

Tuesday, November 29, 2022

**Geothermal Energy Workgroup
Meeting #4**

Discussion of Scope of Work Revisions

Agenda

1:00pm – Introductions

1:05pm - Review of ICF Scope of Work Revisions

Phase 1 Scope of Work Revisions

- **Tasks 1, 3, and 12** – to be performed exclusively by Straughan Environmental.
- **Tasks 2 and 4** – Estimate the annual energy savings and peak demand impacts from GSHP, ASHP w/ electric resistance backup and ASHP w/fuel backup within a subset of the Maryland building stock compared to a base case.
 - Develop energy and peak demand impacts from TRM algorithms and supported by secondary research. Conduct secondary literature research to develop more realistic estimates of heat pump cost and performance curves over analysis horizon.
 - Estimate incentive levels required to encourage high levels of ASHP and GSHP adoption.
- **Task 5** – Conduct analysis for the state of Maryland as a whole, with focus on state-level customer impacts due to the infrastructure changes. It would combine a high-level approach on T&D with generation to do a full electric rate impact. It would focus on the change in results identified in the models. We would use those change trajectories to modify the rate estimate over time. We would not provide a deep dive into revenue requirements and cost of service but rather a high-level assessment that would provide representative average customer rate impacts. The impact would be from the PJM load forecast, or we could get as input the total loads for each case.
- **Task 6** – Conduct analysis for the state of Maryland as a whole.
 - Evaluate impacts from natural gas related job losses due to full electrification scenarios.
- **Task 7** – no proposed change in scope.
- **Task 8** – Scope would be increased to account for inclusion of ASHPs and additional analysis scenarios compared to the base case.
- **Task 9** – Analysis would be primarily qualitative in nature but complimented with a basic estimate of indoor air quality (and localized pollution) in the average household with natural gas heating (and cooking) compared to an all-electric GSHP or ASHP space heating alternative.

- **Task 10** – Analysis will evaluate the life-cycle costs of a one prototypical [primary or secondary] public-school building for both a GSHP and ASHP scenario compared to traditional energy systems. We will use DOE’s Commercial Reference Building Models as the basis of analysis for one construction vintage with one corresponding space heating and cooling system.
- **Task 11** – Conduct analysis for the state of Maryland as a whole.
 - Evaluate impacts from natural gas related job losses due to full electrification scenarios.
- **Tasks 13, 14, and 15** – no proposed change in scope. Scope would be limited to GSHP systems.

1:45pm – Questions

2:00pm - Adjournment