From: Hunt, Marshall

To: "Pennington, Bill@Energy"; Eilert, Patrick L; Anderson, Mary; Driskell, Kristen@Energy

Cc: Farahmand, Farhad (FFarahmand@trcsolutions.com); Bijit Kundu (BKundu@energy-solution.com)

Subject: RE: AGA Report

Date: Thursday, July 09, 2015 9:07:45 AM

ΑII

Normally DOE does not accept comments after the deadline. In the decision they will create their own version of the back and forth that we would like to do in response to GTI. I will raise the issue of giving responses to GTI with ASAP since they have the most direct link to DOE. If we need to dig into the LCC analysis done by GTI we will have Yanda of TRC do the work.

Marshall B. Hunt Professional Mechanical Engineer Codes & Standards Pacific Gas & Electric Company 415-260-7624 mbh9@pge.com

From: Pennington, Bill@Energy [mailto:Bill.Pennington@energy.ca.gov]

Sent: Thursday, July 09, 2015 8:38 AM

To: Hunt, Marshall; Eilert, Patrick L; Anderson, Mary; Driskell, Kristen@Energy

Cc: Farahmand, Farhad (FFarahmand@trcsolutions.com); Bijit Kundu (BKundu@energy-solution.com)

Subject: RE: AGA Report

Should we be gearing up to comment on the comments from the negative commenters (Peter Piper picked a peck ...)?

From: Hunt, Marshall [mailto:MBH9@pge.com] Sent: Wednesday, July 08, 2015 5:13 PM

To: Eilert, Patrick L; Anderson, Mary; Pennington, Bill@Energy; Driskell, Kristen@Energy

Cc: Farahmand, Farhad (FFarahmand@trcsolutions.com); Bijit Kundu (BKundu@energy-solution.com)

Subject: AGA Report

GTI Integrated Scenario Int-5 results also show increased annual primary energy consumption and greenhouse gas emissions for three of the four condensing furnace trial standard levels (90%, 92%, and 95% AFUE) compared to the 80% AFUE baseline furnace, whereas the DOE NOPR LCC model results show decreased annual primary energy consumption and greenhouse gas emissions. This increase in primary (or source) energy and associated greenhouse gas emissions results from fuel switching to electric options that are less efficient on a primary energy basis, especially electric resistance furnaces and electric resistance water heaters, as well as electric heat pumps in northern climates.

This is from the conclusions in the attached report. It had to cost them \$100,000++ showing the importance to them of stopping the standard. Also, the report can be used as the bases for a law suit. The LCC model has so many dials and buttons to manipulate that I am not surprised that they could manipulate it to create such a dramatically oppose result. Tracking down each and every input and its impact would be a huge job and still we would be on the opposite side of the argument.

AGA and NRDC were not able to come to an agreement on a capacity based compromise so there is no proposal for 80 AFUE up to XX Btuh and 92 AFUE above. Taking out the capacity section makes sense so that our letter is purely focused on supporting DOE and CA state policy goals. AGA will of course come out against any standard except 80 AFUE. I will have the next version out for review first thing in the morning.

Marshall B. Hunt
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