMPLIANT WITH LOCAL HFC REGULATIONS**

WARNING: This product is combustible. A protective barrier or a thermal barrier is required as specified in the appropriate building code.  
AVERTISSEMENT: Ce produit est combustible. Une barrière protectrice ou thermique est requise, telle qu'appliquée de la code du bâtiment approprié.

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■ No Action    ■ Jan, 2021  
■ Climate Alliance  
■ July, 2021  
■ July, 2022    ■ Jan, 2022

“Where sold, compliant with local HFC regulations.”

# XPS – Performance, Cost, Availability



- Same R-value
- Blowing agent 2-4x more expensive
  - <~10% of material
- Hiccups with distribution of new XPS
- Per one manufacturer:  
“Most price increases likely part of overall inflation with all building products.”



# Polyisocyanurate



- Very little change – if any
- Most / all polyiso switched from HCFCs to pentane in ~2003.



# Low-Pressure Spray Foam: 2-component kits

- Perhaps the biggest change
- HFCs in most/all kits
  - Plus HFCs usually in both parts of the kits
  - Both parts need to be reformulated
- Shelf life concerns
  - Possibly reduced curing times
- Similar R-value, application



# Dupont Froth-Pak™



- Compliant product press release May 21, 2021
  - (at least that's when I saw it)
- Product [literature](#) available.
- Availability...?

Older packaging – unsure about  
HFC-free branding



# HandiFoam® E84 Low GWP



- “Low GWP” or “HFO”
- Released in February 2021
- HFC products still listed

Not Compliant



DEVELOPED WITH A  
LOW GWP BLOWING AGENT

“HFO”

Compliant



# Dap



- [Touch 'n Foam](#)® Professional Low GWP
- Still many HFC products listed



# High-Pressure Spray Foam



- Some open cell uses water, not HFCs
- Most/all manufacturers had HFO options before 2021
- Spraying is different
  - slower to spray, but can do thicker layers/passes
  - \*might\* be labor savings?
  - slightly higher R-value sometimes?
  - Refer to manufacturers for details!



HFOs are 2-4x more expensive  
<~10% of material

# Huntsman (Demilec, Lapolla, Icynene)



Several products labeled “HFO” e.g.

- HEATLOK HFO Pro
- HEATLOK HFO HIGH LIFT
- PROSEAL HFO
- Compliance not always clear
- HFC products still available
- Talk to suppliers

Lapolla products:

- FOAM-LOK 2000-4G
- others?



**HEATLOK<sup>®</sup> HFO<sup>™</sup> PRO**  
CLOSED-CELL SPRAY FOAM

# Natural Polymers



- [Natural-Therm 2.0 HFO](#)
- “Conventional” products still available

**Natural-Therm<sup>®</sup>**  **2.0 IBS/IBW HFO SERIES**

# BASF



## Low-GWP Products e.g.

- SPRAYTITE Comfort Series
- WALLTITE LWP
- SKYTITE LWP

HFC Products still available





# Single-component, cans

- Hard to find compliance on labels
- Many one-component products were already compliant: used hydrocarbons
  - lower R-value with hydrocarbons

SDS showed no HFCs in:

- DuPont
- Dap
- Handi Foam



# “Canister” 1-component

- Low-GWP products available
- e.g. [DAP](#), [HandiFoam](#)



Low GWP



“Regular” (non-compliant)





## A bit of chemistry

Three main HFCs banned outright in most foam insulation:

- HFC-134a                    1,1,1,2-Tetrafluoroethane
- HFC-245fa                1,1,1,3,3-Pentafluoropropane
- HFC-365mfc              1,1,1,3,3-Pentafluorobutane

Other HFCs are affected.

See [regulations](#).

# SDS



- *SOMETIMES* you can find HFCs in SDS documents
- All components not always listed

Example from SDS for **OLD** 2-part foam kit

HFC-134a



Component	CASRN	Weight percent	
1,1,1,2-Tetrafluoroethane	811-97-2	>= 10.0 - <= 30.0 %	
Glycerol propylene oxide polymer	25791-96-2	>= 10.0 - <= 30.0 %	
Polyester polyol, aromatic	Not available	>= 10.0 - <= 30.0 %	
Sucrose , propylene oxide	9049-71-2	>= 10.0 - <= 30.0 %	
Tris(1-chloro-2-propyl) phosphate	13674-84-5	>= 10.0 - <= 30.0 %	Hazardous
1,1,1,3,3 - Pentafluoropropane	460-73-1	>= 1.0 - <= 10.0 %	
Triethyl phosphate	78-40-0	>= 1.0 - <= 5.0 %	Hazardous
Ethylene glycol	107-21-1	> 0.1 - < 1.0 %	Hazardous



- All components not always listed

Example from SDS for 1-component canned foam

### 3. Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. %</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Dimethyl ether	115-10-6	1-5	GHS02	H220
Propane	74-98-6	0.5-1.5	GHS02-GHS07	H220-332-336
n-Butane	106-97-8	0.5-1.5	GHS02-GHS07	H220-332-336

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

# Other Possible Confusion



## ODP vs. GWP

- Ozone Depletion Potential
- Global Warming Potential

## “Green” Labels

- e.g. GREENGAURD does not mean it complies with GWP regulations
- Low VOC & health implications



# Summary



This is an overview - not comprehensive or authoritative!

- Our take as of June 1, 2021 – things will change
- Date of **manufacture** is the key
- See [regulations](#) for details

## Key products affected

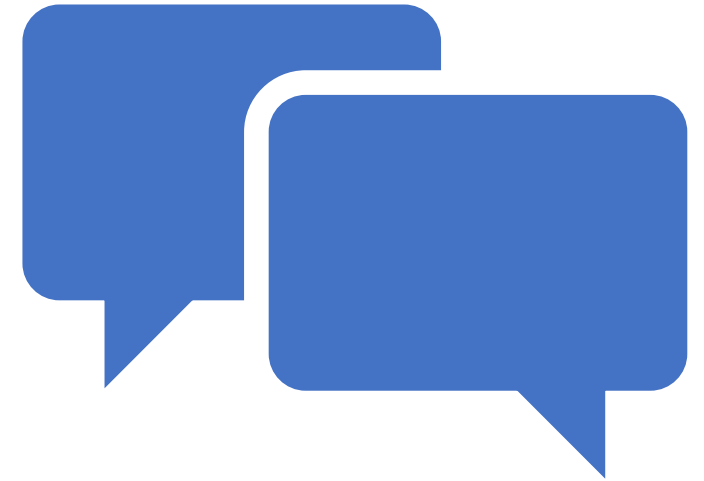
- XPS, low-pressure 2-component spray foam
- HP spray foam, maybe canned foam
- Alternatives are available!

## Buy products in NYS

- Check with manufacturers or distributors
- Most manufacturers very motivated to inform about compliance
- Search “<b>mfr</b> HFC ban” or similar

Questions?

Contact:  
Robb Aldrich  
[raldrich@swinter.com](mailto:raldrich@swinter.com)



# **NYSERDA**

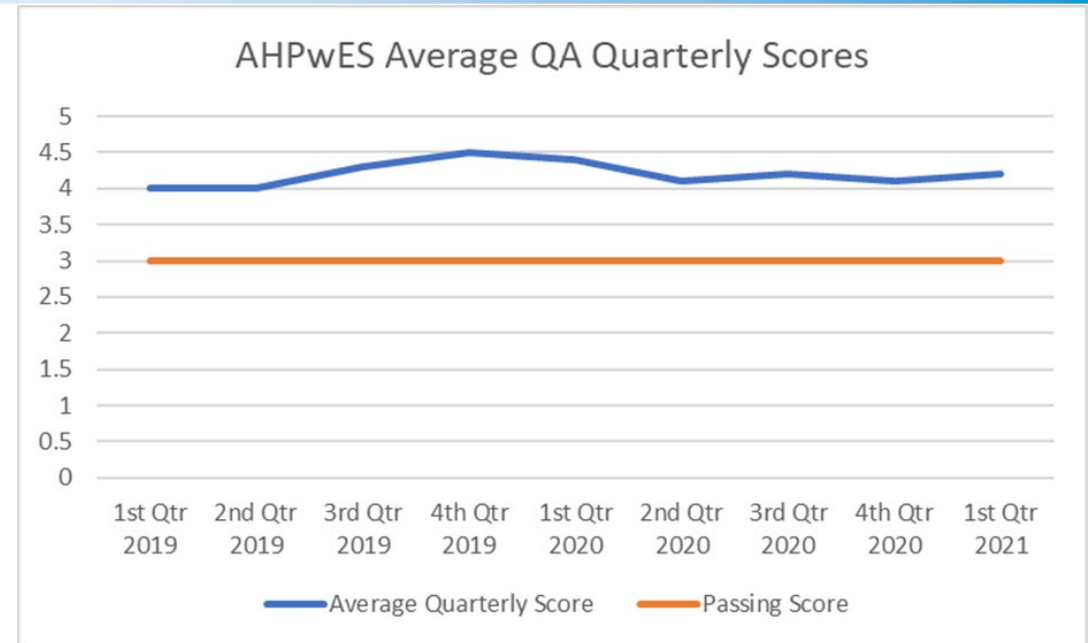
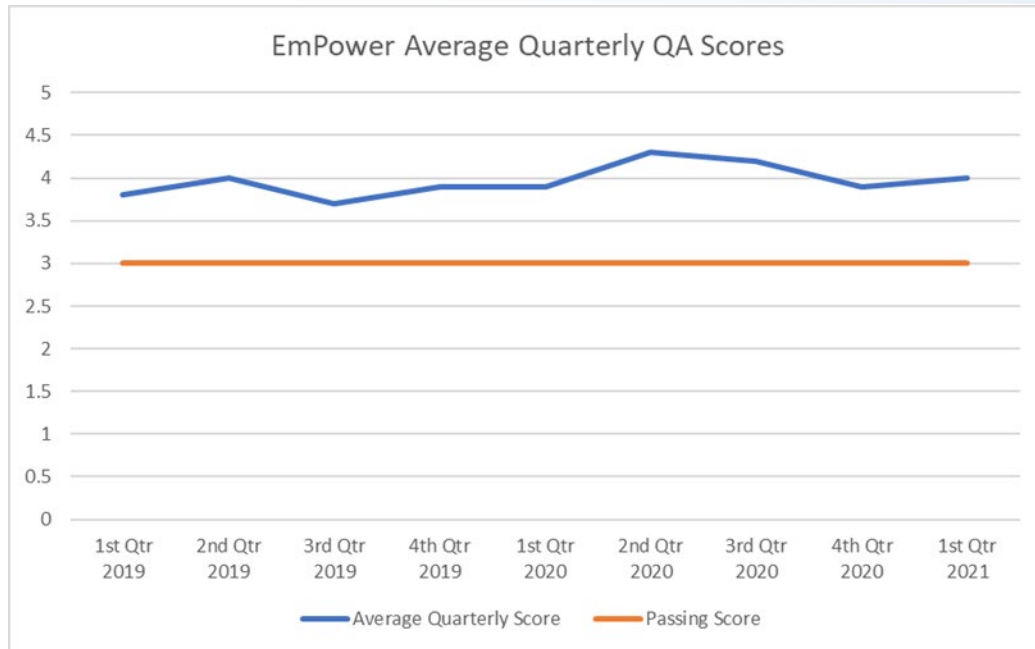
## **Standards and Quality Assurance Update**

**June 4, 2021**



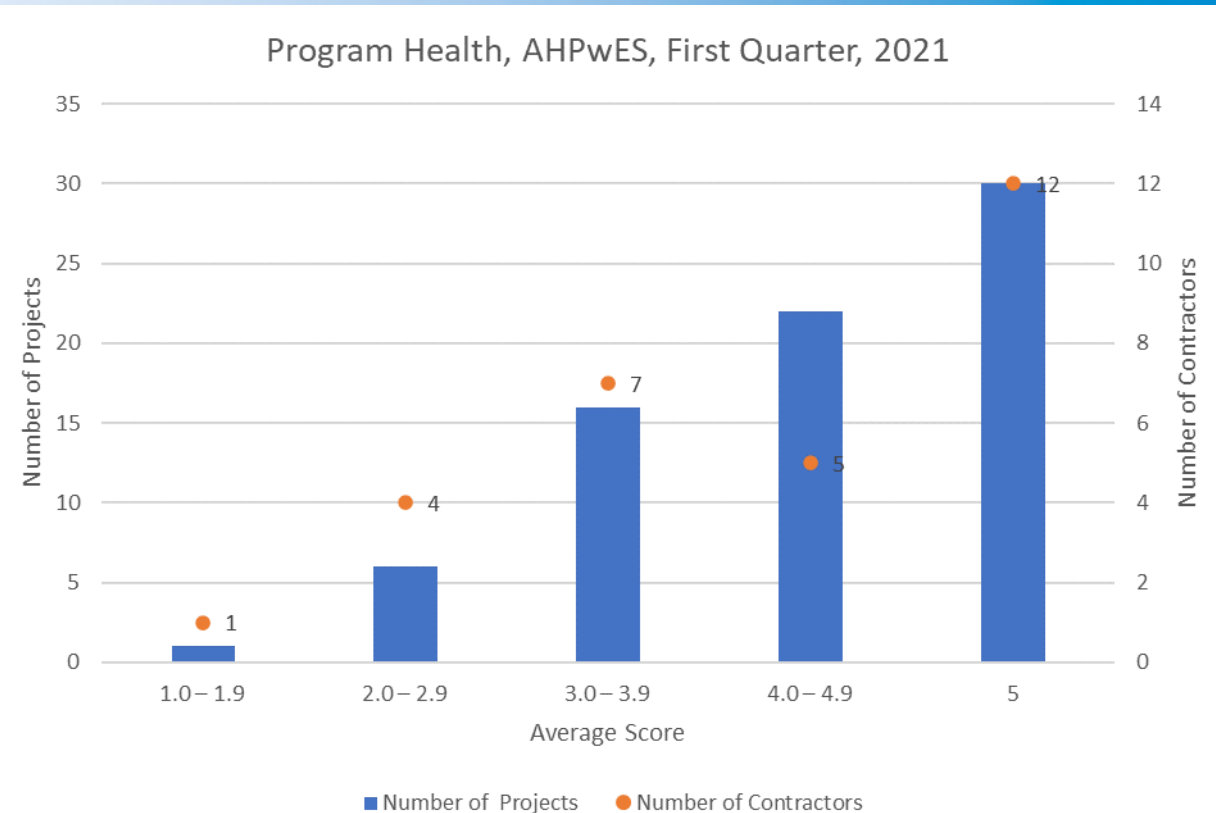
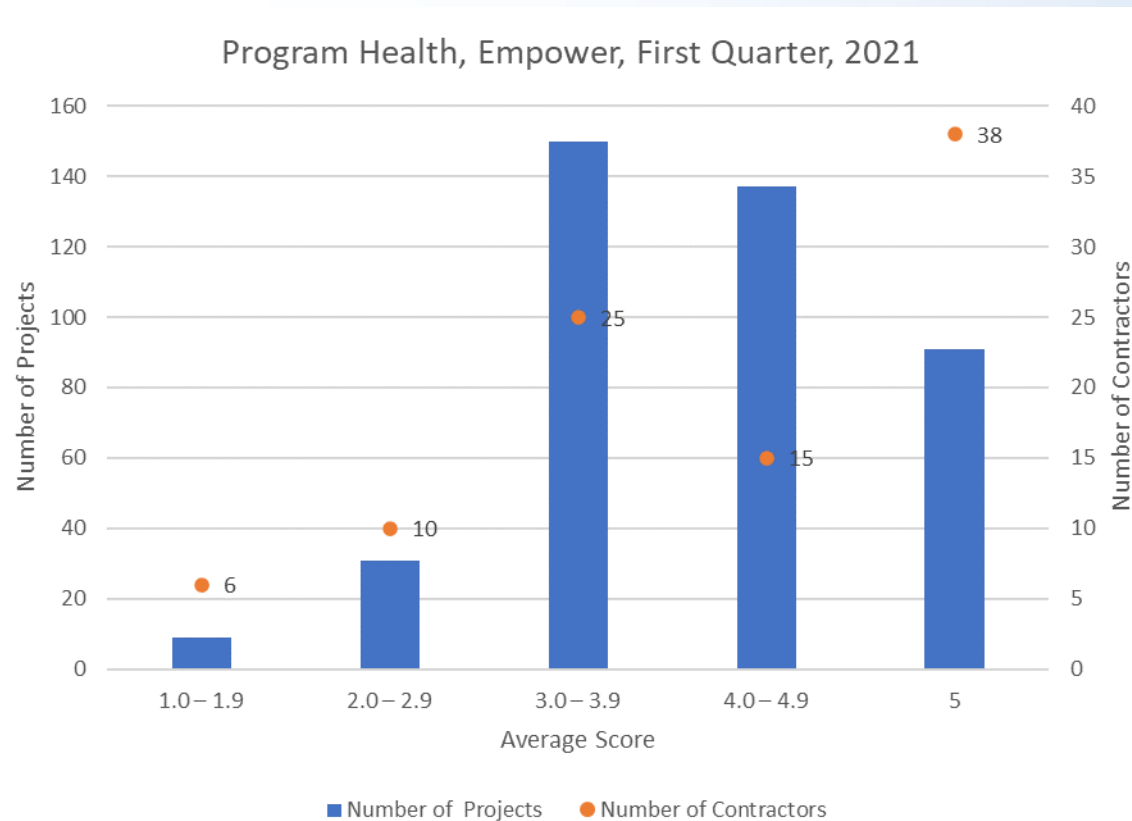
**NYSERDA**

# Quality Assurance Results – Average QA Scores



- Average score of around 4.0 in both EmPower and AHPwES indicates high quality work in both programs
- Quality has held steady over the past 2+ years and have consistently increased since 2016

# Quality Assurance Results – Distribution Q1 2021



- EmPower: 418 projects inspected, 90.4% of inspected projects passed, with 83% of contractors completing these jobs
- AHPwES: 75 projects inspected, 90.7% of inspected projects passed, with 83% of contractors completing these jobs

# What is Quality Assurance Data Used For?

- **Overall Program Health and Due Diligence**
  - Compliance with program requirements
  - Consumer protection and stewardship of public funds
- **Continuous Improvement and Market Support**
  - Tracking and trending non-conformances (State, Region, Contractor)
  - Root cause analysis to understand why critical non-conformances occur (just started)
  - Workforce training opportunities
  - Quality Control
    - Contractor Tools
    - Program Quality Control Assistance
- **Program Measurement and Verification**
  - Data feeds into Evaluation Measurement and Verification, EM&V, studies

# Recent Quality Assurance Activities/Improvements

- **Standardized measuring devices for spray foam**
- **Increased and solidified communication platform**
- **Met with PSEG to discuss their QC/QA process**
- **Benchmarked QA process with national and neighboring states.**
- **Formed the Residential QA/QC working group**
- **Rolled out a Customer Satisfaction Survey**
- **Finalized the Energy Affordability and Equity QA inspection checklist, planned to be implemented with revised program and Salesforce module completion**
  - **Reevaluation of non-conformance categories**
    - **Photo submissions for inaccessible attics - non-conformances reduced from major to minor**
  - **Checklist measures:**
    - **47% reduction (69 to 35)**
    - **Realigned with EmPower + redesign**
  - **Checklist tasks:**
    - **66% reduction (501 to 171)**

# Quality Assurance Additional Enhancements and Timing

**Considering modifications to Scheduling Questions and “Pass/Fail” wording on inspection reports**

**July 2021 expected decision and communication to contractors**

**Rolling out Inspection checklist with redesigned EmPower + program**

**Fall 2021**

**Rolling out Root Cause Analysis with contractor expert panel involvement**

**Late August 2021 – Training for Contractor Expert Panel**

**Early September 2021 – Roll out**

**Retiring QACSS and moving toward Salesforce**

**Early 2022**

**Building Contractor Score Cards – Once SQA module is in Salesforce**

**QA scores: Contractor and Program average**

**QC information**

**Customer Satisfaction Survey Results**

**Non-conformances: Contractor and Program**

**Realization Rates**

# Thank you

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