

U.S. DEPARTMENT OF ENERGY

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ENERGY CONSERVATION STANDARDS FOR  
COMMERCIAL CLOTHES WASHERS

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PUBLIC MEETING

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MONDAY

SEPTEMBER 24, 2012

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The meeting was held in the Forrestal Building, Room 8E-089, 1000 Independence Avenue, S.W., Washington, D.C., at 9:00 a.m., Doug Brookman and James Raba, Facilitators, presiding.

PRESENT:

DOUG BROOKMAN, Facilitator, Pacific Solutions, Inc.

JAMES RABA, Facilitator, Department of Energy

BETSY KOHL, Department of Energy

STEPHEN WITKOWSKI, Department of Energy

ALSO PRESENT:

BEN BARRINGTON, Navigant Consulting, Inc.

LINCOLN BILLINGS, Intertek

DONALD BRUNDAGE, Southern Company

JENNIFER CLEARY, Association of Home Appliance  
Manufacturers

ANDREW DeLASKI, Appliance Standards Awareness  
Project

CAMILLA DUNHAM WHITEHEAD, Lawrence Berkeley  
National Laboratory

JULIA FARBER, UL LLC

AMANDA GONZALEZ, Energy Solutions

MAITHILI IYER, Lawrence Berkeley National  
Laboratory

STEVE LEYBOURN, Association of Home Appliance  
Manufacturers

TIM LONG, Lawrence Berkeley National  
Laboratory

PHIL MANTHEI, Alliance Laundry Systems

JOANNA MAUER, Appliance Standards Awareness  
Project

MARK MENZER, Intertek

RENATA MORTAZAVI, Natural Resources Canada

CHUN CHUN NI, Lawrence Berkeley National  
Laboratory

ED OSANN, Natural Resources Defense Council

JUDITH REICH, Navigant Consulting, Inc.

LOUIS STARR, Northwest Energy Efficiency  
Alliance

TIMOTHY SUTHERLAND, Navigant Consulting, Inc.

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P-R-O-C-E-E-D-I-N-G-S

(9:00 a.m.)

MR. RABA: Okay, let's get started.

Please take your seats. Welcome. Whether you're attending today's public meeting via in person or via the webinar, this is the U.S. Department of Energy's public meeting about energy conservation standards for commercial clothes washers.

Today is Monday, September 24th, 2012, here in the Forrestal Building in Washington, D.C. My name is Jim Raba with the Department of Energy. I will be acting as your facilitator at the outset, and then turn it over to Doug Brookman when he arrives.

As facilitator, I'm your process custodian. My job is to ensure that we satisfy the purpose for the meeting, and in so doing anyone who wishes has an opportunity to speak. So good morning, good to see you all this morning, those present in the room, and good to hear from you, those present via the

1 webinar.

2 Steve Witkowski, would you have any  
3 opening remarks? Please.

4 MR. WITKOWSKI: No. I just want to  
5 thank you all for coming. We appreciate your  
6 participation, and as it says in the purpose  
7 of the meeting, this is for DOE to present its  
8 methodology for the standards rulemaking for  
9 commercial clothes washers, and this being a  
10 framework document meeting, we are here to get  
11 your input, either verbally or in writing and,  
12 you know, to ask for your participation.

13 We have a great deal to cover  
14 today. This is a half a day meeting, and  
15 there's another meeting on dehumidifiers this  
16 afternoon. So I'm not going to say any more  
17 than welcome, and we'll get started.

18 MR. RABA: Well, thank you, Steve.  
19 Steve, Steve Witkowski is your presiding  
20 officer for today. Traditionally, we start  
21 off by doing introductions around the room,  
22 and then followed by introductions from those

1 that are with us via the webinar.

2 I'm going to start in a clockwise  
3 fashion to my left. Introduce yourself,  
4 please. Turn your microphone on before  
5 speaking. State your name and organization.  
6 Speak loud and clear, and then turn your  
7 microphone off when you finish speaking.

8 MS. GONZALEZ: Hi. This is Amanda  
9 Gonzalez with Energy Solutions on behalf of  
10 the California Investor-Owned Utilities.

11 MS. CLEARY: Jennifer Cleary with  
12 the Association of Home Appliance  
13 Manufacturers.

14 MR. MANTHEI: Phil Manthei,  
15 Alliance Laundry Systems.

16 MR. BILLINGS: Lincoln Billings,  
17 Intertek Testing Services.

18 MS. KOHL: Betsy Kohl, DOE General  
19 Counsel.

20 MR. WITKOWSKI: You know who I am.

21 MR. RABA: That was Steve  
22 Witkowski, DOE. In the back please. Go to a

1 microphone. There's one behind you there, the  
2 stand up mic, remote.

3 MR. LONG: Hi. Tim Long from LBNL.

4 MR. RABA: Okay. Again, please  
5 introduce yourselves. State your name loud  
6 and clear and the organization.

7 MS. NI: Chun Chun Ni from LBNL as  
8 well.

9 MS. REICH: I'm Judith Reich from  
10 Navigant.

11 MR. BARRINGTON: I'm Ben Barrington  
12 from Navigant.

13 MR. SUTHERLAND: Timothy Sutherland  
14 from Navigant.

15 MS. IYER: Maithili Iyer from LBNL.

16 MS. DUNHAM WHITEHEAD: Camilla  
17 Dunham Whitehead, LBNL.

18 MR. RABA: Well, thank you. We're  
19 going to do the same introductions, again  
20 likewise via the webcast. Again, speak --  
21 state your name and organization, speak loud  
22 and clear, and when you're finished, please

1 place your telephone on mute when you're  
2 finished speaking.

3 This will help here in the room to  
4 reduce audio feedback that can occur between  
5 the speakers and the microphones here in the  
6 room. So again, please those participating  
7 via webinar, please introduce yourselves, name  
8 and organization. You can turn off mute  
9 please, if you're on the -- calling by  
10 telephone.

11 (No response.)

12 MR. RABA: Okay, nothing heard. If  
13 they have a queue from the sound stage here,  
14 if someone would like to speak via the  
15 webinar, please let us know. Raise your hand  
16 and queue it up. I'll get back, we'll do more  
17 introductions, around the room. Thank you.  
18 Two ways for the folks participating remotely  
19 to provide questions and comments.

20 One is via telephone. Indicate  
21 that you would like to provide a question or  
22 comment by raising your hand. And in the

1 GoToMeeting software, the moderator will be  
2 notified that your hand is raised, and once  
3 called upon, state your name and organization.  
4 Speak loud and clear.

5 Also, via the GoToMeeting, use the  
6 question window in GoToMeeting to submit a  
7 question to be relayed to the moderator, and  
8 note that if it's a technical question of some  
9 length, it's best to use this function to help  
10 us understand clearly what your comments or  
11 thoughts are.

12 One more thing. We have another  
13 guest here this morning. Please again turn  
14 your microphone on. State your name loud and  
15 clear, and your organization represented.

16 MS. MAUER: Joanna Mauer with the  
17 Appliance Standards Awareness Project.

18 MR. RABA: Okay, thank you and  
19 welcome. So thank you all for being here this  
20 morning. As part of our going over our  
21 overview of the meeting today, there's some  
22 things here we'd like to call our norms.

1 These have been, come over the years as  
2 something that's kind of reliable for us.

3 In my previous life, I would call  
4 these rules of engagement, but here they're  
5 norms. First, please listen as an ally. Use  
6 short, succinct statements to keep to the  
7 point. Hold sidebar conversations outside the  
8 room; focus on issues, not personalities.

9 One person speak at a time. Raise  
10 your hand to be recognized, and state your  
11 name for the record. And cell phones, please  
12 set them to silent or vibrate mode. Any  
13 questions so far?

14 (No response.)

15 MR. RABA: Okay. Some housekeeping  
16 items. You've all been given a visitor's  
17 badge. Please display that in full view above  
18 the waist so the security can see you.  
19 Emergency exits, each end of the passageway  
20 there are stairwells. Go all the way down to  
21 the first floor. Ground level will be under  
22 the building, first floor and exit first

1 floor.

2 We had one situation we did have to  
3 evacuate, but the point is think about  
4 emergency exits if the elevators are not  
5 working. Likewise, restrooms are either under  
6 the passageways, either direction. Places to  
7 eat for a coffee break or lunch, if you're  
8 going to stay that long.

9 We have a cafeteria, a small snack  
10 bar directly below us on the ground level  
11 floor. Take the elevators, go straight down.  
12 It's right directly below us, and also later  
13 on if you happen to want to stay for lunch,  
14 the meeting's over, something like that, we  
15 have a cafeteria at the far end of the  
16 building, the west building. You can go down  
17 to the ground floor again and walk in the long  
18 passageway just past the auditorium and up the  
19 escalator there and follow the crowd.

20 If you do leave the building, you  
21 must come back through security and  
22 participate with all the checks and things

1       like that. So if you want to go to the other  
2       building, go down underground and follow the  
3       rest of the people there, okay.

4               Evaluation forms. At the end of  
5       today's public meeting, we'll be handing out  
6       these evaluation forms. We need comments from  
7       you as to how you think the meeting went,  
8       okay, some constructive comments there.

9               And upon entry, you received a  
10       receipt with your laptop computer. DB  
11       Security gave it to you and they'll be looking  
12       for that upon exit to check the receipt and  
13       match the computer, and you'll be good to go.

14              If you've not already done so,  
15       please leave your business card with Brenda,  
16       so we can have a record of who's here and we  
17       can share that too. Now we have some more  
18       people that have come in the room. Please  
19       welcome to the public meeting for commercial  
20       clothes washers here at DOE.

21              Take your seats, please, around the  
22       table. There's plenty of room here. As you

1       come in the room, please introduce yourself,  
2       your organization. Turn your microphone on  
3       and speak clearly and loudly. Your name and  
4       organization, please sir.

5                   MR. MENZER: Hi. I'm Mark Menzer  
6       with Intertek Labs.

7                   MR. BRUNDAGE: Don Brundage,  
8       Southern Company, electric utility.

9                   MR. RABA: Sir?

10                  MR. OSANN: Ed Osann with the  
11       Natural Resources Defense Council.

12                  MR. RABA: And we have one more  
13       coming in. We have one in the back there.  
14       Use the stand up microphone please sir and  
15       introduce yourself.

16                  MR. LEYBOURN: Steve Leybourn.  
17       Steve Leybourn, Association of Home Appliance  
18       Manufacturers.

19                  MR. RABA: Okay, and again, please  
20       turn your microphone on. State your name and  
21       organization clearly.

22                  MS. STARR: Louis Starr, Northwest

1 Energy Efficiency Alliance.

2 MR. RABA: Did you get that? Okay.  
3 Thank you very much. Now turn your  
4 microphones off so we can get started then  
5 too. Okay. So you all received a packet of  
6 information when you came in the door. I'm  
7 referring to this packet right here.

8 It contains an agenda, a slide  
9 deck, which we're presenting from today, and  
10 which is the basis for discussion, and a copy  
11 of the Federal Register notice that announced  
12 the meeting.

13 We'll start briefly by going over  
14 the agenda today, the purpose of today's  
15 meeting is to present DOE's methodology for  
16 conducting energy conservation standards  
17 rulemaking for commercial clothes washers.  
18 DOE will seek input from you and others about  
19 the planned methodologies, assumptions, and  
20 data sources. After each presentation, we'll  
21 entertain comments and discussion.

22 We'll take a break around 10:30, a

1 short break there, and following that we'll  
2 continue with presentations and more comments.  
3 We're scheduled to finish today at 12:00 noon,  
4 so are there any comments or questions about  
5 today's agenda?

6 (No response.)

7 MR. RABA: Okay. So please keep  
8 the focus up here. Turn your cell phones to  
9 silent mode, if you would please, and limit  
10 sidebar conversations. Is there anyone now  
11 who wishes to make an opening statement, a  
12 brief opening statement?

13 None seeing at this time, note that  
14 throughout today's presentation,  
15 presentations, there will be other slides like  
16 this one to cue for issues. We'd like  
17 comments and feedback on. So you see this  
18 come up from time to time at the appropriate  
19 times, okay.

20 And Steve Witkowski, would you care  
21 to make rulemaking introductions. Okay, good  
22 to go.

1 MR. WITKOWSKI: I should stress,  
2 though, that the information for submitting  
3 comments is here in your data sheet as well as  
4 on line. So that's what we're looking for.  
5 We hope you participate in this entire  
6 rulemaking process. Thank you.

7 MR. RABA: Thank you. Again, we're  
8 here to listen to you, and we want your data,  
9 feedback and comments as well. So a lot to  
10 cover. Let's get started. Our first  
11 presenter will be Tim Sutherland from Navigant  
12 Consulting.

13 MR. SUTHERLAND: Test, there we go.  
14 Okay. I'll reintroduce myself. Tim  
15 Sutherland from Navigant. We know why we're  
16 here, so I'll continue. Throughout today's  
17 presentation, in specific areas DOE solicits  
18 comment. We'll present those in green boxes  
19 like this.

20 The comment numbers correspond to  
21 the comment numbers that appear in the  
22 framework document, and as always, DOE

1 welcomes comment on the specific issues  
2 identified, as well as any other issues that  
3 anyone may wish to comment on.

4 And here are the instructions for  
5 submitting written comments after today's  
6 meeting. The key date to note is that the  
7 comment period ends October 12th. So let's  
8 briefly review the regulatory history for  
9 commercial clothes washers.

10 The Energy Policy Act of 2005,  
11 which we'll abbreviate as EPACT, that amended  
12 the Energy Policy and Conservation Act of  
13 1975, or EPCA, to include commercial clothes  
14 washers as a covered product. EPACT  
15 established the first energy conservation  
16 standards, and in addition, it required DOE to  
17 complete two rulemaking cycles to determine  
18 whether to further amend those standards.

19 The first final rule was issued by  
20 DOE December 18th, 2009. That satisfied the  
21 first rulemaking cycle. The second final rule  
22 is required by January 1st, 2015, and the

1 current rulemaking will satisfy that second  
2 requirement.

3 EPACT 2005 also provided the  
4 definition for commercial clothes washers, in  
5 terms of what's considered a covered product.  
6 So I won't read through this entire  
7 definition, but the key point here is we're  
8 dealing with soft-mount clothes washers.

9 For horizontal access or front-  
10 loading, the capacity limit is 3.5 cubic feet.  
11 For vertical access or top-loading, the  
12 capacity limit is 4.0 cubic feet, and these  
13 are primarily washers that are found in multi-  
14 family housing, common laundry areas or coin  
15 laundries or laundromats.

16 In a brief look at the actual  
17 standards, so the first table there shows the  
18 standards that were established by EPACT 2005.  
19 Modified Energy Factor or MEF of 1.26, and  
20 that's a minimum, and a Water Factor or WF of  
21 9.5, and that is a maximum.

22 Those are the current standards.

1 The first DOE rulemaking cycle amended these  
2 standards by product class. It introduced  
3 separate standards for top-loading clothes  
4 washers and front-loading clothes washers,  
5 which are shown in the second table.

6 For top-loaders, the standard will  
7 be 1.6 MEF, 8.5 Water Factor, and for front-  
8 loaders, the standard will be 2.0 MEF, 5.5  
9 Water Factor, and again, those become  
10 effective January 8th, 2013.

11 I'll just pause to see if there are  
12 any questions on anything we've covered so  
13 far. Okay. Let's quickly review some of the  
14 test procedure issues that we, that are  
15 relevant to this current rulemaking.

16 EPCA requires commercial clothes  
17 washers to use the same test procedure as  
18 residential clothes washers, and on March 7th  
19 of this year, DOE published a final rule  
20 amending its procedures for residential  
21 clothes washers.

22 That final rule included minor

1 amendments to Appendix J-1, which is the test  
2 procedure that is currently effective. It  
3 also introduced a new test procedure at  
4 Appendix J-2, which we'll discuss over the  
5 next couple of slides.

6 Appendix J-2 retains -- retains  
7 calculations for the MEF and Water Factor  
8 metrics. It also establishes two new metrics,  
9 shown in this green box. The first is  
10 Integrated Modified Energy Factor or IMEF,  
11 which incorporates stand-by power measurement.

12 The second is Integrated Water  
13 Factor or IWF, which incorporates water  
14 consumption from all the wash temperatures  
15 included in the energy test cycle, rather than  
16 just the cold wash cold rinse, which is what  
17 Water Factor is based on.

18 Appendix J-2 will be required for  
19 use beginning March 7th, 2015, and that  
20 applies to both residential clothes washers  
21 and commercial clothes washers. This is  
22 important to note because the current clothes

1 washer standards and the amended standards  
2 that will be effective at that time are based  
3 on MEF and Water Factor, as measured according  
4 to Appendix J-1.

5 And MEF and Water Factor, as  
6 measured according to Appendix J-1, are not  
7 equivalent to MEF and Water Factor, as  
8 measured according to Appendix J-2. So to  
9 deal with this, DOE is considering developing  
10 correction factors for translating the MEF and  
11 Water Factor values measured under Appendix J-  
12 1 into their equivalent Appendix J-2 values.

13 Those correction factors would  
14 apply beginning March 7th, 2015, to determine  
15 compliance with the 2013 standard levels, and  
16 they would remain effective until the date of  
17 any new standards that may arise from the  
18 current rulemaking.

19 Just another slide to visually show  
20 the timelines that we're talking about. So on  
21 the top, we show the residential clothes  
22 washers, which are using Appendix J-1 until

1 March of 2015, switching over to Appendix J-2.

2 In addition, they'll be using the IMEF and IWF  
3 metrics at that point.

4 On the bottom, we show the  
5 commercial clothes washer timeline, using  
6 Appendix J-1 until March of 2015, at which  
7 point, as we just discussed, switching over to  
8 Appendix J-2, still based on MEF and Water  
9 Factor, but using the conversion factors to be  
10 developed.

11 And then from 2018 onwards, that  
12 will be determined during the course of this  
13 rulemaking. Whether the standards remain in  
14 terms of MEF or IMEF and Water Factor or  
15 Integrated Water Factor.

16 So let's pause here for comments.  
17 Item 1-1, DOE invites comments on developing  
18 correction factors for translating the  
19 Appendix J-1 MEF and Water Factor values into  
20 their equivalent Appendix J-2 values, that  
21 would apply beginning March 7th, 2015, at  
22 which time commercial clothes washer

1 manufacturers will be required to use Appendix  
2 J-2. DOE also welcomes any data on the  
3 appropriate correction factors.

4 MR. RABA: We have two comments.  
5 Go ahead, please, you're first.

6 MR. BRUNDAGE: Don Brundage,  
7 Southern Company. Not specifically to this  
8 correction factor, but the way I understand  
9 the washer test procedure, a large portion of  
10 the energy savings is the reduced drying time  
11 from reduced water in the clothes.

12 Has there been any modeling or  
13 research to see whether, to validate the  
14 reduced drying time?

15 MR. SUTHERLAND: I'm not sure  
16 exactly what you mean by "reduced drying  
17 time." In the test procedure, one of the  
18 components of energy consumption is an  
19 approximation of the dryer energy, and that  
20 derives from a measurement of the remaining  
21 moisture content.

22 So in Appendix J-2, that equation

1 has been changed. I'm not aware of any  
2 studies or anything that have validated that  
3 portion of the equation, but --

4 MR. BRUNDAGE: The reason I'm  
5 asking was I was at an Electric Power Research  
6 Institute meeting last week, and they were  
7 telling me about some of their ongoing  
8 research, and they've done some metering on  
9 residential washers and dryers in real live  
10 situations.

11 They said they weren't, they hadn't  
12 made it through all their internal  
13 validations. They weren't ready to release  
14 data, but they said their findings were that  
15 there was very little energy savings from  
16 reduced moisture content, because people still  
17 dried them the same way, even if they came out  
18 of the washer with less water in them.

19 MR. SUTHERLAND: Okay.

20 MR. BRUNDAGE: I strongly  
21 encouraged them to submit that before your  
22 comment deadline, but I don't have any hard

1 data. But they had told me they did not find  
2 much energy savings on dryer, on the dryer  
3 side.

4 MR. SUTHERLAND: Okay, thank you.  
5 As always, DOE welcomes whatever data may be  
6 out there. So we strongly welcome submission  
7 of that data.

8 MR. BRUNDAGE: Yeah.

9 MR. RABA: I saw a hand over here  
10 first and then over there second.

11 MR. MANTHEI: Phil Manthei,  
12 Alliance Laundry Systems. I think this one  
13 just doesn't pass the common sense test.  
14 DOE's proposing to use a lot of resources and  
15 time to produce correction factors which could  
16 be, have an error.

17 I think the requirement is that any  
18 existing model that's in production, when  
19 there's a standard or a test procedure change,  
20 still has to be valid after the test  
21 procedure.

22 Why can't DOE general counsel look

1 at a way to continue to use Appendix J-1 for  
2 three more years, and not waste resources for  
3 doing something that's really not necessary?

4 MS. KOHL: So this is Betsy Kohl  
5 with DOE General Counsel's office. There's a  
6 statutory requirement that the test procedure  
7 for commercial clothes washers be the same as  
8 the test procedure for residential clothes  
9 washers, and the requirement for compliance  
10 with that residential clothes washer test  
11 procedure is keyed off of the new standards,  
12 and that's March 7th, 2015.

13 So we're -- compliance with the  
14 statute is what's driving this. But we  
15 welcome comment obviously on what those  
16 correction factors might be.

17 MR. RABA: Thank you, Phil. Yes,  
18 over here for Ed on this side too.

19 MR. OSANN: Yes. This is Ed Osann  
20 with NRDC. Just to follow up on the first  
21 point that was made, we think it's important  
22 to consider the potential energy savings, the

1 validity of the potential energy savings  
2 derived from the test procedure in the  
3 commercial washer context.

4 The savings from reduced moisture  
5 content are most effectively captured with a  
6 dryer with, that is sensor operated, and in  
7 the commercial setting, it is more common  
8 perhaps than in the residential setting, for  
9 dryers to be operated on a time dry basis.

10 We think it would be appropriate  
11 for DOE to collect data on the existing stock  
12 of dryers in the commercial setting, and the  
13 availability of a sensor dry feature in  
14 today's stock of commercial dryers.

15 MR. RABA: Thank you. On the right  
16 please, from AHAM. Your name please?

17 MS. CLEARY: Jennifer Cleary. Can  
18 you just expand a little bit on how you are  
19 thinking about doing these correction factors?

20 MR. SUTHERLAND: I think probably a  
21 similar process that was used for residential,  
22 where units that are currently available on

1 the market would be tested to both test  
2 procedures, and the correlation of Appendix J-  
3 1 results to Appendix J-2 results, that would  
4 be the basis for their correction factors.

5 MS. CLEARY: And would you be using  
6 minimally compliant units or a mixture?

7 MR. SUTHERLAND: I don't think  
8 that's been decided yet.

9 MS. KOHL: Hi, this is Betsy Kohl  
10 at DOE OGC. We're aware of the statutory  
11 provisions and the reference to minimally  
12 compliant, so we'll be taking that into  
13 account when we develop the correction  
14 factors.

15 MR. SUTHERLAND: Thanks, Betsy.

16 MR. RABA: Any other comments or  
17 questions? Anything from our webinar  
18 audience.

19 (No response.)

20 MR. RABA: Okay, none assuming.  
21 Proceed with another one.

22 MR. SUTHERLAND: Okay, thank you.

1 Okay. So here are two comments related to the  
2 use of new metrics.

3 When using Appendix J-2, or this is  
4 with regards to using Appendix J-2, DOE  
5 invites comment on whether to establish new  
6 energy efficiency standards for commercial  
7 clothes washers, based on the new IMEF metric,  
8 which would incorporate standby and off mode,  
9 and Item 1-3, DOE invites comment on whether  
10 to establish new water efficiency standards  
11 based on the new IWF metric, which would  
12 incorporate water consumption from all the  
13 temperature cycles included as part of the  
14 energy test cycle.

15 MR. RABA: Yes, comment or  
16 question? State your name and organization.

17 MS. CLEARY: Jen Cleary with AHAM.  
18 On Item 1-2, I was wondering if DOE is  
19 considering doing a consumer use study, to  
20 determine how the usage for inactive versus  
21 standby might be different in the commercial  
22 context versus the residential context?

1 MR. SUTHERLAND: I'm not aware of  
2 any plans for consumer usage studies, but DOE  
3 does plan to conduct standby power testing as  
4 part of its investigation into the possibility  
5 of using the new metric.

6 MS. CLEARY: I just have a follow-  
7 up question, Jen Cleary.

8 MR. RABA: Sure, go ahead.

9 MS. CLEARY: Do you also anticipate  
10 that the definition of standby might be the  
11 same or different for commercial?

12 MR. SUTHERLAND: That will be one  
13 of the issues under investigation during this  
14 rulemaking.

15 MR. RABA: As we go through the  
16 comments and the questions, again, I would  
17 like to hear from you with your written  
18 comments as well. It would be very helpful.  
19 Thank you. Anybody else here in the room?  
20 Remotely?

21 (No response.)

22 MR. RABA: Okay. Let's go ahead,

1 please.

2 MR. SUTHERLAND: Okay. One  
3 additional note. There may be other test  
4 procedure issues that crop up during the  
5 course of this rulemaking. So DOE will  
6 consider any other test procedure issues  
7 relating to the use of Appendix J-2 throughout  
8 this rulemaking for commercial clothes  
9 washers.

10 Okay. We have just a few slides  
11 here to describe the overall rulemaking  
12 process. For energy conservation standards  
13 rulemaking, new or amended standards must be  
14 designed to achieve the maximum improvement in  
15 efficiency that is technologically feasible  
16 and economically justified, and DOE performs a  
17 variety of analyses to make that  
18 determination.

19 This table shows the analyses that  
20 DOE conducts to determine technological  
21 feasibility, and we'll discuss each of these  
22 analyses in greater detail throughout today's

1 presentation.

2 The second table shows the seven  
3 factors that DOE must consider, to determine  
4 whether new or amended standards are  
5 economically justified, and the seven factors  
6 required by EPCA are shown on the left, and  
7 the corresponding analyses that DOE conducts  
8 are shown on the right. Again, we'll discuss  
9 each of these analyses in more detail  
10 throughout today's presentation.

11 Here's an overall look at the  
12 schedule for this rulemaking. Beginning with  
13 the framework, which was published on August  
14 13th of 2012.

15 The next step will be the NOPR,  
16 which is the Notice of Proposed Rulemaking,  
17 with a target publishing date of January 31st,  
18 2014, and the final rule target date is  
19 December 31st, 2014. As shown on the  
20 timeline, the 2013 standards will become  
21 effective January 8th, 2013.

22 DOE plans to leverage the analyses

1 that were performed during the previous  
2 commercial clothes washer rulemaking, which  
3 wrapped up at the end of 2009, beginning of  
4 2010, leverage those analyses to allow DOE to  
5 proceed directly to the NOPR stage, following  
6 the framework stage.

7 Here's a quick look at the various  
8 analyses that DOE will perform during the NOPR  
9 period. When DOE publishes the NOPR, that  
10 will be a preliminary determination of whether  
11 standards should be amended, and if so, the  
12 proposed new levels. The results of the NOPR  
13 will be presented in a technical support  
14 document or TSD, and there will be a public  
15 meeting and comment period following  
16 publication.

17 After that, DOE will revise its  
18 NOPR analyses as necessary, based on public  
19 comments. Also, there will be consideration  
20 of the Department of Justice determination of  
21 any impacts on market competition.

22 Finally, the final rule will

1 provide DOE's determination of whether  
2 standards should be amended, and if so, the  
3 new standard levels. The final rule will also  
4 provide the compliance date of any new  
5 standards, and the final rule will have its  
6 own separate technical support document.

7 So any questions on the overall  
8 process, before we continue discussing the  
9 individual NOPR analyses?

10 MR. RABA: Go ahead, please.

11 MS. CLEARY: Jen Cleary with AHAM.  
12 I was just wondering why DOE decided not to do  
13 an ANOPR.

14 MR. SUTHERLAND: The ANOPR or the  
15 preliminary analysis, DOE felt that because  
16 the prior rulemaking wrapped up at the  
17 beginning of 2010, that DOE would be able to  
18 leverage a lot of the analysis that was  
19 performed during that period, which would  
20 allow it to effectively shorten the analysis  
21 period for this rulemaking. So DOE felt that  
22 that would allow it to go straight to the

1       NOPR.

2                   MR.   RABA:        Other    questions,  
3       comments?

4                   (No response.)

5                   MR. RABA:    Before we proceed, I saw  
6       a couple of folks arrive, albeit late.  Those  
7       who just arrived recently, please state your  
8       name with the microphone over there, remote  
9       microphone, and your organization represented.

10                  MR.   DeLASKI:    Andrew  DeLaski,  
11       Appliance Standards Awareness Project.

12                  MS.  FARBER:  Julia Farber with UL.

13                  MR.  RABA:  Anyone  else,  please,  
14       that slipped in?  Okay.  Go ahead.  Okay.  
15       Wait, wait.

16                  MS.  GONZALEZ:  I actually have a  
17       question.

18                  MR.  RABA:  Name and organization?

19                  MS.  GONZALEZ:  Yes.  This is Amanda  
20       Gonzalez on behalf of the California IOUs.  
21       When you said that DOE would consider any  
22       other issues with the test procedure for

1 commercial clothes washers, does that mean  
2 that DOE will consider amending them for the  
3 commercial clothes washer rulemaking?

4 MR. SUTHERLAND: DOE, statutorily,  
5 commercial clothes washers are required to use  
6 the residential test procedure. But DOE will  
7 investigate any test procedure issues that  
8 need to be investigated. Well, Betsy, do you  
9 have any -- okay.

10 MR. RABA: Thank you. Others,  
11 please? Go ahead.

12 MR. BRUNDAGE: Don Brundage,  
13 Southern Company. While you have to use the  
14 same test procedure, you could do something  
15 like make assumptions that for commercial,  
16 they have to make assumptions about percentage  
17 in the market of things like water sensors and  
18 the dryers and that submarket.

19 There's ways to do it that could  
20 address some of these issues on commercial  
21 while using the same test procedure.

22 MR. WITKOWSKI: Okay. In the back

1 there please, Andrew DeLaski?

2 MR. DeLASKI: I have follow-up.  
3 This is Andrew DeLaski. I just want to follow  
4 up on Don's point.

5 It just strikes me, just thinking  
6 about this, that there's no reason why the  
7 residential clothes washer test method might  
8 not have a commercial section, just to make  
9 that sort of explicit, that you could have a  
10 commercial section of a residential clothes  
11 washer test method, and it may be a way around  
12 this.

13 If it is a problem, it might be a  
14 way to deal with it. I see Betsy smiling,  
15 thinking this is maybe a little too creative  
16 for her. But it's something to think about.

17 MS. KOHL: Thanks very much. This  
18 is Betsy Kohl with DOE OGC.

19 MR. RABA: Okay, great.

20 MR. SUTHERLAND: Great. We're  
21 right on time, so this is good. Okay. So  
22 we're going to dive into the individual

1 analyses that DOE will be conducting in  
2 development of the NOPR.

3 First up is the market and  
4 technology assessment. The purpose of this  
5 analysis is to characterize the overall  
6 commercial clothes washer industry and the  
7 market.

8 As part of this analysis, DOE will  
9 gather historical shipments and other relevant  
10 data, and as part of the technology  
11 assessment, DOE will identify technology  
12 options that exist for improving energy  
13 efficiency.

14 First, request for comment here,  
15 Item 3-1. DOE requests information that would  
16 contribute to the market assessment for  
17 commercial clothes washers, and this includes  
18 information on current product features and  
19 efficiencies, product feature and efficiency  
20 trends, and historical product shipments and  
21 prices.

22 MR. RABA: Wait. Before we

1 proceed, I have two hands raised, one  
2 remotely, and then one here in the room.

3 MR. SUTHERLAND: Oh.

4 MR. RABA: Remotely, we have Renata  
5 Mortazavi hand raised. Yes, go ahead please.  
6 Is the -- are we hearing anything from the  
7 audio? Oh my.

8 MS. MORTAZAVI: Hello. Can you  
9 hear me now?

10 MR. RABA: Yes, thank you.  
11 Welcome.

12 MS. MORTAZAVI: Hi. Oh my gosh.  
13 It saves me typing. I just want --

14 MR. RABA: Wait, wait, stop.  
15 Please say your name for the record and the  
16 organization you represent?

17 MS. MORTAZAVI: Yes. It's Renata  
18 Mortazavi from Office of Energy Efficiency,  
19 Natural Resources Canada. I just want to make  
20 a quick comment to the last comment actually,  
21 around the test procedure difference for the  
22 residential.

1 I don't see why do we have to have  
2 two different test procedures for commercial  
3 clothes washers, because they are the same  
4 units. So they will be testing the same way  
5 as the residential dryer. That's it.

6 MR. RABA: Renata, this is Jim  
7 Raba, facilitator. Would you please state  
8 again a little more slowly? The audio's not  
9 that great here. No. I can hear your  
10 enthusiasm, but the audio's not that great,  
11 and so just do it again, please.

12 MS. MORTAZAVI: Because somebody  
13 mentioned that you have to have two different  
14 test procedures for the commercial style  
15 clothes washers. I want to know the reason  
16 why we have to develop two different test  
17 procedures for commercial clothes washers?

18 They are the same unit, right? But  
19 it's the same with residential machine, right?  
20 So we don't really need to have, worry about  
21 separate test procedure for clothes washer for  
22 a commercial clothes washer.

1 MR. RABA: Okay. We'll note that  
2 for the record, thank you. Over here, please.  
3 Phil Manthei.

4 MR. MANTHEI: I'm sorry. Oh.

5 MR. RABA: Your name and  
6 organization?

7 MR. MANTHEI: Phil Manthei,  
8 Alliance Laundry Systems. For the request for  
9 comment on the slide up there, obviously the  
10 big issue right now is of course that the  
11 products for the new standard, that it takes  
12 effect on January 8th, 2013, are not in the  
13 marketplace yet.

14 It's very difficult for DOE or  
15 anyone, probably, to make the assessment as  
16 to, you know, how that impacts and what the  
17 market will be like, until later on in 2013,  
18 early 2014.

19 And then I guess I'll also address  
20 Renata's question. Yes, there are some  
21 differences. Yes, they are very similar. The  
22 basic construction of a commercial clothes

1 washer in this rulemaking is very similar to a  
2 residential.

3           However, there are issues, as we  
4 just talked about, possibly regarding such  
5 things as the standby power and how those  
6 usage factors for the standby power would be,  
7 would be addressed for commercial, because  
8 they are probably going to be different.

9           MR. RABA: Thank you. Others?

10           (No response.)

11           MR. RABA: Okay.

12           MR. OSANN: Question.

13           MR. RABA: Oh sir. Your name and  
14 organization, please.

15           MR. OSANN: Ed Osann with NRDC.  
16 This request for comment includes historic  
17 product shipments and prices. There was, I  
18 think, significant attention to shipments in  
19 the last rulemaking, and noting a trend for --  
20 a downward, a downward trend in unit  
21 shipments.

22           That may or may not have

1 stabilized, and I'm wondering whether DOE can  
2 provide an indication of what elements of the  
3 prior analyses you're intending to repurpose  
4 for this rulemaking, compared with what  
5 analyses that will be done anew.

6 It's one thing to say you've got  
7 analyses that were done for the 2010 rule; but  
8 how much of that, what are the components that  
9 you're actually going to be reusing, and what  
10 about new inputs to those components?

11 MR. SUTHERLAND: Well, for the  
12 market and technology assessment, clearly DOE  
13 will be seeking to supplement the prior  
14 analysis with more recent data on shipments  
15 from 2009, 2010, onwards. So that data, of  
16 course, would be updated with more recent  
17 data.

18 Some of the information on the  
19 technology itself, product features,  
20 efficiency features, much of that information  
21 will probably, DOE will probably be able to  
22 carry over.

1                   But it will really be a case-by-  
2 case basis, in terms of information that DOE's  
3 able to reference from the last rulemaking,  
4 versus information that needs to be reassessed  
5 for this rulemaking. Any other questions?

6                   Okay. A quick mention of product  
7 classes. During the last rulemaking, DOE  
8 established two separate product classes based  
9 on location of access, top-loading and front-  
10 loading, and DOE is considering retaining  
11 these two product classes for the current  
12 rulemaking.

13                   So a request for comment on this  
14 topic. DOE seeks comment on the merits of  
15 retaining two product classes, based on  
16 location of access, top-loading and front-  
17 loading.

18                   MR. RABA: Go ahead.

19                   MR. OSANN: Ed Osann for NRDC. We  
20 recommend that DOE revisit the product class  
21 determinations that were made for the 2010  
22 rule.

1           At that time, prior to that time,  
2           there was a single product category in the  
3           initial statutory authorization for efficiency  
4           standards for commercial clothes washers, and  
5           in the 2010 rule, a separation of those  
6           classes was made, based upon assumed customer  
7           utility, deriving from shorter cycle times for  
8           top-loaders versus front-loaders.

9           This was based largely on a  
10          Consumer Reports assessment that presented  
11          cycle times for front-loaders in the range of  
12          70 to 110 minutes, or something along those  
13          lines. Whether or not that was ever apt for -  
14          - an apt characterization of cycle times for  
15          commercial front-loaders, it certainly doesn't  
16          appear to hold true today.

17          The products in the market that  
18          have front-loaders that have cycle times in  
19          the range of 30 minutes, from several  
20          manufacturers. These front-loaders are  
21          performing in a time, in the time frame that  
22          is comparable to top-loaders.

1                   So we think this bears a thorough  
2 reexamination and consideration of a single  
3 product class.

4                   MR. SUTHERLAND: Thank you.

5                   MS. CLEARY: Jennifer Cleary with  
6 AHAM. We would disagree respectfully with  
7 that comment. We think that the product class  
8 separation should remain the same, and DOE got  
9 that analysis correct in the last rulemaking.

10                  MR. RABA: We certainly invite your  
11 written comments from DOE's view also, both  
12 sides. Anybody else in the room?

13                   (No response.)

14                  MR. RABA: Okay, go ahead.

15                  MR. SUTHERLAND: Okay, and to wrap  
16 up this section, a discussion of the  
17 technology assessment portion. DOE will  
18 consider technology options that it considered  
19 during the previous rulemaking. A subset of  
20 those are shown here, plus any new available  
21 technologies that may be available.

22                   So DOE seeks -- Item 3-3, DOE seeks

1        comments on whether any of the technologies  
2        listed in the table should be removed from  
3        consideration, or whether any other  
4        technologies not listed in the table should be  
5        added for consideration. I'll go back to that  
6        table if there are any comments on that.

7                    (No response.)

8                    MR. SUTHERLAND: Okay. We'll move  
9        along to the screening --

10                   MR. RABA: One comment.

11                   MR. SUTHERLAND: Oh sorry, go  
12        ahead.

13                   MR. OSANN: We'd recommend that DOE  
14        consider a feature that might be characterized  
15        as cycle-based pricing.

16                   It's a combination of the controls  
17        in the machine and the coin box or fee  
18        collection system that will allow for  
19        differentiation based upon water temperature  
20        selection, so the customers actually have an  
21        incentive to go for a warm or cold water wash.

22                   This is a feature that's offered by

1 more than one manufacturer today. We may loop  
2 back and find there's a test procedure issue  
3 in how to effectively characterize or capture  
4 the energy savings. But it is a feature.

5 It's in the market now. It has a  
6 potential to save perhaps a significant amount  
7 of energy, and we think it ought to be  
8 assessed in the technology assessment.

9 MR. RABA: Thank you. That comment  
10 was from Ed Osann of the Natural Resources  
11 Defense Council. Other comments or questions?

12 (No response.)

13 MR. SUTHERLAND: Great, thank you.

14 MR. RABA: All right.

15 MR. SUTHERLAND: Okay. So we'll  
16 move along to the screening analysis. The  
17 purpose of the screening analysis is to screen  
18 out technology options that DOE will not  
19 consider during this rulemaking, and there are  
20 four specific criteria that DOE uses.

21 The first is technological  
22 feasibility. The second is the practicability

1 to manufacture, install and service that  
2 technology. The third is whether that  
3 technology has any adverse impacts on product  
4 utility or availability, and the fourth is  
5 whether that technology has any adverse  
6 impacts on health or safety.

7 So Item 4-1 seeks comment on  
8 whether any of the technologies listed in that  
9 table should be removed from consideration,  
10 based on any of these screening criteria, and  
11 if so, please provide specific details  
12 regarding the specific screening criteria that  
13 would preclude consideration of that  
14 technology option.

15 MR. RABA: Thoughts?

16 (No response.)

17 MR. RABA: Go ahead.

18 MR. SUTHERLAND: Okay. So we'll  
19 move along to the engineering analysis. The  
20 purpose of the engineering analysis is to  
21 determine the relationship between  
22 manufacturer cost and energy efficiency.

1                   Part of that is defining the  
2 different efficiency levels on the market. So  
3 these two tables show the preliminary  
4 efficiency levels for consideration during  
5 this rulemaking.

6                   For top-loading commercial clothes  
7 washers, DOE is unaware of any top-loading  
8 washers currently on the market that exceed  
9 the January 2013 standard levels.

10                  So the baseline efficiency level  
11 for top-loaders is defined as the 2013 DOE  
12 standard of 1.6 MEF and 8.5 Water Factor. For  
13 front-loaders, DOE has the four efficiency  
14 levels defined here. Again, the baseline is  
15 defined as the 2013 DOE standard of 2.0 MEF,  
16 5.5 Water Factor.

17                  Level 1 and Level 2 are based on  
18 the Consortium for Energy Efficiency tier  
19 levels. So Level 1 corresponds to CEE Tier 2  
20 of 2.2 MEF, 4.5 Water Factor. Level 2  
21 corresponds to CEE Tier 3, which is 2.4 MEF,  
22 4.0 Water Factor, and Level 3 represents the

1 maximum available efficiency currently on the  
2 market, of 2.6 MEF and 3.7 Water Factor.

3 We have, I believe, four requests  
4 for comment on these efficiency levels. So  
5 let me read through all four, and then I'll go  
6 back to that table and we can, we'll take  
7 comments.

8 So the first, Item 5-1, seeks input  
9 on whether the January 2013 standard levels  
10 are appropriate for characterizing the  
11 baseline efficiency levels for both products,  
12 product classes.

13 Item 5-2, DOE seeks input on  
14 whether any higher efficiency levels should be  
15 considered for top-loading washers. If so,  
16 the basis for such consideration. Item 5-3,  
17 DOE seeks input on the appropriateness of the  
18 higher efficiency levels that have been  
19 identified for front-loading washers, and Item  
20 5-4, DOE seeks input on the appropriate  
21 maximum technologically feasible energy  
22 efficiency levels, and the basis for why those

1 should be selected.

2 So I'll go back to the table  
3 showing the efficiency levels if you have any  
4 comments.

5 MS. CLEARY: Jen Cleary with AHAM.  
6 I just have a question. I think in the  
7 framework document, DOE stated that it will  
8 use Appendix J-1 for the engineering analysis,  
9 but use J-2 for the energy and water use  
10 analysis. Can you just explain why that would  
11 be?

12 MR. SUTHERLAND: I'm not familiar  
13 with exactly what you're referring to, but  
14 DOE's intention is to use Appendix J-2 for the  
15 purpose of performing the analysis and  
16 establishing the new standards. DOE will be  
17 using Appendix J-1, as we discussed earlier,  
18 to develop correction factors if it decides to  
19 do that. So it will really be a combination  
20 of both.

21 MS. CLEARY: Just so I understand  
22 what you said, this is Jen Cleary following

1 up. The only reason you think you would use  
2 J-1 would be to develop the correction factor.  
3 So like as a basis for comparison, and there  
4 wouldn't be any other --

5 MR. SUTHERLAND: Well, I don't want  
6 to say that there wouldn't be any other  
7 purpose. That would be the primary purpose  
8 for using it.

9 MS. CLEARY: Okay. What else might  
10 it be used for?

11 MR. SUTHERLAND: Well, to be  
12 determined.

13 MS. CLEARY: Okay.

14 MR. RABA: Further questions,  
15 comments?

16 (No response.)

17 MR. RABA: Okay.

18 MR. SUTHERLAND: Brief description  
19 here of DOE's approach for determining the  
20 cost efficiency relationship. DOE uses a  
21 combination of two approaches: The efficiency  
22 level approach and the design option approach.

1 The efficiency level approach, for that  
2 approach, DOE solicits industry-aggregated  
3 incremental costs for achieving each higher  
4 efficiency level.

5 As part of the design option  
6 approach, DOE performs reverse engineering  
7 teardowns to validate the cost efficiency  
8 relationships obtained using the efficiency  
9 level approach. Just a note on proprietary  
10 designs. Those will only be considered if  
11 they do not present a unique path to a given  
12 efficiency level.

13 So DOE requests feedback on the use  
14 of the efficiency level approach, to determine  
15 the cost efficiency relationship, supplemented  
16 as needed by a design option approach. Item  
17 5-6, are there any proprietary designs or  
18 technologies of which DOE should be aware in  
19 this rulemaking?

20 If so, what are these designs or  
21 technologies, and how should DOE acquire the  
22 cost data necessary for evaluating them?

1 MR. RABA: I see a hand raised.

2 MR. OSANN: Yeah. This is Ed Osann  
3 with NRDC. This actually goes to the previous  
4 request for comment on the engineering  
5 analysis and efficiency levels for  
6 consideration.

7 MR. RABA: Sure.

8 MR. OSANN: I didn't quite get it  
9 in before you switched subjects.

10 MR. RABA: No problem.

11 MR. OSANN: I just wanted to  
12 clarify that there are no max tech levels  
13 shown here, and ask whether it is in fact  
14 DOE's intention to develop a max tech level  
15 for each product class?

16 MR. SUTHERLAND: That will be  
17 determined during the course of the rulemaking  
18 as part of that analysis.

19 MR. OSANN: The max tech level will  
20 be determined, not whether to identify a max  
21 tech level, but what the specific level is?

22 MR. SUTHERLAND: That's correct.

1 MR. RABA: Okay. Comments?

2 (No response.)

3 MR. RABA: Go ahead.

4 MR. SUTHERLAND: Thanks. Okay, and  
5 last note relating to the engineering  
6 analysis, are impacts on consumer utility.  
7 EPCA requires DOE to consider any lessening of  
8 utility or performance likely to result from a  
9 new standard.

10 So DOE will consider whether new  
11 standards may impact consumer utility of  
12 commercial clothes washers. On this topic,  
13 request for comment, Item 5-7, DOE seeks  
14 comment on whether any new standards may  
15 impact the utility of commercial clothes  
16 washers, and if such impacts exist, can the  
17 effects be quantified, and if so, how?

18 (No response.)

19 MR. SUTHERLAND: No comments, okay.  
20 At this point, we are going to jump ahead to  
21 the manufacturer impact analysis, and I'll  
22 turn it over to Ben Barrington, who will

1 present that.

2 MR. BARRINGTON: Thanks for all  
3 this equipment.

4 (Pause.)

5 MR. BARRINGTON: Is that pretty  
6 good? Thanks. Thanks very much, Tim. I may  
7 need to move this up a little bit. Good  
8 morning, everyone. I'm Ben Barrington with  
9 Navigant Consulting. I help conduct the  
10 manufacturer impact analysis as part of DOE's  
11 efficiency standards rulemakings.

12 I'm going to walk you through sort  
13 of why we do the manufacturer impact analysis  
14 and sort of the process that we follow. So  
15 the manufacturer impact analysis fulfills two  
16 of EPCA's requirements, to determine economic  
17 justification of a proposed efficiency  
18 standard.

19 Specifically, those are the  
20 economic impacts on manufacturers themselves,  
21 but also the impact on the industry at large  
22 and the competitive dynamics therein. There

1 are some format changes described in a 2006  
2 report to Congress.

3 It's available in the link  
4 displayed below, primarily relating to  
5 specific activities that have to happen as  
6 part of the manufacturer impact analysis.

7 So there are roughly five stages  
8 that happen as part of this portion of the  
9 analysis. It's downstream from the  
10 engineering and shipments analysis, and so we  
11 use inputs that are created as part of those  
12 other analyses, in performing the MIA.

13 But it starts off with an industry  
14 profile, in which we aim to identify current  
15 and past industry structure, ownership  
16 structure, whether things are manufactured  
17 domestically, whether they're imported, things  
18 of this sort.

19 Along with that, we examine the  
20 annual reports and 10-Ks as filed in the SEC  
21 by manufacturers of these products that are  
22 publicly traded, and where available, publicly

1 available information from their annual  
2 reports as well, to develop an industry  
3 weighted average set of financial parameters.

4 Also during that phase, we look  
5 through databases of companies that engage in  
6 this type of activity, looking through the  
7 North American Industry Classification System  
8 codes relevant to this particular industry, to  
9 develop a list of manufacturers, and identify  
10 if any of those are small businesses or other  
11 subgroups of manufacturers that we're  
12 considering in this particular rulemaking.

13 Beyond that, we also work to  
14 develop our framework for analysis, which is  
15 an industry discounted cash flow, to determine  
16 the net present value of the industry itself,  
17 both with amended standards and absent amended  
18 standards.

19 I should stop and pause and solicit  
20 any questions that anyone might have on this  
21 point.

22 (No response.)

1 MR. BARRINGTON: Okay. I'll move  
2 forward, then. Once that framework has been  
3 developed, we also developed an interview  
4 guide that we circulate to members of  
5 industry, to get their input on a variety of  
6 topics, ranging from the key issues that they  
7 see relevant to this particular rulemaking, to  
8 how they anticipate shipments might change  
9 over time, how they anticipate consumer  
10 preference for products might change over  
11 time, pricing, so on and so forth.

12 I won't go through them, but there  
13 are about a dozen different topics that we  
14 address during the course of these interviews.  
15 We also circulate these interviews with a non-  
16 disclosure agreement, that maintains  
17 confidentiality of the information provided by  
18 manufacturers during interviews, between  
19 Navigant Consulting and the manufacturer  
20 themselves.

21 Once we've circulated these  
22 interview guides and booked a day to conduct

1 the interviews, we moved forward with those,  
2 and as I mentioned, those are carried out on a  
3 confidential basis.

4           Thereafter, we take the information  
5 provided by manufacturers, additional  
6 information that's been developed through the  
7 course of other analyses like the engineering  
8 and shipments analysis, and work that together  
9 into an industry cash flow, and then discount  
10 that back to the present value at the weighted  
11 average cost of capital for the manufacturers  
12 represented in our analysis.

13           The key quantitative aspects of the  
14 manufacturer impact analysis are the industry  
15 net present value, as well as the impact on  
16 domestic employment.

17           Additionally, we also assess the  
18 cumulative regulatory burden associated with  
19 the rulemaking, the effects on competition as  
20 required by EPCA, as well as the  
21 disproportionate effects on any particular  
22 subgroup of manufacturers that we've

1 previously identified.

2           So that brings us to these two last  
3 areas in our sort of preliminary screening of  
4 the industry to date. We've identified one  
5 small business manufacturer of commercial  
6 clothes washers, and we've also identified one  
7 low volume manufacturer of commercial clothes  
8 washers, that is a sort of carryover subgroup  
9 that was analyzed separately in the last  
10 rulemaking. So we're moving forward with  
11 doing that again.

12           With regards to the cumulative  
13 regulatory burden, these are other regulations  
14 that could affect the industries impacted by  
15 this rulemaking, and those include standards  
16 on residential clothes washers, clothes  
17 dryers, as well as room air conditioners, as  
18 well as the ROHS or Reduction of Hazardous  
19 Substances directive.

20           I think that takes us to our first  
21 comment. In our attempts to identify small  
22 businesses that are engaged in manufacturing

1 or commercial clothes washers, we would  
2 greatly appreciate any input from industry who  
3 could help point us in that direction. So if  
4 there are any comments?

5 (No response.)

6 MR. BARRINGTON: None? Okay.  
7 Additionally, we're open to considering  
8 additional manufacturers subgroups that we may  
9 not have considered to date.

10 As mentioned, we're doing, we're  
11 looking at the disproportionate effects on  
12 small business manufacturers and low volume  
13 manufacturers. So if there are any other  
14 subgroups that we should consider, I'd greatly  
15 appreciate your input.

16 MR. RABA: Go ahead.

17 MR. OSANN: Ed Osann from NRDC.  
18 Two questions. Is the disproportionate -- the  
19 analyses to determine disproportionate  
20 impacts, is that a standard DOE analysis, or  
21 is that -- is generally applied across all  
22 product categories, or is that one-off for

1 this particular rulemaking?

2 MS. KOHL: Betsy Kohl from DOE OGC.  
3 As far as impacts to small businesses, we're  
4 required by the Regulatory Flexibility Act to  
5 look at those impacts in every rulemaking that  
6 we do. So that's a standard analysis.

7 MR. OSANN: I guess my question  
8 was, is the methodology for assessing those  
9 impacts standardized?

10 MS. KOHL: Yes. I mean -- this is  
11 Betsy Kohl, DOE OGC. There may be  
12 differences, depending on the specific facts,  
13 the industries that are out there. But  
14 typically, the analysis is pretty much the  
15 same.

16 MR. RABA: Thank you, Ed. Other  
17 comments or questions?

18 (No response.)

19 MR. RABA: In all, you may want to  
20 again, certainly we invite, DOE invites your  
21 comments in written form after this, as we  
22 proceed on from the public meeting here to

1 think about it, and if you have something that  
2 you'd like to raise as part of the issue to  
3 move the process forward constructively, it  
4 would be very helpful.

5 MR. BARRINGTON: Okay. I think we  
6 have one more request for comment. With  
7 regards to cumulative regulatory burden, if  
8 there are other products that are also  
9 simultaneously being regulated by DOE in terms  
10 of minimum efficiency standards.

11 We welcome your comment on those,  
12 as well as any other things outside of the  
13 scope of efficiency standards that might  
14 impact your business.

15 MR. RABA: None seen in the room at  
16 this time. Any via the webinar would like  
17 offer comment or question at this time? Well,  
18 we've proceeded quite ahead of schedule this  
19 morning, which is a good sign, so he's being  
20 very efficient. So let's take a break to come  
21 back at 10:30 by that clock up there.

22 Remember there's a coffee shop

1 directly below us on the ground floor, and as  
2 you walk about the building, be sure you wear  
3 your pink badge above the waist so it's very  
4 visible. Otherwise, security may stop you and  
5 I don't know who they are. But yes, please do  
6 that.

7 So a good start to the day, and  
8 take a break. Be back here at 10:30 please.

9 (Whereupon, the above-entitled  
10 matter briefly went off the record.)

11 MR. RABA: Please take your seats.  
12 Brenda's passed out a record of our attendance  
13 here. From the attendance, you can see who is  
14 here, the business cards and the sign-ins.

15 So we did before the break the  
16 manufacturer impact analysis, and now we will  
17 start with the markups analysis, energy and  
18 water use analysis and so forth and so on.  
19 Say it.

20 (Off record comments.)

21 MS. IYER: Okay. All right. Good  
22 morning, everybody. My name is Maithili Iyer.

1 I am with the Lawrence Berkeley National  
2 Laboratory. In the next hour or so, I'll be  
3 covering analysis, the economic analysis that  
4 follows engineering work.

5 As part of this, you see that there  
6 are many boxes that I'm supposed to cover in  
7 the next hour or so. I'll try to be as  
8 detailed or short as required, and I  
9 appreciate any comments or questions from all  
10 of you. Feel free to interrupt me whenever  
11 you feel like it.

12 I will first cover the life cycle  
13 cost analysis, and cover two important inputs  
14 to this piece of analysis. These two are  
15 mark-ups and energy and water use. This is a  
16 flow chart of the life cycle cost and payback  
17 period analysis inputs.

18 The yellow boxes here represent the  
19 data inputs; the green ones represent  
20 intermediate analyses, and the blue boxes are  
21 the output results. There are several  
22 intermediate steps to finally get to the life

1 cycle cost and national impacts.

2 One of the important things, since  
3 the life cycle cost looks at the total cost of  
4 owning and operating an appliance over the  
5 life of the equipment, we look at the purchase  
6 expense or the total installed cost, and the  
7 annual operating expense, which is basically a  
8 part of the lifetime operating expense.

9 For this, we require energy and  
10 water use to establish energy and water  
11 consumption of the commercial clothes washer  
12 unit, and the consumer retail price markup,  
13 which is required to develop the retail  
14 prices, once we have the manufacturer price.

15 DOE needs to understand the  
16 distribution channel in order to develop the  
17 markups. The boxes in the middle of this flow  
18 diagram show the distribution channel of  
19 commercial clothes washers.

20 You'll notice that we have  
21 manufacturers and route operators supplying  
22 the units to common area laundry in multi-

1 family establishments, and distributors or  
2 wholesalers supplying to laundromats.

3 In order to get to the final retail  
4 price, DOE will develop whatever markup is  
5 necessary to move from the manufactured  
6 product to the consumers, which are basically  
7 the laundromats and multi-family buildings  
8 here.

9 You will see that this graph is  
10 from 1998. It is fairly old. We would like  
11 inputs from the stakeholders, if this  
12 distribution channel still represents what we  
13 see in the market today.

14 There are essentially two types of  
15 markups that we consider under this. One is  
16 the baseline markup and the other is the  
17 incremental markup. The baseline markup  
18 typically includes all those costs that are  
19 part of moving a manufactured product to its  
20 final consumer retail price.

21 This will include things like  
22 salaries, wages, rentals, etcetera. What this

1 will not include is the sales tax. The  
2 incremental markups, on the other hand, are  
3 those costs -- include those costs that are  
4 specific to a more efficient product.

5 So this is generally very small,  
6 and will not include salaries or rentals, but  
7 will include specific costs that are required  
8 to sell a more efficient product. So  
9 something like marketing of a more efficient  
10 product will become part of this cost.

11 In order to develop these markups,  
12 DOE will utilize data from the SEC 10-K  
13 reports that are filed by companies or part of  
14 the distribution chains, and also the economic  
15 Census data from the U.S. Census Bureau. DOE  
16 will also develop and apply a sales tax, and  
17 will use the data from sales tax clearinghouse  
18 for this purpose.

19 We have a specific request for  
20 comment here. Item 7-1 requests comments from  
21 you on the distribution channels that we just  
22 described. Item 7-2 seeks input on the data

1 sources that will be used for developing the  
2 markups.

3 MR. BROOKMAN: Maybe you can go  
4 back to the diagram. Good morning, everyone.  
5 Surely we can comment on this. This is 1998.  
6 Come on. Yes, okay.

7 (No response.)

8 MS. IYER: Okay. So that concludes  
9 the markups analysis. We will now look at the  
10 second key input to the LCC analysis, which  
11 establishes the operating cost expense as the  
12 input.

13 The purpose of the energy and water  
14 use analysis is to develop annual energy and  
15 water consumption data, to establish the life  
16 cycle cost at varying efficiency levels for  
17 the product.

18 DOE will utilize the per unit  
19 energy and water use data at different  
20 efficiency levels for the product, for both  
21 the top-loading and front-loading, and utilize  
22 this in connection with the usage of the unit,

1 the number of cycles that any clothes washer  
2 unit goes through.

3 The test procedure that describes  
4 the calculation of energy and water use  
5 utilizes a single value for the number of  
6 cycles, based on residential use. DOE  
7 therefore needs to establish an appropriate  
8 range for the commercial clothes washer units  
9 in the field.

10 In the past, DOE utilized research  
11 studies available from Multi-Housing Laundry  
12 Association, the Coin Laundry Association,  
13 Consortium for Energy Efficiency, and Southern  
14 California Edison, to establish the usage for  
15 these products.

16 The two primary applications that  
17 DOE will consider under this are, as we have  
18 already discussed, will be multi-family  
19 buildings and laundromats. This is specific  
20 request for data. DOE requests per cycle  
21 energy and water use for each efficiency  
22 level, for both the top- and the front-loading

1 clothes washers.

2           The past studies that I mentioned,  
3 which were used in the previous rulemaking,  
4 established the average number of cycles for  
5 multi-family applications as 3.4 cycles, and  
6 for laundromats, six cycles per day. Now you  
7 see that there is a wide variation in the  
8 number of cycles that we have from different  
9 studies.

10           We would definitely want to improve  
11 this estimate, and if there are any new  
12 studies that people want to point us to, we  
13 welcome those.

14           This slide provides more detail as  
15 to how we calculate the energy use, the annual  
16 energy use by efficiency level for a specific  
17 application type.

18           The green box here represents,  
19 takes the annual usage per application type,  
20 which is the total number of cycles per year,  
21 and multiplies that by the per cycle energy  
22 use, to arrive at the annual energy use by

1 efficiency level for that application.

2 The equation here is from the test  
3 procedure, and you would notice that the  
4 energy component comprises of three parts:  
5 the machine energy, the water heating energy  
6 and the dryer energy.

7 The machine energy is primarily the  
8 motor energy required to turn the agitator or  
9 to rotate the wash basket. So the annual  
10 energy use is basically per cycle energy use  
11 times the number of cycles.

12 We have a request for comment here.  
13 Item 6-1. Here, DOE seeks input on the  
14 approaches considered for specifying the  
15 typical annual energy and water consumption.  
16 Most importantly, we would like data or  
17 information on establishing the usage of  
18 commercial clothes washers in the field.

19 MR. RABA: Ed Osann.

20 MR. OSANN: Yeah. This is Ed Osann  
21 with NRDC. In this portion of the framework  
22 document, DOE states that other applications,

1 meaning other than multi-family housing and  
2 coin laundry, include lodging establishments,  
3 inpatient health care facilities and nursing  
4 homes.

5 Relative to multi-family buildings  
6 and laundromats, these other applications are  
7 a small segment of the market. In the prior  
8 rulemaking, the 2010 rule, the entire analysis  
9 seemed to ignore the on-premise laundry  
10 segment.

11 There were analyses that were  
12 carried forward in some detail for coin  
13 laundry, laundromat sector and multi-family,  
14 and really no analysis. I don't think they  
15 were even included in the unit count for  
16 machines that were used for on-premise  
17 laundry.

18 I guess I would start with a  
19 question, that there is no -- it is clear that  
20 machines that are used for on-premise laundry  
21 that meet the size qualification in the  
22 statute are in fact covered products, are they

1 not?

2 MS. KOHL: Betsy Kohl, DOE OGC. If  
3 it meets the definition in the statute, then  
4 yes, it's a covered product.

5 MR. OSANN: Okay. Yes, it refers  
6 to other commercial applications in addition  
7 to multi-family housing, common areas and coin  
8 laundries. I would just point out that while  
9 this may be a relatively small segment of  
10 product line, the usage factors may in fact be  
11 greater than say common area laundry rooms.

12 So it would seem to be worthwhile  
13 for DOE to acquire data on on-premise laundry  
14 usage, and develop usage factors and do a  
15 comparable degree of analysis as was done for  
16 these other two categories.

17 MR. BROOKMAN: Okay, thank you.  
18 Don Brundage.

19 MR. BRUNDAGE: I'm trying to  
20 envision what sort of applications you're  
21 talking about. You're talking about something  
22 like a business that has laundries for

1 uniforms or small equipment located at a place  
2 like a hotel, or what -- can you give  
3 examples?

4 MR. OSANN: Ed Osann. Yes, as  
5 noted in the framework document, the  
6 hospitality industry, bed and breakfast, there  
7 of course is a wide range of equipment that is  
8 supplied by this industry that's beyond the  
9 size thresholds that limit the scope of  
10 covered products.

11 But there are what you might call  
12 family size or small load machines that are  
13 offered by most of the purveyors of commercial  
14 products, specifically for the on-premise  
15 laundry market.

16 MR. BROOKMAN: Thank you.  
17 Additional comments?

18 MS. IYER: Thank you. We will now  
19 move to describing the life cycle cost and  
20 payback period analysis in greater detail.  
21 The purpose of the life cycle cost analysis is  
22 to assess the net life cycle cost impact on

1 consumers for differing efficiency levels of  
2 the product.

3 As we have explained before, this  
4 includes the purchase expense, which is the  
5 consumer price and the installation, and the  
6 operating cost of running that equipment over  
7 the lifetime.

8 The operating cost is discounted  
9 over the lifetime of the unit to present  
10 value, to get us the total life cycle cost.  
11 The difference of the life cycle cost between  
12 a baseline unit and the standard or potential  
13 efficiency level, or the unit potential  
14 efficiency level gives us the life cycle cost  
15 impact.

16 DOE implements this analysis in an  
17 Excel spreadsheet, and as part of this, will  
18 also calculate payback period, which measures  
19 the amount of time it takes to recover a  
20 presumed increased price of higher efficiency  
21 product through reduction in operating costs.

22 Recognizing that several of the

1 inputs to the LCC analysis have a lot of  
2 variability and uncertainty associated with  
3 it, DOE will model these uncertainties and  
4 variabilities using a Monte Carlo simulation,  
5 and by assigning probability distributions to  
6 these input variables.

7 We saw that -- we noticed the wide  
8 range of variability in the clothes washer  
9 usage. This introduces uncertainty in the  
10 energy and water use value, and we addressed  
11 this uncertainty through the variability that  
12 is assigned to the usage factor.

13 This type of analysis allows DOE to  
14 quantify the percentage of consumers that may  
15 benefit from a potential standard, and those  
16 that may not.

17 The benefits are calculated with  
18 respect, in relation to a base case efficiency  
19 distribution, and therefore that distribution  
20 is very critical, so as to not overstate the  
21 benefits accruing from a particular efficiency  
22 level.

1                   We come up with a comment here,  
2           Item 8-1. Here, DOE seeks input on the extent  
3           to which purchasers of commercial clothes  
4           washers are able to either pass on the higher  
5           purchase cost of more efficient clothes  
6           washers, or are otherwise able to recover  
7           these costs. This is relevant for the multi-  
8           family laundry application.

9                   Item 8-6. DOE requests data from  
10           interested parties to characterize the current  
11           mix of commercial clothes washers, washer  
12           efficiencies in the market. Any comments?

13                   MR. BROOKMAN: Ed Osann.

14                   MR. OSANN: Yes, this is Ed Osann  
15           from NRDC. I think one of the areas that  
16           could benefit from more development in the  
17           record is more transparency on typical  
18           contract arrangements between route operators  
19           and the host building owners.

20                   I think there was very little in  
21           the record the last time around about that,  
22           but typical contract terms, typical coin box

1 splits. These would be useful things to have  
2 in the record, and I think that it ought to be  
3 possible to acquire that information, under  
4 the same kind of confidentiality protection  
5 that's afforded to manufacturers.

6 MS. IYER: Okay.

7 MR. BROOKMAN: Okay, thank you.

8 Other comments?

9 (No response.)

10 MS. IYER: Okay. Here's an example  
11 of the Monte Carlo simulation. This is an  
12 efficiency distribution from the prior  
13 rulemaking, from the 2010 commercial clothes  
14 washer LCC analysis. This sort of describes  
15 how we conduct this analysis.

16 The plot here on the X axis  
17 provides the life cycle cost savings for a  
18 specific efficiency level, and the Y axis  
19 shows the probability of its occurrence. The  
20 bold blue line that separates the red bars  
21 from the blue bars is the point where there is  
22 -- this is the point of no impact.

1                   Everything to its right is LCC  
2 benefit, and everything to its left is not.  
3 The dotted line represents the mean LCC  
4 savings. It is 179 here, and the table here  
5 provides the percentage of population that  
6 actually is benefitting from that, which is 85  
7 percent.

8                   So this sort of explains how the  
9 LCC analysis really takes care of the wide  
10 distribution that we see amongst consumers.

11                   I will now move to covering all the  
12 other inputs that go into the LCC analysis.  
13 I'll start with energy prices. Energy prices,  
14 in combination with energy use, covers the  
15 operating cost pertaining to energy use for a  
16 commercial clothes washer.

17                   DOE will develop the electricity  
18 prices from the EIA Form 861 data and the  
19 natural gas and oil prices from the Natural  
20 Gas Monthly and The Petroleum Navigator, also  
21 published by the EIA.

22                   The EIA Form 861 data provides

1 utility-based data, which allows DOE to  
2 develop these average prices for 13 geographic  
3 regions. These include the nine Census  
4 divisions and the four large states. DOE will  
5 use the residential population rate for these  
6 geographic areas, to come up with an average  
7 price for the nation.

8 For projecting the energy prices  
9 out to the future, DOE will utilize EIA's  
10 Annual Energy Outlook, that provides  
11 projections for reference, high and low cases.  
12 We also welcome other quantitative price  
13 projections that may be available, and  
14 stakeholders want DOE to run sensitivities on.

15 The water and waste water prices,  
16 in combination with water usage, covers the  
17 operating costs pertaining to water. DOE will  
18 develop the water and waste water prices by  
19 utilizing the water and waste water rate  
20 survey conducted by the American Water Works  
21 Association and the Raftelis Financial  
22 Consultants.

1           The water and waste water rate  
2 survey covers about 216 water utilities, and  
3 about 153 waste water utilities. Since 216 is  
4 not a large enough number to represent all the  
5 water utilities and all geographic areas, DOE  
6 will develop the average prices at the four  
7 Census region level.

8           To forecast the future prices, DOE  
9 will use the historical Bureau of Labor's  
10 consumer price index for water and sewerage  
11 for this purpose. Again, DOE may evaluate  
12 other projections that may be available, and  
13 the stakeholders may want to provide.

14           We have a request for comment here.  
15 Item 8-2. Here we seek input from all parties  
16 on the planned approach for estimating current  
17 and future energy and water and waste water  
18 prices. Questions?

19           MR. BROOKMAN: Ed Osann.

20           MR. OSANN: Yes. This is Ed Osann  
21 from NRDC. I had thought that the AWWA-  
22 Raftelis survey covered a large scope of

1 utilities than 200 plus water and 100 plus  
2 sewer.

3 Are you citing to a particular, to  
4 a particular survey publication, or are those,  
5 is that the number of utilities that may have  
6 been comparable for the entire series, or  
7 what's the basis for the numbers that you  
8 cited on the number of utilities?

9 MS. IYER: Water and waste water  
10 rate survey, but I'll allow Camilla to speak  
11 more on that.

12 MR. BROOKMAN: Would you find a  
13 microphone?

14 MS. DUNHAM WHITEHEAD: Camilla  
15 Dunham Whitehead, LBNL. Whoops. Yeah, this  
16 refers to the 2010 AWWA and Raftelis survey,  
17 and those were the numbers of utilities that  
18 were, that had responded to their survey.

19 So what we try to do is generalize  
20 the information recorded in the AWWA-Raftelis  
21 survey to the entire country, and as Maithili  
22 said, to the four Census regions.

1 MS. IYER: Thank you. We'll now  
2 look at discount rates as an input. Discount  
3 rates are developed to allow DOE to discount  
4 the future operating costs to present day.  
5 DOE will use similar approach as it has done  
6 before for other commercial product standards  
7 rulemaking.

8 DOE will develop the estimates of  
9 discount rates based on the cost of capital  
10 for companies to purchase commercial clothes  
11 washers. This may be in the form of funds  
12 that are required to be raised in the form of  
13 finance cost, from debt incurred, or in the  
14 form of equity from capital used, interest  
15 from equity used.

16 The data that DOE will use to  
17 develop the discount rate is Damodaran Online  
18 and Ibbotson Associates. We will use whatever  
19 publicly available data exists, and if there  
20 are other data that stakeholders would want to  
21 refer us to, we'll be happy to receive those.

22 Specific comment here, Item 8-5.

1 DOE seeks stakeholder input on the planned  
2 approach for estimating discount rates for  
3 commercial customers.

4 MR. BROOKMAN: Ed Osann.

5 MR. OSANN: Yes. This is Ed Osann  
6 from NRDC. I have a question about the  
7 application of the discount rate. In the  
8 past, DOE has used this to discount financial  
9 costs, and also discount energy savings. Is  
10 it still your intention to use a discount rate  
11 to discount energy savings?

12 MS. IYER: It's the operating cost  
13 that we are discounting. The purchase of the  
14 equipment happens at the time, you know, in  
15 the present day terms. So that doesn't need  
16 to be discounted.

17 This is from the consumer  
18 perspective. So any expense that is incurred  
19 in the future is going to be discounted, based  
20 on this.

21 MR. OSANN: Right. We appreciate  
22 the use and the need for a discount rate in

1 the, in financial analyses. I think we have a  
2 long-standing objection to the use of the same  
3 discount rates, those that are developed for  
4 financial analyses, for discounting energy  
5 savings. Just make a record of that.

6 MR. BROOKMAN: Okay, okay.

7 MS. IYER: Okay. In this slide, we  
8 combine three inputs to the LCC analysis: the  
9 maintenance, repair and installation costs.  
10 We combine three, all three over here, even  
11 though installation cost pertains to the  
12 initial or the first cost at the time of the  
13 equipment purchased.

14 The maintenance and repair occurs  
15 over the lifetime of the equipment, and are  
16 actually part of the operating costs. We do  
17 that because DOE does not have information  
18 indicating that routine repair and maintenance  
19 or installation of a more efficient commercial  
20 clothes washer unit will be that much  
21 different from a baseline unit.

22 Since LCC savings are calculated as

1 the difference between a baseline unit and  
2 those of a more efficient unit, we expect the  
3 difference to be negligible or zero.

4 That brings us to a comment. Item  
5 8-3. DOE seeks input on whether it is correct  
6 to assume that changes in maintenance, repair  
7 and installation costs will be negligible for  
8 more efficient commercial clothes washers, and  
9 if we are not correct about that, DOE is  
10 interested in the reasons as to why it is so,  
11 and specific ways that DOE should correct this  
12 assumption.

13 MR. BROOKMAN: Yes. No comments  
14 here. Okay.

15 MS. IYER: Okay. Product  
16 lifetimes. Product lifetimes are important to  
17 calculate the operating cost over the life of  
18 the equipment. The past DOE analysis utilized  
19 the following product lifetimes: we  
20 calculated 7.13 as the life, an average life  
21 for a laundromat application, and 11.25 years  
22 for multi-family laundry application.

1                   These were developed based on the  
2 sources that are listed here. We would like  
3 to update these, if there is any change, and  
4 we are also looking for other studies that  
5 provide inputs on the lifetime.

6                   Request for comment here. Item 8-  
7 4. DOE seeks input on appropriate lifetimes  
8 for the commercial clothes washer classes  
9 covered in this rulemaking.

10                   MR. BROOKMAN: Ed Osann.

11                   MR. OSANN: Ed Osann with NRDC.  
12 I'd just note in the previous slide there's no  
13 presentation of information for on-premise  
14 laundries.

15                   MS. IYER: We have utilized  
16 whatever studies were available, and those did  
17 not cover smaller establishments with on-  
18 premise laundry. So if you have information  
19 available, we would definitely encourage you  
20 to submit that.

21                   MR. BROOKMAN: Yes, please.  
22 Amanda, is it?

1 MS. GONZALEZ: Yes. This is Amanda  
2 Gonzalez on behalf of the California IOUs.  
3 Can you just mention how those lifetimes were  
4 calculated?

5 MS. IYER: Sure.

6 MS. GONZALEZ: Did you take into  
7 account the market-rated averages for top-  
8 loading and front-loading?

9 MS. IYER: Yes.

10 MS. GONZALEZ: Because the --  
11 (Simultaneous speaking.)

12 MS. GONZALEZ: --seemed low.

13 MS. IYER: Yeah. The studies  
14 listed over here, you would notice that they  
15 all have a wide range. DOE made the  
16 assumption that because laundromats experience  
17 heavier usage, we considered those studies or  
18 those data sets that pointed to ten years or  
19 less, and came up with an average based on a  
20 number of data sets that were available.

21 For multi-family laundry  
22 applications, because it does experience less

1 usage, sorry let me correct myself. It was  
2 ten years or more, and in the case of -- in  
3 the case of multi-family laundry applications,  
4 it is basically seven years or more. That was  
5 ten years or less. I'm just blabbering here.  
6 So we used those data sets, that sort of fell  
7 into that criteria, to develop the averages.

8 MR. BROOKMAN: Okay. Additional  
9 questions or comments. Yes, please Phil.

10 MR. MANTHEI: Phil Manthei,  
11 Alliance Laundry Systems. I would suggest  
12 that DOE, of course, contact our customers,  
13 who are the multi-housing route operators, and  
14 you know, I don't even see them listed up  
15 there as a source of information. Certainly,  
16 you know, they could tell you a lot about, you  
17 know.

18 MR. BROOKMAN: Phil, are they  
19 represented by an entity, or are they kind of  
20 --

21 MR. MANTHEI: Sure. There's Multi-  
22 Housing Laundry Association.

1 MS. IYER: Right. We did not have  
2 any study that pointed to lifetime, but we  
3 definitely look for it.

4 MR. MANTHEI: But certainly you can  
5 ask each one of them, you know, and you know  
6 who they are. You can go to the Multi-Housing  
7 Laundry Association and get their names. You  
8 can get their names from our letters from our  
9 customers that were submitted to the  
10 Department of Justice during the last  
11 rulemaking.

12 MS. IYER: Yes.

13 MR. BROOKMAN: Okay, thank you.  
14 Additional comments?

15 (No response.)

16 MS. IYER: Thank you. That  
17 concludes all the inputs to the LCC analysis.  
18 We will now cover shipments analysis. The  
19 purpose of the shipments analysis is to  
20 quantify the changes in product shipments, due  
21 to a potential efficiency standard.

22 The shipments model is pretty

1 straightforward, in that it forecasts or  
2 projects future shipments when the standard  
3 comes into effect, for the entire period of  
4 the analysis. The shipments model is  
5 developed based on different data sources and  
6 includes historical shipments data.

7 The model primarily serves two  
8 purpose. One is of course to project the  
9 future shipments during the analysis period.  
10 The second is to develop a stock that is sort  
11 of vintage-based, that allows us to assign the  
12 correct efficiency or energy and water use to  
13 the entire stock.

14 So we use a stock turnover  
15 methodology and we develop the affected stock  
16 as part of the shipments model.

17 The first step in developing  
18 shipments projections is to come up with the  
19 base case projection. That is when, in the  
20 event of no standards. Rather than  
21 extrapolating the current trend of shipments,  
22 the shipments model uses driver inputs, driver

1 variables as inputs, to inform the shipments  
2 pertaining to particular market segments.

3 We looked at two market segments  
4 here. One due to new construction or new  
5 installations, and the second that is due to  
6 retirements of the existing clothes washer  
7 units. The new construction shipments are  
8 driven off of housing starts, in combination  
9 with the purchase rate for these multi-family  
10 housing establishments.

11 The retirements, of course, come  
12 from the lifetime distribution function. We  
13 have data listed here that we need for  
14 developing the shipments model, which includes  
15 historical data, as well as saturation rates  
16 to properly account for the existing stock of  
17 products.

18 In the past, we have used the AHAM  
19 fact book, RECS, and American Housing Survey,  
20 for coming up with saturation rates. I have  
21 highlighted market share efficiencies as one  
22 of the data points here. It is not a direct

1 input to the shipments model, but is a very  
2 important input for the National Impact  
3 Analysis, which we'll cover later.

4 This is a plot of the historical  
5 shipments data. The Y axis has the total  
6 shipments in millions, and we cover from mid-  
7 80's to 2010 here.

8 You'll see, and this pertains to  
9 some of the comments that were there earlier  
10 about the shipments trend you'll see that  
11 there's an increasing trend, up to late 90's,  
12 and then the shipments start to decline.

13 The four black diamonds here are  
14 from AHAM, that we received as part of the  
15 last rulemaking. Because of the declining  
16 trend, DOE in the past rulemaking projected a  
17 flat shipments out to the future.

18 We attributed some of the decline  
19 to conversions of apartments to condos. We  
20 did find justification for that assumption  
21 from the American Housing Survey.

22 You'll see that we have five new

1 data points, which are actually based on the  
2 quantity index of commercial laundry  
3 equipment. It includes all the equipment that  
4 falls in this category, not just the product  
5 that is being covered.

6 But you would see that there is a  
7 pretty good correlation between the AHAM data  
8 submittal over there and the quantity index.  
9 We have just plotted this, to sort of show  
10 that we are continuing to see a declining  
11 trend, and would like input from stakeholders  
12 on what they think about the trend.

13 This is a request for historical  
14 sales data, and for market share efficiency.  
15 These are by product class.

16 We come to a specific request for  
17 comment, Item 9-1. DOE seeks historical  
18 shipments data, broken down by product class.  
19 Item 9-2, DOE seeks input on whether  
20 conversions from apartments to condos or  
21 townhouses are still occurring. Questions?

22 MR. BROOKMAN: Ed Osann.

1 MR. OSANN: Yes. This is Ed Osann  
2 with NRDC. What is the basis -- what's the  
3 source for the quantity index?

4 MS. IYER: Bureau of Economic  
5 Affairs.

6 MR. OSANN: Okay, and is it a unit-  
7 based index, or is it a dollar-based index?

8 MS. IYER: They're available in  
9 both. This is quantity, so it's unit-based.

10 MR. OSANN: Thank you.

11 MR. BROOKMAN: Comments on  
12 conversions from apartments to condos and  
13 townhouses?

14 (No response.)

15 MR. BROOKMAN: No comments. Okay.

16 MS. IYER: Okay. Once we have  
17 developed the base case shipments projections,  
18 DOE needs to come up with standards case  
19 shipments projections. These are developed  
20 pretty much the same way, except now we  
21 account for impact on shipments from potential  
22 price increases from a new standard.

1                   Realizing that data that captures  
2                   the purchase price impact on shipments and the  
3                   operating cost savings on the shipments is not  
4                   easy to procure, and particularly for a  
5                   commercial clothes washer unit, which is a  
6                   small segment of the total clothes washer  
7                   market.

8                   We request data on that, but in the  
9                   absence of any such data, DOE may use the  
10                  purchase price elasticities that were  
11                  developed for the residential clothes washer  
12                  rulemaking.

13                  DOE will also, if we're not able to  
14                  come up with a proper elasticity, we may  
15                  create scenarios based on specific drops in  
16                  shipments as a sensitivity, and DOE will also  
17                  account for any cross-price elasticity impacts  
18                  between the product classes, to forecast the  
19                  market shares into the future.

20                  We have a specific request for  
21                  comment. Item 9-3, request input from  
22                  manufacturers and other stakeholders on

1 historical shipments by efficiency, historical  
2 prices of commercial clothes washers for  
3 specific product categories. This will allow  
4 us to determine purchase price elasticities.

5 Item 9-4 seeks input from  
6 manufacturers and stakeholders on the  
7 potential impact of amended commercial clothes  
8 washer energy conservation standards on  
9 equipment shipments, and whether the  
10 elasticities developed for residential clothes  
11 washers would be appropriate for commercial  
12 clothes washers.

13 MR. BROOKMAN: Yes, please. Julia.

14 MS. FARBER: Sorry. This is just a  
15 point of clarification that I have. So is the  
16 Department of Energy considering, also in  
17 doing these price elasticity reviews, are you  
18 also considering any incentive programs that  
19 might be out there, to encourage people to  
20 purchase any of these products?

21 MS. IYER: Since we are focusing  
22 mainly on price increases pertaining to

1 standards, we don't really consider those  
2 programs for this particular purpose.

3 MS. FARBER: Thank you.

4 MR. BROOKMAN: You see the comment  
5 boxes 9-3 and 9-4, historical shipments and  
6 elasticities. No additional comments or  
7 questions?

8 (No response.)

9 MS. IYER: That concludes shipments  
10 analysis. We will now cover the National  
11 Impact Analysis. National Impact Analysis  
12 allows DOE to assess national energy and water  
13 savings, and the national economic impact.

14 In order to develop annual national  
15 energy and water savings, DOE utilizes the  
16 shipments projections that is generated by the  
17 shipments model, and the per unit energy and  
18 water use data developed as part of the LCC  
19 analysis, to develop the energy and water  
20 consumption of the entire stock of commercial  
21 clothes washer units in the country.

22 DOE aggregates all of the costs and

1 the consumption, and reports national energy  
2 savings and national water savings. DOE  
3 discounts the operating cost savings, to come  
4 up with the Net Present Value.

5 This graph here, which is a flow  
6 chart of how this is implemented, will explain  
7 it further as to how base case and standards  
8 case annual energy and water use is developed.

9 You will see that the shipments  
10 analysis on top provides both the base case  
11 and the standards case projection of  
12 shipments. The time period considered is from  
13 2018, the potential year for the energy  
14 conservation standards to kick in, up to 2047,  
15 which is a 30-year period.

16 DOE potentially will calculate  
17 annual energy and water consumption for every  
18 single year in that period, and will calculate  
19 energy and water consumption as it pertains to  
20 the complete stock of commercial clothes  
21 washer units in the country.

22 These are aggregated to arrive at

1 the total, which is the base case cumulative  
2 energy and water savings, water use, and the  
3 standards case cumulative energy and water  
4 use.

5 These are then converted from site  
6 to source, using a site to source energy  
7 conversion factor, to arrive at the source  
8 energy and water use in the base case and the  
9 standards case. The difference between the  
10 two gives us the national energy and water  
11 savings.

12 The NPV, the National Consumer Net  
13 Present Value follows a similar procedure.  
14 The inputs come from shipments model in the  
15 form of base case and standards case  
16 projections, and DOE will develop two streams  
17 of costs here, operating costs and the total  
18 equipment costs.

19 The operating costs come from the  
20 energy and water costs, and the repair and  
21 maintenance costs for the same analysis period  
22 that we computed the national energy savings

1 for. The equipment cost informs the part of  
2 total equipment cost increase for the same  
3 period of analysis.

4 These are discounted to arrive at  
5 the Net Present Value and the difference  
6 between the operating cost savings and the,  
7 excuse me, equipment cost increase, gives us  
8 the national Net Present Value.

9 This slide talks about shipment-  
10 rated efficiency data and market share  
11 efficiency data, and how it is important for  
12 calculating the National Impact Analysis, or  
13 conducting the National Impact Analysis, and  
14 projecting future changes in efficiency.

15 The historical trends in product  
16 efficiency helps DOE to project future product  
17 efficiencies. Other than that, DOE also uses  
18 other market pull programs that may be in  
19 existence, such as Energy Star or others, that  
20 informs the base case efficiency trend.

21 The market share efficiency data is  
22 utilized to create the market share efficiency

1 distribution when the standards kick in. In  
2 the past, DOE has utilized a roll up scenario  
3 to project the standards impact, which  
4 basically moves all the units below a certain  
5 standard level out of the market and moves the  
6 efficiency to the standard level.

7 DOE will also report the full fuel  
8 cycle measure of energy and greenhouse gases  
9 as part of the NIA. Basically, what the full  
10 fuel cycle does is it goes beyond the power  
11 sector to calculate the extraction, processing  
12 and transportation of fuels to the power  
13 sector. We will present detailed technical  
14 documentation in the technical support  
15 document.

16 This is a data request for  
17 historical shipment-weighted average  
18 efficiency by product class. We request data  
19 going as far back as 1997, because the more  
20 data we have, the better we are able to  
21 project the future trends.

22 We're coming up for request for

1 comment. Item 10-1, DOE seeks historical  
2 shipment-weighted efficiency data by product  
3 class. We also seek historical market share,  
4 showing the percentage of equipment shipments  
5 by efficiency level for as many product  
6 classes as possible.

7 MR. BROOKMAN: No comments here.

8 MS. IYER: Okay. Moving on --  
9 okay.

10 MR. MANTHEI: Phil Manthei from  
11 Alliance Laundry Systems.

12 MR. BROOKMAN: Phil.

13 MR. MANTHEI: I guess I would think  
14 that you would have all the data up to the  
15 last rulemaking, and from the historical, you  
16 wouldn't need to really ask for that again,  
17 right? It would just be the more recent?

18 MS. IYER: We do have some data.  
19 It wasn't very detailed the last time around.  
20 We had the shipment-weighted efficiency data  
21 for three years. So any new data we can get  
22 will always be useful.

1                   Okay. I will now move on to  
2 consumer subgroup analysis. The purpose of  
3 the consumer subgroup analysis is to analyze  
4 economic impacts of standards on those  
5 consumers that are likely to be  
6 disproportionately impacted by a potential  
7 standard.

8                   The method DOE employs to assess  
9 this impact is to extend the LCC, or the Life  
10 Cycle Cost analysis, to examine the impacts on  
11 specifically defined groups.

12                   In the past rulemaking, DOE looked  
13 at specific groups such as laundromats, small  
14 businesses, or landlord-owned apartment  
15 buildings, small lodging establishments that  
16 have on-site laundries. So we covered some of  
17 the subgroups as part of the consumer subgroup  
18 analysis.

19                   We have a request for comment. DOE  
20 requests input on any consumer subgroups it  
21 should consider when analyzing the standards  
22 for commercial clothes washers, and in fact

1 we'd like to develop these subgroups based on  
2 stakeholder input. Yeah.

3 MR. BROOKMAN: Ed Osann.

4 MR. OSANN: Osann with NRDC. In  
5 this context, are consumer subgroups subgroups  
6 of purchasers of the equipment, or subgroups  
7 of users of the equipment?

8 MS. IYER: Purchasers.

9 MR. OSANN: So for instance,  
10 Americans With Disabilities, ADA-compliant,  
11 availability of ADA-compliant equipment would  
12 not be a consideration?

13 MS. IYER: If they purchased their  
14 own equipment, they will be. The way we  
15 define the consumer here is somebody who is  
16 purchasing it and operating it.

17 MR. BROOKMAN: Additional comments?

18 MS. IYER: Okay. We now move to  
19 utility impact analysis. The purpose of the  
20 utility impact analysis is to assess the  
21 overall impact from a conservation standard on  
22 electric and gas utilities that supply energy.

1 The national energy savings from the National  
2 Impact Analysis forms the input to this  
3 analysis.

4 DOE will use the NEMS-BT model,  
5 which is a variant of the national energy  
6 modeling system developed by the EIA, for  
7 conducting this analysis. The analysis will  
8 be developed for two cases, the base case and  
9 the standards case, and the standards case  
10 will be run as a departure from the AEO  
11 reference case.

12 Request for comment. Item 13-1.  
13 DOE seeks input from stakeholders regarding  
14 its plan to use the NEMS-BT model to conduct  
15 the utility impact analysis. We would like  
16 input on whether NEMS-BT model is appropriate  
17 for this analysis, and if not, we would like  
18 inputs as to why. We would also like inputs  
19 from the stakeholders on any other model that  
20 they consider more appropriate for conducting  
21 this analysis.

22 MR. BROOKMAN: No comments on NEMS.

1 Okay.

2 MS. IYER: Okay. We move to  
3 employment impact analysis. The basic purpose  
4 of the employment impact analysis is to assess  
5 the overall impact from a conservation  
6 standard on national employment at that level.

7 Employment impacts include both  
8 direct and indirect impacts. The direct  
9 impacts were already covered by Ben in the  
10 manufacturer impact analysis that he covered.  
11 The indirect employment impacts result from  
12 any changes from a reduced energy consumption  
13 or changes in equipment prices.

14 These can be in the form of  
15 substitution effect or income effect. DOE  
16 intends to use an input/output model to assess  
17 these impacts. The impact of sector energy  
18 technology is an input/output model of the  
19 U.S. economy that DOE plans to use.

20 We have another request for comment  
21 here. Item 14-1, DOE welcomes feedback on its  
22 approach to assessing national employment

1 impacts.

2 (No response.)

3 MS. IYER: No comments?

4 MR. BROOKMAN: No comments on  
5 employment impacts.

6 MS. IYER: Moving on, emissions  
7 analysis. The purpose of the emissions  
8 analysis is to assess the environmental  
9 impacts from a potential energy conservation  
10 standard on commercial clothes washers.

11 These will include impact from  
12 power sector emissions, as well as the full  
13 fuel cycle emissions, and also the site  
14 emissions from the use of oil and gas from  
15 water heating.

16 DOE will base the emissions factors  
17 for full fuel cycle on EIA's Annual Energy  
18 Outlook, and will supplement that with other  
19 data sources for developing the multipliers.

20 The standard power sector emissions  
21 will include carbon dioxide, sulfur dioxide,  
22 nitrogen oxides and mercury. The full fuel

1 cycle in addition will provide emissions of  
2 methane and nitrous oxide, both of which are  
3 recognized as greenhouse gases.

4 MR. BRUNDAGE: Yes. Don Brundage.  
5 I just want to emphasize the importance in  
6 looking at electric utility emissions, and  
7 making sure you supplement data from other  
8 sources. Things are moving very rapidly, with  
9 additions of emission controls and retirements  
10 of plants.

11 So it's very important to do a good  
12 job on this, because the future is not the  
13 past for these emissions. Thank you.

14 MR. BROOKMAN: Thank you.

15 MS. IYER: Thanks. DOE also  
16 monetizes emissions reductions for carbon  
17 dioxide and nitrogen oxide. For this, DOE  
18 will use the most current social cost of  
19 carbon values developed by inter-agency  
20 reviews.

21 At the present time, the inter-  
22 agency estimates of the potential global

1 benefits resulting from carbon dioxide  
2 emissions are provided in this slide.

3 We do anticipate that these values  
4 are likely to change, depending on the  
5 contributions of CO or other GHG emissions,

2

6 and the economic damage that ensues from them.  
7 So we are aware that this is not something to  
8 be cast in stone.

9 MR. BROOKMAN: Don Brundage.

10 MR. BRUNDAGE: One more comment.  
11 On your carbon emissions, are you basing the  
12 emissions on measured emissions or the input  
13 fuels?

14 MS. IYER: These will be, since we  
15 are going through a full fuel cycle, these  
16 will include the measured, the emissions that  
17 pertain to the power sector, and those that  
18 actually will impact through the fuel supply  
19 chain.

20 MR. BRUNDAGE: Okay. The reason  
21 I'm bringing it up is there are some plants,  
22 and my own company has one, that removes and

1 sequesters carbon dioxide. We have one  
2 currently under construction for completion in  
3 2014, which will remove two-thirds of the  
4 carbon dioxide.

5 So some of the standard ways of  
6 calculating this may not be true in the future  
7 as they have in the past.

8 MS. IYER: Okay, duly noted. Since  
9 we use NEMS-BT for the power sector emissions,  
10 I'm assuming that EIA actually has in its  
11 database information about, you know, plants  
12 that have this capacity, and incorporates  
13 that.

14 MR. BROOKMAN: Okay, thank you.

15 MS. IYER: So we now come up with a  
16 specific request for a comment. DOE seeks  
17 input on its plan to use NEMS-BT and other  
18 sources to analyze emissions impacts on  
19 potential standards on commercial clothes  
20 washers.

21 (No response.)

22 MS. IYER: Okay. Moving on to

1 regulatory impact analysis. This will be the  
2 last analysis I'll be covering today.

3 Recognizing that there are several  
4 other efforts that are ongoing, either from  
5 utilities or manufacturers or other interested  
6 parties, that helps improve the efficiency of  
7 commercial clothes washer units, DOE will  
8 conduct its regulatory impact analysis for all  
9 the non-regulatory approaches that are out  
10 there.

11 For this purpose, DOE will evaluate  
12 actual impacts that have been there from other  
13 such programs in the past, and will also  
14 include any existing programs that are likely  
15 to have impact in the future. That's pretty  
16 much the conclusion of regulatory impact  
17 analysis. Thank you very much.

18 MR. BROOKMAN: Thank you. Ed  
19 Osann.

20 MR. OSANN: Going back to the  
21 monetization of the emissions reduction, what  
22 slide is that?

1 MS. IYER: I have it up.

2 MR. OSANN: Okay, Slide No. 108.

3 MR. BROOKMAN: Thank you. I think  
4 she's got it.

5 MR. OSANN: Is this simply a side  
6 bar or an illustrative analysis, or is this  
7 incorporated into the economic component of  
8 the National Impact Analysis?

9 MS. IYER: This is not  
10 incorporated, as far as I know, and correct  
11 me, Betsy, if I'm wrong. But DOE reports  
12 this. Betsy, do you want to take this  
13 question?

14 MR. BROOKMAN: Betsy.

15 MS. KOHL: Sure. This is Betsy  
16 Kohl at DOE OGC. I can probably confirm it,  
17 but I think it's not part of the, strictly  
18 part of that seven-factor analysis. It might  
19 be under the others, or just something that we  
20 consider as part of establishing the standard.

21 MR. BROOKMAN: Thank you.

22 MS. IYER: Any other questions or

1       comments?

2                   MS. FARBER:   Can I ask a clarifying  
3       question?

4                   MS. IYER:    Okay.

5                   MR. BROOKMAN:  Yes, Julia.

6                   MS. FARBER:  Hi.  This is Julia  
7       from UL.  I'm actually not asking -- I'm just  
8       asking out of curiosity.  I have some points  
9       of clarification.

10                    Could somebody in the room share  
11       with me what exactly happens to these products  
12       when they're done being used in the cycle?  Do  
13       they get sold to somebody else or do they get  
14       trashed?  Is there some other fate for them?

15                   MR. BROOKMAN:  Phil.

16                   MR. MANTHEI:  Well, it depends on -  
17       - if you're mainly talking about the multi-  
18       housing segment, is that what you're talking  
19       about, or the --

20                   MS. FARBER:  I-- sure.

21                   (Laughter.)

22                   MR.  MANTHEI:       Okay.       The  coin

1 laundry segment, those probably get trashed,  
2 because those are pretty well done by their  
3 lifetime.

4 But the multi-housing, depending on  
5 the contract or leasing arrangement, the  
6 buyers of our product, the route operators,  
7 may redeploy them. They may refurbish them  
8 and redeploy them.

9 There's, you know again, I suggest  
10 DOE discuss that and ask those kind of  
11 questions, you know, with our customers. But  
12 I know that is what happens.

13 MS. FARBER: Thank you. So then  
14 going back to that one slide where you were  
15 asking clarification on and updates from 1998,  
16 about what happens to the cycle, just curious  
17 that there is potential for these products to  
18 be used, reutilized or in certain parts of the  
19 sector, if they have another life, that should  
20 be considered in that piece, where the end is  
21 not really the end, and they get either broken  
22 down in other pieces and move forward.

1 I'm also asking also clarification,  
2 probably to you as well at Alliance. If there  
3 is a movement in that direction in the  
4 industry, to start thinking of the products as  
5 a source of -- another way to either recycle  
6 or break down the product, reuse some of those  
7 aspects, so that they don't necessarily just  
8 go right to landfill? Just out of curiosity.

9 MR. MANTHEI: Phil Manthei from  
10 Alliance. I'm going to probably defer a  
11 little bit to Jennifer Cleary from AHAM, but  
12 AHAM has quite a record of, to respond on how  
13 white goods, as they're called, clothes  
14 washers and major appliances, are recycled in  
15 the United States, and it's like 99 percent or  
16 something like that, mainly because they're  
17 primarily, you know, metal.

18 MR. BROOKMAN: Jennifer.

19 MS. CLEARY: Jen at AHAM. Yes, I'd  
20 be glad to discuss that maybe later on. It's  
21 just, it's very detailed and complex, but just  
22 building on what Phil said.

1 MS. FARBER: Yes, fair enough. The  
2 reason I was asking is because I was also  
3 thinking is, do you know where those products  
4 sold? Like are those pieces sold? Because if  
5 so, then that may also impact the way that you  
6 do the analysis, of how, the economic impact  
7 is there a potential to create another part of  
8 the industry that's not really part of the  
9 larger stream. They're just ideas, I know.  
10 I'm just asking questions, that's all.

11 MR. BROOKMAN: Yes, please.  
12 Amanda.

13 MS. GONZALEZ: Hi, yes. This is  
14 Amanda Gonzalez on behalf of the California  
15 IOUs. There's actually been research done on  
16 that question, to look at the energy and cost  
17 savings associated with refurbishing clothes  
18 washers, relative to buying them new.

19 So I could point you to that, if  
20 you're interested. If you'd give me your  
21 business card afterwards.

22 MS. FARBER: Yes, absolutely. All

1 right. Well, that will conclude my question  
2 session. Thank you very much for indulging  
3 me.

4 MR. BROOKMAN: Additional and  
5 perhaps final questions, before I turn it back  
6 to Stephen Witkowski for final comments?

7 (No response.)

8 MS. IYER: I have a request.

9 MR. BROOKMAN: Yes please, go  
10 ahead.

11 MS. IYER: I have a request.  
12 Amanda, can you point me to the study that  
13 you're referring to as well?

14 MS. GONZALEZ: Yes.

15 MS. IYER: Thank you.

16 MR. BROOKMAN: Take us to the last  
17 slide. So I see that the Department has  
18 furnished a copy of the business cards for  
19 individuals present here today that signed in.  
20 So thanks to the Department for doing that.  
21 Then back to Stephen Witkowski --

22 MS. KOHL: Before -- this is Betsy.

1 MR. BROOKMAN: Betsy, yes.

2 MS. KOHL: I just wanted to make  
3 one point of clarification to the discussion  
4 that we had on Slides 15 and 16, about that  
5 March 7th, 2015 date on the test procedure.

6 That, as many of you in the room  
7 know, is contingent on DOE adoption of those  
8 new standards that we established in that  
9 direct final rule at the end of May.

10 And as many of you in the room also  
11 know, notice for that is due at the end of the  
12 week. So keep a lookout for that.

13 MR. BROOKMAN: Thank you. Stephen  
14 Witkowski. It's not on.

15 MR. WITKOWSKI: Well, on Slide 113  
16 is the information for submitting your  
17 comments, and please note that the comment  
18 period date closes on October 12th.

19 We strongly encourage you to get  
20 your comments in and get them in by that date,  
21 and I want to thank you all for coming today  
22 and participating, and we look forward to as

1 many comments and as much data as you can  
2 provide. So thank you very much.

3 MR. BROOKMAN: Thank you. I'm  
4 going to hand out an evaluation form, send  
5 that around. We welcome your comments.  
6 Julia. And if any of you are staying for the  
7 afternoon meeting, that will commence on time  
8 at one o'clock.

9 (Whereupon, the above-entitled  
10 matter went off the record at 11:42 a.m.)

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C E R T I F I C A T E

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