TECH Contractor Knowledge Base

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PNNL Quality Install Tool

🕐 Jun 20, 2025 Knowledge

Answer

PNNL Quality Installation Tool

ATTENTION

As of June 20, 2025, HEEHRA Single Family Heat Pump HVAC rebates are currently fully reserved statewide. As a reminder, funding is first come, first served. Funding is not guaranteed until the reservation is approved.

If a reservation is rejected, the program team will not allow for resubmission at this time. Contractors have 120 days from reservation approval to convert the reservation to a claim before it is rejected.

Please note that currently, the program is not accepting new income verification applications or reservation requests for single family projects. We will provide updates if additional funding becomes available for single family upgrades. HEEHRA rebates continue to be available for statewide multifamily homes. More information can be found on the TECH HEEHRA Program page (https://frontierenergy.us5.list-manage.com/track/click? u=2767a2f40908a311eb1f66dbd&id=8c915285d7&e=1ed47c77d0).

To ensure quality installation in energy efficiency upgrade projects, all Single Family HVAC projects must either be HERS rated at test-out or installations must be documented via the Pacific Northwest National Laboratory's Quality Install (PNNL QI) Tool. (https://www.pnnl.gov/projects/quality-install-tool)

If the authority-having jurisdiction (AHJ) does not require a HERS test or it is otherwise exempt (see 'Testing Requirements' section here (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/Heat-Pump-HVAC-Incentives-Single-Family)), the project will require the PNNL QI tool report to be uploaded to the claim to be eligible for incentives.

The web-based PNNL QI tool allows contractors to collect information and photos throughout their installation. The tool also generates an exportable PDF of results that can be shared with customers and submitted to claim project rebates in lieu of a HERS report.

Our team will be reviewing the QI tool results PDF for completeness. Additionally, we will review to ensure that no false information has been provided. Finally, our team will be sure to confirm that the geo-tagged pre-install equipment/conditions photo and post-install equipment photo has been provided. Please see the below flow chart for assistance navigating the required assessments and how to manage them in the PNNL tool.

PNNL Workflow for TECH and HEEHRA
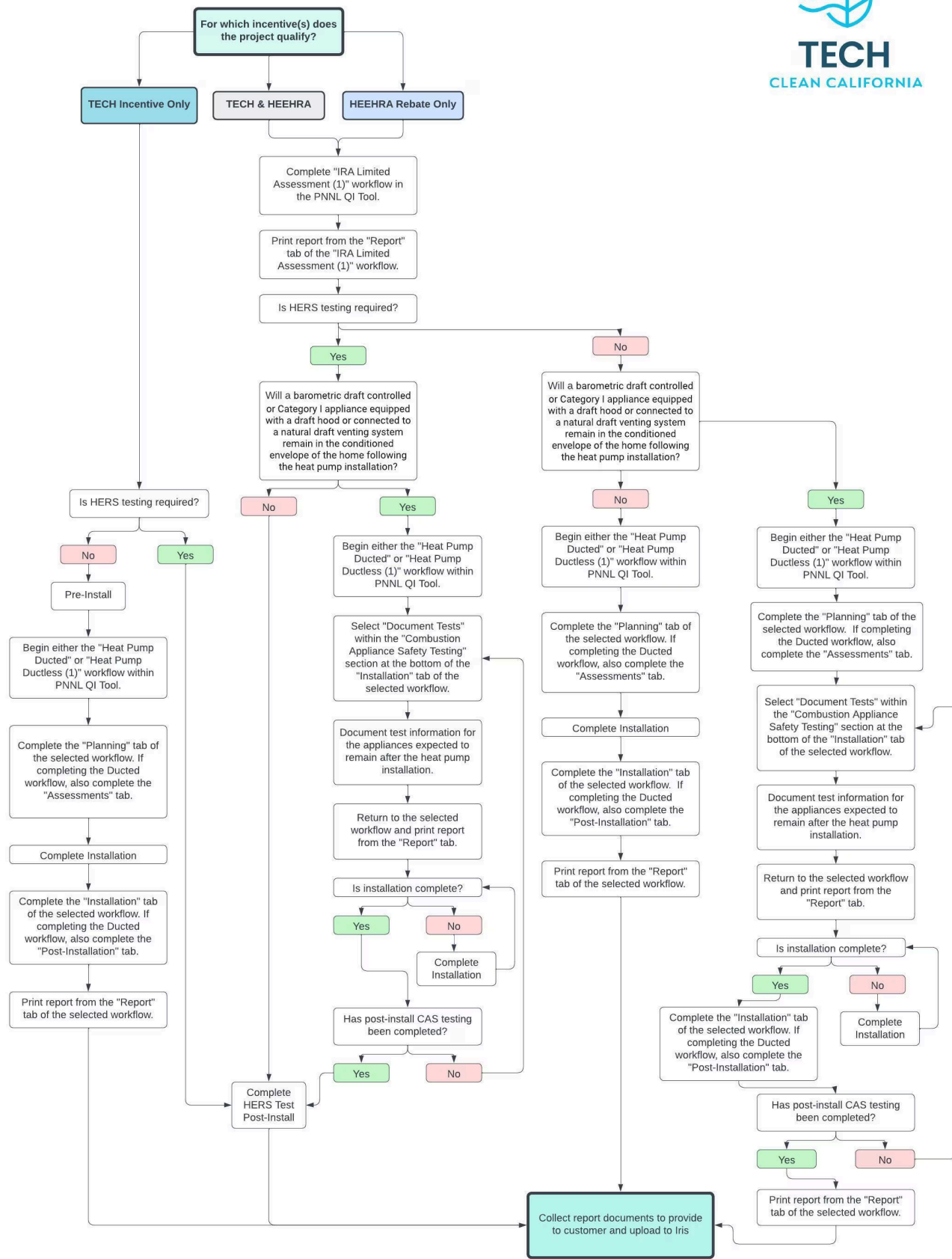
Photo Requirements for HEEHRA

Per DOE's Program Requirements and Application Instructions section 4.2.4 and the Data & Tools Requirements Guide section 2.1 and Appendix B, states **must collect geotagged post-install photos for all products** (i.e., appliances and building materials) rebated under the Home Efficiency Rebates (HOMES) and Home Electrification and Appliance Rebates (HEAR) programs.

When a retailer or distributor is reimbursed with a rebate, a state program can comply with post-install photo requirements by either collecting geotagged photos of product delivery or by requiring an agreement by the household that received a rebate to provide photos upon request.

Appliances rebated under the HEAR program will also require geotagged photos of pre-existing equipment/conditions.

Post-Install Photos:

- A post-install photo of the outdoor condenser units from each project.
- Reviewing a geotagged photo has been added to our application review workflow. We will be contacting for photos already uploaded that are not geotagged. We will also reach out to collect post-installation photos; please ensure these are geotagged if they are not already.

Please see the below guides for how to turn on Location Services for phones. **Review of photo geotagging has been added to our application review workflow.** We may contact contractor participants who have already uploaded photos that are not geotagged. **We will also be reaching out to collect post-installation photos, please make certain these are geotagged if they are not already.** Please make sure this information is distributed to your teams and we thank you in advance for helping us help you deliver new HVAC systems to low- and moderate-income customers.
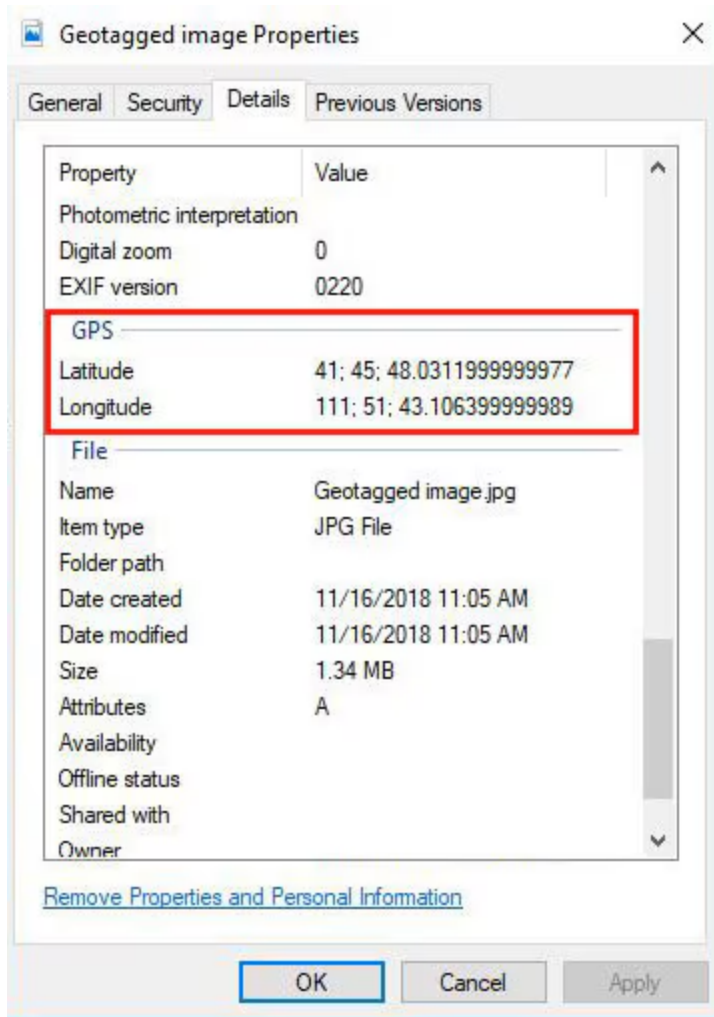
Example view of a photo that has had geotagging enabled

 The following resources provide additional instructions on how to geotag pre- and post-installation photos:

Developed by PNNL

1. Capturing Geotagged Photos (https://www.pnnl.gov/sites/default/files/media/file/Capturing-Geotagged-Photos_12.12.24.pdf)
2. Transferring Geotagged Photos (https://www.pnnl.gov/sites/default/files/media/file/Transferring-Geotagged-Photos_12.12.24.pdf)
3. Viewing Geotagged Data in Photos (https://www.pnnl.gov/sites/default/files/media/file/Viewing-Image-Geotag-Data_12.12.24.pdf)

Additional Resources

- Geotagged Photo Guide (https://frontierenergy-tech.my.salesforce.com/sfc/p/#5f000003GyZS/a/RO0000029iBx/m.YHijCLTqA9WZgcnQqqA_kb8BB1

zooa1bvSmc_DoK0)

- US Department of Energy Rebates Photo Collection Recommendations (https://frontierenergy-tech.my.salesforce.com/sfc/p/5f000003GyZS/a/RO0000029iDZ/k0tMMFVstlYbJX85iBbReH8WVk4lIIjYCLI_tRnbFq8) (this is noted for HOMES, but can also apply to HEEHRA)

Additionally, all HEEHRA Single Family HVAC projects will require the PNNL QI tool to collect documentation for satisfying the test-in limited HVAC assessment and combustion appliance safety (CAS) testing requirements. See HEEHRA Assessments and Safety Testing (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/HEEHRA-Assessments-Safety-Testing) article for more information.

How to use the PNNL QI tool

1. Access the tool at https://quality-install-tool.pnnl.gov/ (https://quality-install-tool.pnnl.gov/)
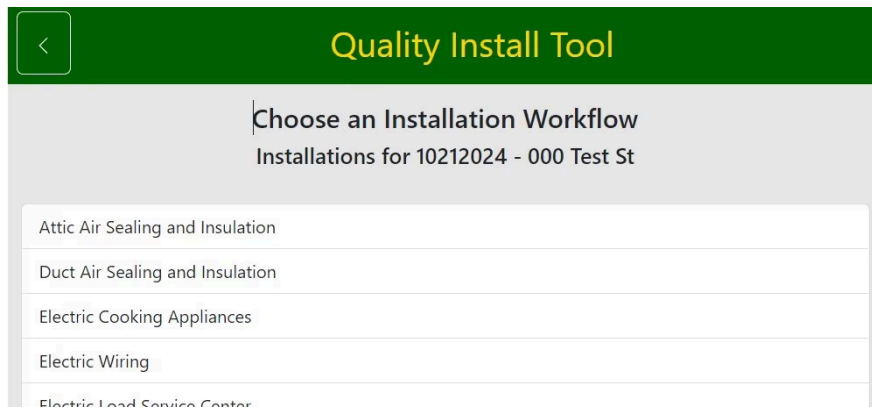
2. Click "Add a New Project"
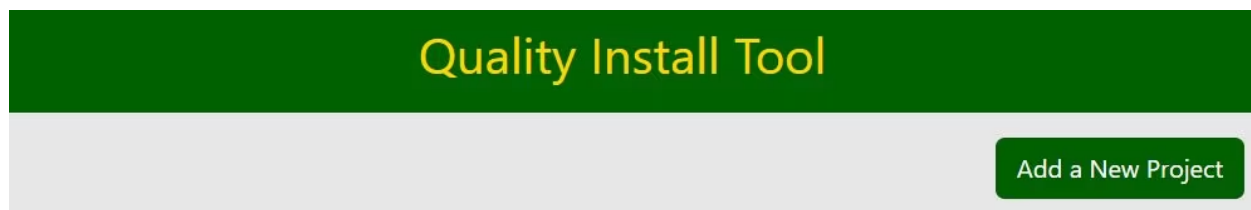
3. Add a new project and name it with the date followed by street name.

a. [MMDDYYYY – STREET NAME]

4. Fill in Installer Information and Project Address and click Save Project.

5. Click into the newly created project for a list of installation workflows.

Quality Install Tool

Choose an Installation Workflow
Installations for 10212024 - 000 Test St

Attic Air Sealing and Insulation

Duct Air Sealing and Insulation

Electric Cooking Appliances

Electric Wiring

Electric Load Service Center

6. For SF HVAC HEEHRA projects, complete the **IRA Limited Assessment** workflow. For TECH/3CE-only projects, skip to step 7 to document quality install and CAS.

    a. Add and name installation similarly to the project

    b. Click into the installation

    c. Turn on the geotagging feature. See the following resources for guidance on how to capture geotagged photos through the PNNL QI tool.
        i. Capturing Geotagged Photos (https://www.pnnl.gov/sites/default/files/media/file/Capturing-Geotagged-Photos_12.12.24.pdf)
        ii. Transferring Geotagged Photos (https://www.pnnl.gov/sites/default/files/media/file/Transferring-Geotagged-Photos_12.12.24.pdf)
        iii. Viewing Geotagged Data in Photos (https://www.pnnl.gov/sites/default/files/media/file/Viewing-Image-Geotag-Data_12.12.24.pdf)
    d. Follow prompts to assess and document information about the home, ceilings, ducts, ventilation, and heating/cooling systems
    e. Print Report from the Report tab and save to records
        i. Name file "Limited HVAC Assessment form"
    f. Go back to list of installation workflows

High Efficiency Water Heater

Insert Replacement Windows

Mechanical Ventilation

IRA Limited Assessment

IRA Limited Assessment
Installations for 10212024 - 000 Test St

Add Installation

IRA Limited Assessment
Installation for 10212024 - 000 Test St
10212024 - 000 Test St

Assessment   Report

Assessment date
10/21/2024

Assessment for
Individual unit/home

Conditioned floor area of single dwelling unit
1500SF_2500SF

Is the year the building was built known?
YES

Year building was built
2002
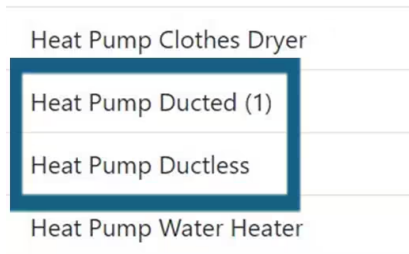
Enter as YYYY

Electrical panel max amps
50

Assessment   Report

Print Report

7. The next steps are dependent upon whether or not a HERS test will be completed.

    a. **Route A - If project will NOT have HERS test, click into the appropriate installation work to document quality install.**

   i. Add and name installation similarly to the project

  ii. Follow prompts to assess and document information on planning, installation, and post-installation

 iii. There will be a section asking contractors to upload load calculations to ensure the newly installed unit will provide most of the home's heating and cooling needs. ACCA-approved Manual J software is recommended but contractors can use their own software as long as the calculations show design conditions, conditioned square footage, and heating and cooling load calculations.

Nameplate photos must be geotagged either by enabling location access when taking pictures directly from the tool or updating photos to have location before uploading to the tool.

Manual J Calculation

Manual J Calculation Details ∧

Correctly sizing the heat pump for the home's heating and cooling needs is much more important for a heat pump than for a furnace and AC system. Use ACCA-approved Manual J residential load calculation software. It is recommended that the Manual J calculations be performed with the home occupant present that knows the most about the home to help determine the most accurate values to enter. Ask the home occupant whether any rooms presently get too hot or cold.

PDF of Manual J - File ∧

Attach the Manual J load calculations showing design conditions, conditioned square footage, and the heating and cooling load calculations.

File Types Accepted: PDF

Add File

Manual J Notes or Comments

iv. Skip the Combustion Appliance Safety Testing portion if not needed. Refer to the HEEHRA Assessments and Safety Testing (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/HEEHRA-Assessments-Safety-Testing) article

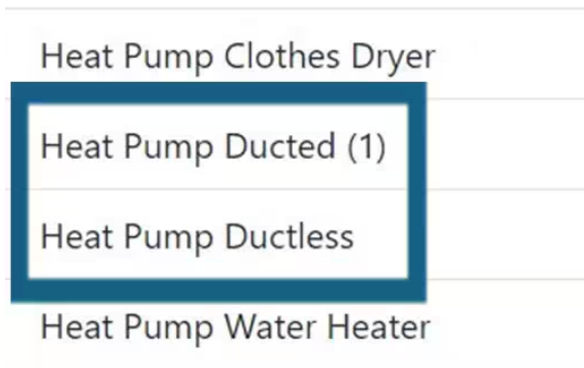v. Print Report from the Report tab and save to records

Assessment   Report

Print Report

vi. Name file "PNNL Quality Install Tool Export"

b. **Route B - If a project will have HERS test-out but CAS testing is needed, click into the appropriate installation workflow.**

i. Add and name installation similarly to the project
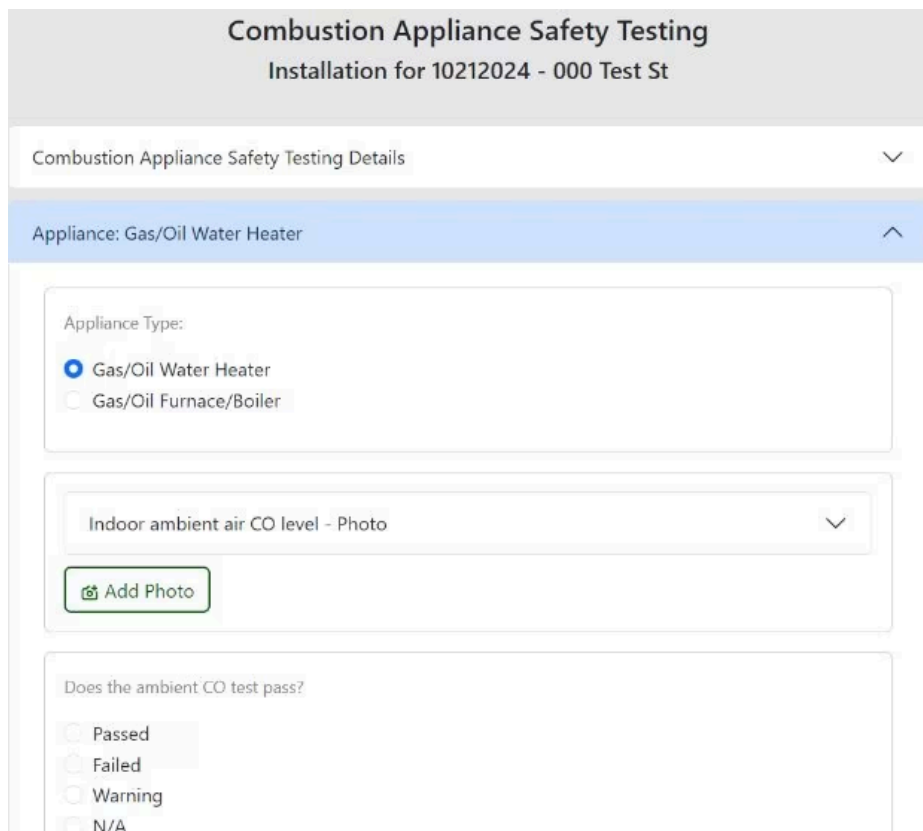
ii. Skip all portions except the Combustion Appliance Safety Testing

iii. Follow prompts to test and document CAS for the appropriate remaining combustion appliance
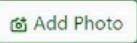
iv. Go back to list of installation workflows and click back into the appropriate workflow

v. Use the Project Invoice section to upload a picture of CAS certification badge. Include name and badge number in the photo.

vi. Print Report from the Report tab and save to records

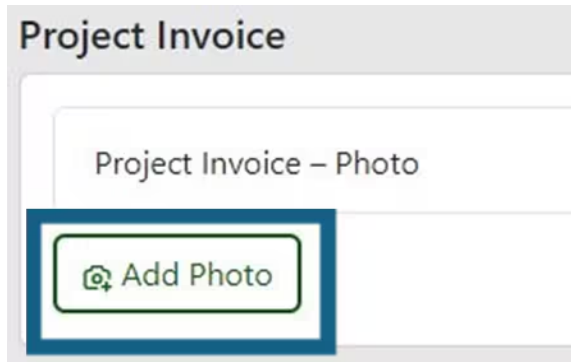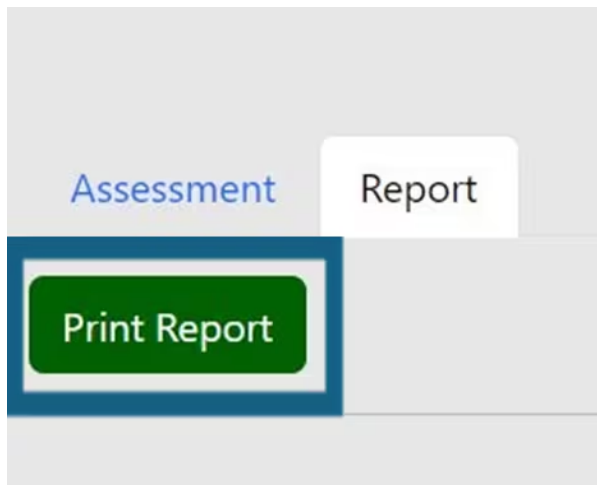vii. Name file "Combustion Safety Form"

c. Route C - **If a project will have HERS test-out and CAS testing is not needed, skip step 7.**

What do I do with these reports?

- Provide a copy of the Combustion Safety Form to the customer
- When applying for rebates, upload each report to the corresponding Iris field as shown in the table below. Ensure that all reports are correctly named and saved before uploading
- Note that PNNL forms are saved locally to a devices browser and will be wiped if using incognito or clearing browser data. Currently, the only method of sharing project data across users is to print out the completed or in progress PNNL form and send it to another user to refill in data.

Report	Corresponding Iris Field	Applicable Cases
Limited HVAC Assessment form	Limited HVAC Assessment form	For all claims
PNNL Quality Install Tool Export	PNNL Quality Install Tool Export and Combustion Safety Form	For claims without HERS and needs CAS testing
Combustion Safety Form	Combustion Safety Form	For claims with HERS and needs CAS testing

Related Articles

- Heat Pump HVAC Incentives – Single Family (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/Heat-Pump-HVAC-Incentives-Single-Family)

- HEEHRA Assessments and Safety Testing (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/HEEHRA-Assessments-Safety-Testing)

- Single Family HP HVAC Submission Step-by-Step (https://frontierenergy-tech.my.site.com/contractorsupport/s/article/Single-Family-HVAC-Submission-Step-by-Step)

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