

From: Eilert, Patrick L
To: McHugh, Jon
Cc: Anderson, Mary; Hunt, Marshall
Subject: FW: Docs for your study
Date: Tuesday, November 17, 2015 9:24:14 AM

Jon:
How close are you on the deck?
Thanks.
Pat

-----Original Message-----
From: Hunt, Marshall
Sent: Tuesday, November 17, 2015 8:37 AM
To: Eilert, Patrick L
Cc: Zhang, Yanda; Jon McHugh
Subject: RE: Docs for your study

Pat
At some point this will be a good observation to share with our leadership. Also, Kristen at the CEC would be very interested.

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

-----Original Message-----
From: Zhang, Yanda [mailto:YDZhang@trcsolutions.com]
Sent: Monday, November 16, 2015 11:31 PM
To: Eilert, Patrick L; Jon McHugh
Cc: Hunt, Marshall
Subject: RE: Docs for your study

Jon,

I performed the billing impact analysis per Pat's request. Please include the following into your summary slides.

If DOE adopts a gas furnace standard that only requires furnace with heat input larger than 70 kBtu/hour to be condensing models, the loss of first-year energy savings from annual gas furnace installation in PG&E territory is estimated to be 3.1 MMT/year. The loss of cumulative savings from 2020, when the standard is expected to take effect, to 2030 is estimated to be 51 MMT. This means that PG&E customer would pay \$58 million more for heating their homes (assuming \$1.14/therm based on PG&E residential G-1 baseline rate).

The estimation is based on energy savings data obtained from the DOE's life cycle analysis model and market share data for different sizes of furnace provided in the DOE rulemaking document.

Yanda Zhang
Direct: 916.844.1103

-----Original Message-----
From: Eilert, Patrick L [mailto:PLE2@pge.com]
Sent: Thursday, November 12, 2015 7:59 PM
To: Jon McHugh <jon@mchughenergy.com>; Zhang, Yanda <YDZhang@trcsolutions.com>
Cc: Hunt, Marshall <MBH9@pge.com>
Subject: RE: Docs for your study

Can we estimate the total dollars that pge customers will have to pay if we the cutoff for condensing is 70 kbtu until 2030?

Sent from my Verizon Wireless 4G LTE smartphone

----- Original message -----
From: Jon McHugh <jon@mchughenergy.com>
Date: 11/12/2015 7:52 PM (GMT-08:00)
To: "Zhang, Yanda" <YDZhang@trcsolutions.com>
Cc: "Hunt, Marshall" <MBH9@pge.com>, "Eilert, Patrick L" <PLE2@pge.com>
Subject: Re: Docs for your study

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Yanda,

Is this the first year's worth of savings? If yes do I just multiply by 10 for the tenth year's savings?
Does this include replacements and retrofits or new construction only?
What was base and proposed efficiencies for these analyses?

Thanks,

Jon McHugh, PE
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McHugh Energy Consultants Inc
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Tel 916.966.8600
https://urldefense.proofpoint.com/v2/url?u=http://3A_www.mchughenergy.com&d=BQJFAg&c=hl_S_V_MyRCwXDjNCFvC1XhVzdhW2dOtrP9xOj43EYI&r=NFEIWh9TgrsB2jylwJkQ&m=UmSicylhJDQNPRAkzWjHdzelFUGTgE85BHACyuv7g&s=hkNEI-V3ErnDjM5Kq_JKYaXUXy08356Oulc-zOF_W0B&e=<https://urldefense.proofpoint.com/v2/url?u=http://3A_www.mchughenergy.com&d=BQMFAG&c=hl_S_V_MyRCwXDjNCFvC1XhVzdhW2dOtrP9xOj43EYI&r=NFEIWh9TgrsB2jylwJkQ&m=sOod3rRt7Dc9_HUxDPQEbGzICyRG&uId0H_09yOyLos&s=qG6DAOvw8stbQG-j5lqatbmmG-q_tlxvmlc315E15G1&e>

On Nov 12, 2015, at 6:54 PM, Zhang, Yanda <YDZhang@trcsolutions.com<mailto:YDZhang@trcsolutions.com>> wrote:

Jon and Marshall,

Here is estimate of furnace/water heater standards savings as compared to PG&E annual gas demand.

PG&E gas demand (2011)
(base on CEC California 2012 Gas report)

MMT/year

MMCF/day

Residential

2157

577

Commercial

912

244

Industrial

1858

497

Electric generation

2706

724

Wholesale

37

10

NGV - Natural Gas Vehicles

19

5

Total

7688

2057

Savings from federal appliance standards (MMT/yr)

% of PG&E Total annual demand

% of PG&E Total residential annual demand

Residential Gas Furnace

1.85

0.02%

0.09%

Residential Gas Water Heater

0.93

0.01%

0.04%

Total

2.77

0.04%

0.13%

Yanda Zhang
Direct: 916.844.1103

From: Hunt, Marshall [<mailto:MBH9@pge.com>]
Sent: Friday, November 06, 2015 5:08 PM
To: Jon McHugh <jon@mchughenergy.com>; Zhang, Yanda <YDZhang@trcsolutions.com>>
Cc: Eilert, Patrick L. <PLE2@pge.com>
Subject: Docs for your study

John and Yanda
Here are two docs to get you started. Look at my comment letter footnotes for important references.

Marshall B. Hunt
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mbh9@pge.com <<mailto:mbh9@pge.com>>

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