From: **Marc Hoeschele** mhoeschele@frontierenergy.com
Subject: FW: CBECC modeling results
Date: November 20, 2019 at 2:08 PM
To: peter@beyondefficiency.us
Cc: Joshua Pereira jpereira@frontierenergy.com, Ada Liu aliu@frontierenergy.com, nathan@beyondefficiency.us

MH

Peter –

Pasting your email to Josh in here…. Look at the summary tab in the spreadsheet.

Hi Josh,

I'm preparing to create the draw profiles for analyzing the impacts of the gas HPWH throughout the state of CA. Could you help me out by finding gathering information on the draw profiles that Marc, Alea, and Jenifer used to analyze the more traditional water heating options? Specifically I'm looking for:

- Number of bedrooms in each home- Shown in the spreadsheet. Assumed based on house size (we tried to use something reasonable)
- Conditioned floor area of each home- Shown in the spreadsheet
- Were all home types/sizes simulated in all climate zones, or were different assumptions made in different climate zones? – All sizes, all zones
- Did they use the CEC Prototype SF buildings? If so, can you gather the specs for those buildings? We ran the house sizes and bedrooms shown in the spreadsheet. DHW model doesn't care about anything other than floor area, # of stories, and CZ (… and WH type).

Marc Hoeschele, PE, on behalf of the California Statewide Utility Codes and Standards team
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From: Marc Hoeschele
Sent: Thursday, October 31, 2019 10:25 AM
To: peter@beyondefficiency.us
Subject: CBECC modeling results

Peter
Here is the output from the CBECC models. The CBECC energy use data is in columns A-O. The calcs to the right was me looking at relative performance. You can ignore the DWHR results for this project.

In terms of the Simple Annual tool, I would anticipate that we have inputs for average gas and electric rates. (Not sure about TOU, unless we want to look at a few cases and see

and electric rates. (Not sure about TOU, unless we want to look at a few cases and see what the typical on vs off peak usage would be, and then apply a ratio on the rates. The challenge with TOU is that to do it right, we would need to do winter and summer and also define on/off time periods for each, which adds a lot of complexity.)

Marc

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Copy of DHW cbecc...lts.xlsx