

NYS Clean Heat Working Group Series

for Participating Contractors & Industry Partners

Session #6

October 14, 2021, 8:30 am–10 am

**NYS Clean Heat
Joint Management Committee**



NYS Clean Heat

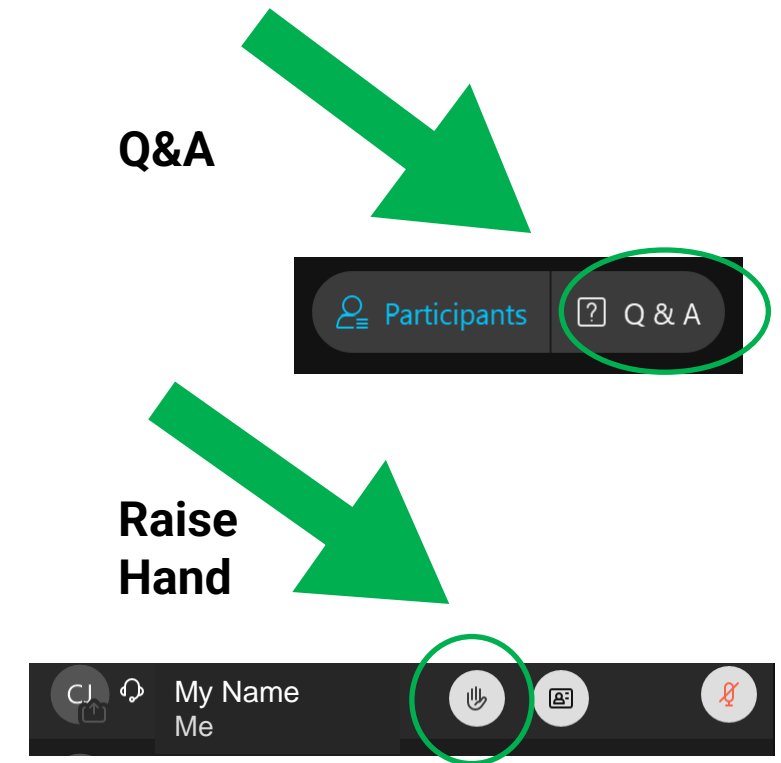
Agenda

- > **Meeting procedures** (2m)
- > **Welcome** (3m)
- > **JMC updates and discussion** (50m)
 - Overview of 10/1 Program Manual updates
 - Stakeholder feedback – follow-ups and next steps
- > **Stakeholder-initiated topics for discussion** (30m)
 - Tiered payments for large, custom projects (*NY-GEO*)
 - Technical eligibility (*Dandelion Energy*)
- > **Resources, support, and next steps** (5m)

Meeting procedures

Before beginning, a few reminders:

- > **All attendees will be muted**
 - > For questions or comments throughout, please use either the Raise Hand or Q&A functions
 - > Hover your mouse over your name in the Attendees list in order to see the Raise Hand icon displayed
 - > When you have finished asking your question, select the Raise Hand icon again to lower your hand
 - > If an attendee opts to use the Raise Hand function to ask a question or make a comment, the meeting moderator will call on that attendee and unmute individually
 - > Q&A function is private – the team will share public responses as appropriate
- > Slides, notes, and a compilation of Q&As will be posted after the meeting
- > If technical issues arise, please contact Paul Dauderis pdauderis@ceadvisors.com



Welcome

Joint Management Committee (JMC) Co-Chairs:

- > **William Xia**, Con Edison
- > **Wendy MacPherson**, NYSERDA

> Other JMC Members:

- **Ray Cotto**: Central Hudson
- **Ayomide Balogun**: National Grid
- **Nicole Williams**: NYSEG, RG&E
- **Mark Maloney**: Orange & Rockland

> Our implementation team today:

- **Mike L'Ecuyer**: ICF
- **Kenn Latal**: ICF

> Our Working Group support team:

- **Ben Davis**: Concentric
- **Pieter Zwart**: Concentric
- **Clara-Ann Joyce**: Concentric

Working Group Series

Review of typical meeting format

- > **Working meetings between Participating Contractors, industry partners, and other stakeholders with the NYS Clean Heat Program Administrators**
- > To foster:
 - Transparency
 - Coordination and communication
 - Prioritization
 - Solution development

Working Group Series

Review of typical meeting format

- > **Updates on previous topics** (various)
- > **Stakeholder presentations**
 - Presentation (5m)
 - Discussion time will vary by topic (5-30m)

Overview of 10/1 Program Manual updates

> Version 5

- <https://saveenergy.ny.gov/NYScleanheat/assets/pdf/NYS-Clean-Heat-Program-Manual.pdf>
- *If you are still seeing Version 4 of the Program Manual posted on the NYS Clean Heat website, try clearing your web browser's cache*

> Con Edison / Orange & Rockland adders

- Integrated controls (2A)
 - Eligibility criteria: <https://saveenergy.ny.gov/NYScleanheat/assets/pdf/NYS-Clean-Heat-Integrated-Controls-Eligibility-Guidance-Con-Edison-Orange-Rockland.pdf>
 - Qualified product list: <https://saveenergy.ny.gov/NYScleanheat/assets/pdf/Integrated-Controls-Qualified-Product-List-Con-Edison-Orange-Rockland.pdf>
- Decommissioning checklist (2B)
 - <https://saveenergy.ny.gov/NYScleanheat/assets/pdf/NYS-Clean-Heat-Decommissioning-Requirements-Checklist-Category-2B-Con-Edison-Orange-Rockland.pdf>

> HP + Envelope (4A) – Section 3.2.6

- Thresholds for eligibility, process for calculating savings

> Clarity on eligibility criteria for other **Category 4 heat pump technologies** including:

- Single package vertical heat pumps, ground source VRF, and energy recovery ventilators (*Section 3.2*)

Overview of 10/1 Program Manual updates

> Incentive updates

- Con Edison (for Residential, 1-4 family only):
 - Category 1 decreased from \$500 to **\$250 / unit** (inclusive of \$125/unit contractor reward)
 - Category 2 decreased from \$2,000 to **\$1,000 / 10,000 Btu/h** (inclusive of \$500/project contractor reward)
- Orange & Rockland: clarification of additional bonus incentive amounts and structure

> Future updates

- Errata identified to be compiled and shared next week – let us know of any via NYSCleanHeat@ceadvisors.com

Stakeholder feedback – OIT process improvements

- > September 30th meeting with HalCo, Dandelion, BlocPower
- > Discussion on suggested process improvements, process clarifications
- > For today: readout of items that can be incorporated in prescriptive OIT, with estimated timeframe

Stakeholder feedback – OIT process improvements

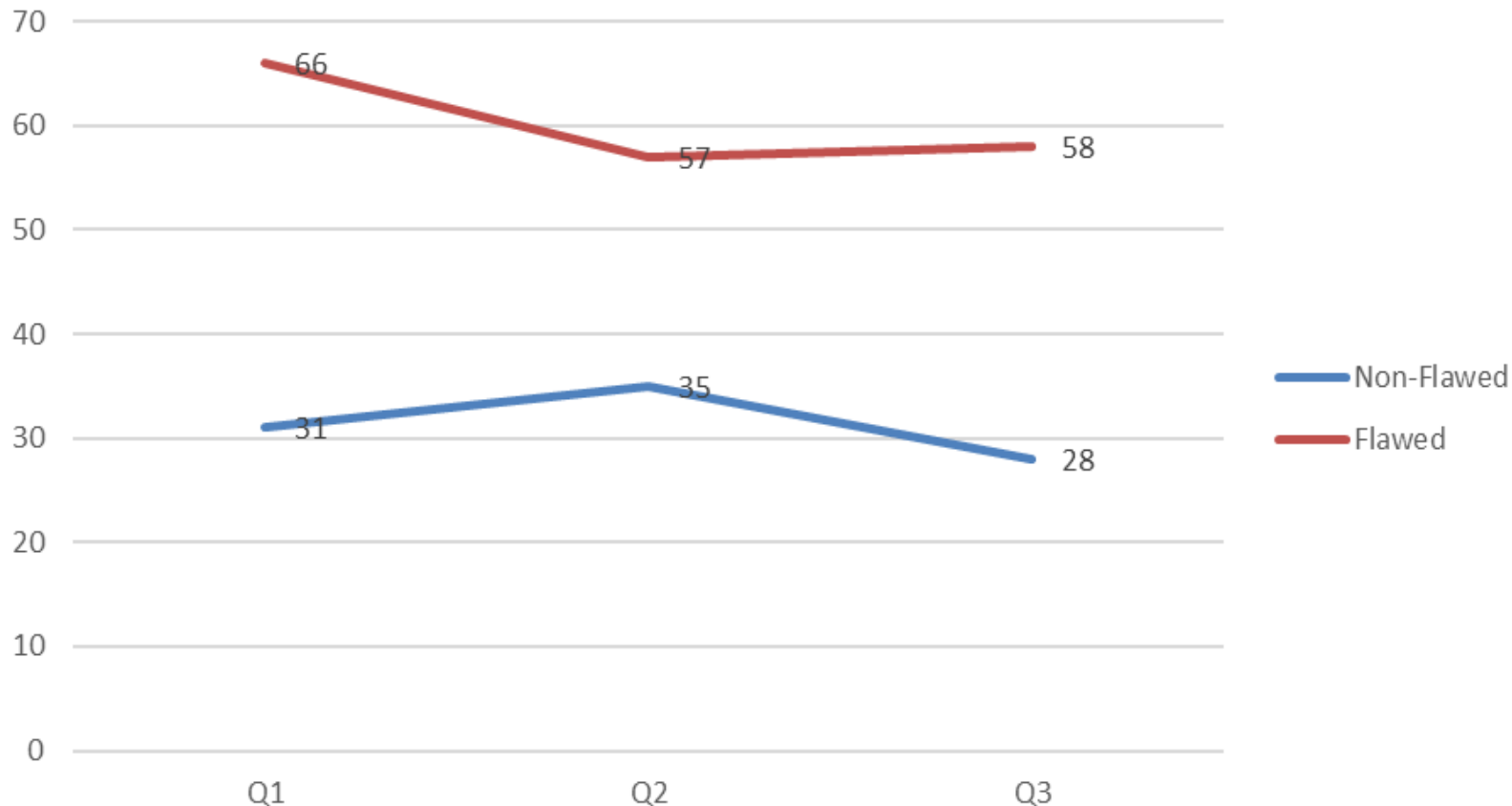
Improvement	Feasibility	Notes	Estimated ETA
Status Aging on OIT dashboard project list	High		Completed
Filtering on OIT Dashboard	High		Completed
Vision flawed communications: provide the premise address in the subject line	High		Completed
Activate Note Field for contractors to use when they fill out the initial application	High	ICF can turn on Notes field for new applications, in addition to when an application needs attention	Nov-21
HPWH OIT - simplified	High	ICF can direct contractors wishing to submit HPWH-only projects to use electronic HPWH applications that were set up for customers to use.	Nov-21
Texting capability on contractor communications	High	ICF is setting up texting both for project-specific communications and for general communications. Contractors will need to opt in and provide cell numbers	Nov-21
Synchronize Vision emails and texts with OIT status changes - prevent sending them a day early	Medium	We will change the order such that the OIT status change will precede email or text. Users who see a change in the OIT early in the morning can expect a text or email that day.	Nov-21
"Hover help" functionality - tips on OIT fields	High	ICF is currently working on field tip language	Dec-21

Stakeholder feedback – OIT process improvements (cont.)

Improvement	Feasibility	Notes	Estimated ETA
Cloning Measures	High	Planning to develop such that only serial number will need to be entered for the cloned equipment	Q1 2022
Make all versions of OIT identical	High	Needs common OIT platform, which in turn requires JMC harmonizing all aspects of the program that would affect the OIT	Q2 2022
Deploy bulk upload tool like the one deployed for Con Ed	High	The OIT bulk upload tool is complex b/c of attachment capability - requires one OIT platform.	Q2 2022
Smarter existing equipment type entries, based on fuel type entry	TBD	Inquiry underway on feasibility of restricting equipment type DDL based on fuel type field	TBD
Provide ability to export the OIT dashboard project list to a file format such as Excel	TBD	IT investigating feasibility of creating a new report or an alternative method that may work without needing to develop a report - will report back	TBD
Order of files uploaded into OIT should be shown in the same order as Document Details so user can verify everything is entered	TBD	Comment just received 10/12 and referred to IT	TBD
Adding Participation Acknowledgement Form moved the Add Document tab off the screen for a 15" laptop - adds time to find it	TBD	Comment just received 10/12 and referred to IT	TBD
Provide ability to open attachments in already-submitted OIT records	None	The OIT passes documents to OIT upon sending - it doesn't store them.	

Stakeholder feedback – ICF Process cycle times for complete projects

Q1-Q3 2021 Processing Time from Receipt to ICF Approval



- > Statistics have upward pressure in the short run due to number of older projects being resolved and processed recently
 - First for non-flawed, then for flawed applications
- > Efforts now continuing on both cohorts simultaneously
 - Some utilities have gone below 20 days for non-flawed
 - Also getting to brand new apps more quickly
 - Will keep up efforts to resolve flawed applications ASAP
 - The fewer flaws, the shorter the time across the board

Stakeholder feedback – GSHP checklist updates

- > Underwent checklist review with NY-GEO on GSHP revisions per previous feedback
 - Startup checklist documents compressed into one line item.
 - To be collected during application.
 - Removed redundant line items attested to in Ts & Cs and other program areas
 - Removed electrical code items
 - Clarified conditionally applicable items
 - QSPs will notify contractors and customers of warranty documents and training verification prior to onsite visits.
- > Next Steps
 - JMC will communicate updates and share updated checklist
 - Checklist updates to be implemented and enforced beginning December 1
 - JMC will provide additional guidance on “safe access” requirement
 - JMC to consider future items related to manufacturer warranty docs, air filter confirmation and more

Stakeholder Submission

> See following slides for discussion topic submitted by Zachary Fink of NY-GEO

Working Group Series

Stakeholder input template (1 of 3)

> Speaker and stakeholder(s) represented:

> Issue and context:

> Proposed change / solution requested:

Zachary Fink for the NY-GEO Board

Issue: The payment timing for Category 4 and 4a installations requires installer to cover costs without payment until the installation is complete, creating cash flow difficulties.

Proposed change –

10% - On Application Acceptance

30% - Loopfield Completion

30% - Heat Pump Installation

30% - System Commissioning

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Stakeholder input template (2 of 3)

- > Suggested priority level (High, Medium, or Low) with explanation:
- > Requested timing for change / solution:
- > Who else this issue affects:

High

30 Days – Allowing utilities time to establish administrative mechanisms.

This issue affects the entire supply chain of a geothermal installation. When an installer/developer is unable to pay suppliers and/or employees the process becomes far more difficult and expensive

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Stakeholder input template (3 of 3)

Larger projects are by nature months-long processes that incur expenses along the way. There are several milestones within large geothermal projects that represent progress involving financial outlays that would be appropriate points for partial payment

When payment of incentives comes upon project completion, it leaves all involved in the project in a financially vulnerable position.

Stakeholder Submission

> See following slides for discussion topic submitted by Rona Banai of Dandelion Energy

Working Group Series

Stakeholder input template (1 of 4)

> Speaker and stakeholder(s) represented:

Rona Banai and Ryan Carda, PE of Dandelion Energy

> Issue and context:

EWT minimum of 30°F does not take into account the full recommendation of the IGSHPA manual. Chapter 2, section 2.7, page 2-72 states: “As a starting point for design, the minimum entering water temperature should be 15 to 20°F below the deep earth temperature at the installation location or 25°F, whichever is greater.” The requirement to use a minimum of 30°F with no flexibility in the colder regions of NY (including the Capital Region and Western NY) results in the use of large, impractically sized ground loops to meet the requirement. This is especially impactful in use cases where the possibility of installing a horizontal loop is ruled out due to space limitations. Vertical loops are more expensive to install, and installation capacity is limited.

> Proposed change / solution requested:

Adopt the industry accepted language of the IGSHPA manual for designing to minimum EWT.

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Stakeholder input template (2 of 4)

- > Suggested priority level (High, Medium, or Low) with explanation:
- > Requested timing for change / solution:
- > Who else this issue affects:

High. This change would make horizontal ground loops more viable and increase the number of projects installed in the short and long term. Horizontal loops require more space to install, and longer loops are not always feasible to meet the 30°F minimum EWT. Horizontal loops do not require specialized drilling skills, which are in short supply. In National Grid territory, the cost benefits to the customer is compounded by the special 30% bonus offering in effect through November 30th.

November 1, 2021

All contractors who install in the Capital Region and Western NY. Numerous past and future customers who have been DQ'd due to insufficient space or who could not afford to use vertical drilling. *Bonus benefit for National Grid customers: With horizontal, we'd be able to offer at least a \$3k discount, and install the loop within the next 4-6 weeks (which would make them eligible for the added rebate for being installed by the November 30).*

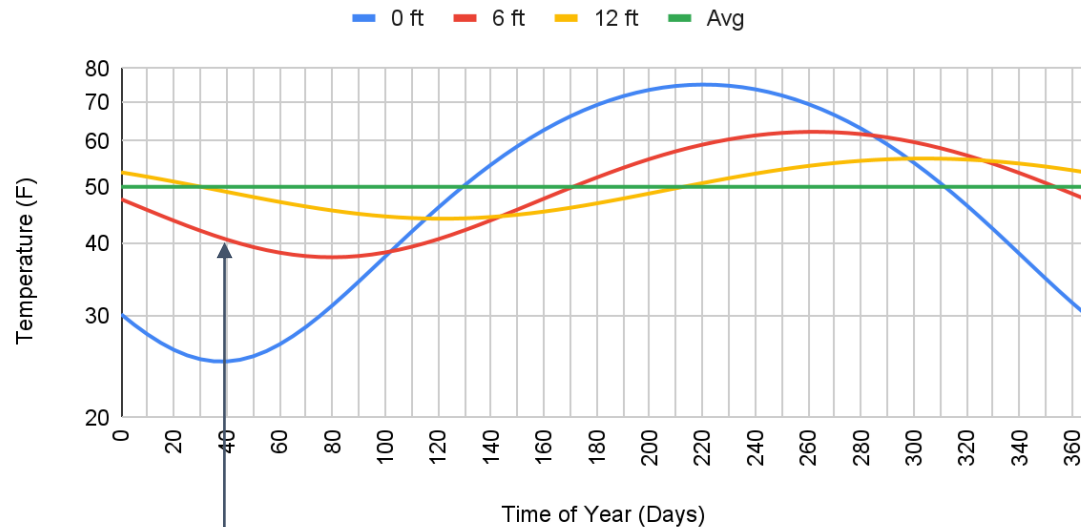
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Stakeholder input template (3 of 4)

Example: Capital Region

Albany, NY

Predicted Soil Temperature vs Time of Year



Peak Load in Early Feb

EWT _{min} (°F)	Peak Heating Load (Btu/hr)	Heating Capacity at EWT _{min} (Btu/hr)	% Sizing (vs. Peak Load)	% Energy from Geo	Design COP	Average COP	Predicted Annual Operating Cost (@ \$0.15/kWh)
30	50,000	49,300	98.6%	99.6%	3.92	3.87	\$1,239.96
25	50,000	45,925	91.8%	99.2%	3.70	3.72	\$1,290.26

Minimal loss in COP and minimal increase in annual operating costs

EWT _{min} (°F)	Length per Coil (ft)	Total Pipe Length (ft)	Land Area Required (ft ²)	% Decrease	Total Pipe Length (ft)	Installation Cost @ \$12/ft	Simple payback of extra loop to increase EWT (vs 25°F min EWT, years)
30	1,176	8,232	8,820	--	8,232	\$10,584	64
25	819	5,733	6,120	30.6%	5,733	\$7,344	--

No financial incentive for lower EWT

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Stakeholder input template (4 of 4)

Example: Capital Region Site Plan



- Address: 5 Blackburn Way, Latham, NY 12110
- Peak Heating Load: 55,976 BTU/hr

Ground Loop Type	Horizontal	Horizontal	Vertical
EWT_{min} (°F)	25	30	30
Trench Length (ft)	100	140	N/A
Installation Timeline	4 - 6 weeks	DQ'd	6 - 8 months
Average Heating COP	3.71	3.86	3.86
Predicted Heating Cost (@\$0.15/kWh)	\$1,306.01	\$1,255.36	\$1,255.36
Installation Cost (Ground loop only)	\$7,000	\$10,000	\$14,000
Additional National Grid Bonus Rebate	(\$2,500)	N/A	\$0

Resources, support, and next steps

- > Next PC&IP meeting on **Thursday, November 18, 2021** (8:30 AM-10 AM)
 - Proposals for discussion at the next Working Group must be received by **November 8th** and can be submitted to NYSCleanHeat@ceadvisors.com.
- > NYSCleanHeat@ceadvisors.com – for *program*-related inquiries
- > NYSCleanHeat@icf.com and (844) 212-7823 for *project*-related inquiries
- > NYS Clean Heat Website - (<https://saveenergy.ny.gov/NYScleanheat/resources/>)

NYS Clean Heat Project Status Inquiry Process

Project inquiries

1. Contractor reaches out to their dedicated account manager (AM) for issue resolution first
2. If the AM does not respond within three days contact NYSCleanHeat@icf.com or the Utility Program Manager as listed below. These Program Managers work for their respective utilities, which have contracted with ICF to handle applications.

Utility Program Manager contacts

- > **Central Hudson:** Ray Cotto, Assoc. Energy Efficiency Program Manager
Phone: (845) 486-5750, Email: RCotto@cenhud.com
- > **Con Ed:** Will Xia, Program Manager, Phone: (646) 761-1851, Email: xiaw@coned.com
- > **National Grid:** Ayomidé Balogun, Senior Program Manager
516-419-7365, Email: Ayomide.Balogun@nationalgrid.com
- > **NYSEG/RG&E:** Nicole Williams - Program Manager, Conservation and Load Management
Phone: 585-484-6592, Email: nicole.williams@nyseg.com
- > **Orange & Rockland:** Mark Maloney Phone: (845) 577-2433, Email: maloneym@oru.com

Resources, support, and next steps

- > **Email blasts** – twice per month
 1. Early week following Working Group: next steps, including PowerPoint and meeting notes
 2. Week prior to meeting: Agenda items and report-out on prior items
- > All program documents are located on the NYS Clean Heat Resources page (<https://saveenergy.ny.gov/NYScleanheat/resources/>)
- > All regulatory proceeding documents are located on the NYS DMM (<http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-M-0084>)

Thank you!

