Mr. BARTON. In terms of the second unanimous consent request, you are asking that Mr. Markey be given an additional 5 minutes right now?

Mr. DINGELL. I am asking that you give him my 5 minutes.

Mr. BARTON. Well, your 5 minutes will be given after Mr. Walden's 5 minutes. If you want to yield at that time--

Mr. DINGELL. I was hoping I could yield it at this time.

As I have indicated, I have been enjoying Mr. Markey's comments.

Mr. BRYANT. Well, I will object to the second part of the unanimous consent request, and we will do regular order in terms of when questions are to be asked.

Mr. BARTON. Objection is so noted. We have allowed others to go over some; and Mr. Markey, if you have a question you want to pose at this point, it appears that you will have another 5 minutes there after I ask my questions.

Mr. MARKEY. I thank the chairman for yielding to me at this time for a quick question.

Well, here is the question I have. Up until my questioning, the Chair had been operating under a no-standard standard--

Mr. BARTON. No, in terms of the time, that is not true. Mr. Markey, we have actually been keeping track. We have been going over about a minute and a half. At 48 seconds over, I flip my mike on just to give you a signal that we
were approaching that time limitation.

Mr. BRYANT. When I was in the Chair--when I asked my
questions, I asked questions for 5 minutes and 20 seconds.

Mr. BARTON. We have now used up another minute and a
half on this debate, so if you have--.

Mr. TAUSIN. We are not being very efficient here.

Mr. MARKEY. So how do you want to proceed, Mr. Chairman?

Mr. BARTON. Well, as I said, if you have a quick
question you want to ask, it appears Mr. Dingell will be
yielding you 5 minutes after I get my first round of
questions in, since I haven’t had that opportunity yet. So
if you have a quick question, we can do it. I will take my
five, and then it appears Mr. Dingell will yield to you his
five.

Mr. MARKEY. Okay. I thank you, Mr. Chairman.

The EPA Energy Star website, Mr. Garman, this morning
lists the 132 model lines made by 25 different manufacturers
that already meet or exceeded the SEER 13 standard. Why
can’t the other industry participants meet that standard?

What is the difficulty, knowing that low-income users, 60
percent of whom rent, are in situations where they
effectively pay the electricity bill every day that they are
in these apartments, where the estimates are that the rent
would only increase by $2 a month if a more efficient SEER 13
standard was installed in each one of those homes?
Why isn't a low-income user better off in the long term if the landlord is forced—not forced but because the air conditioning industry is forced to only have more efficient air conditioners out in the marketplace?

Please explain again the deep concern that this administration seems to have for low-income people in this one area if every economic analysis demonstrates that the consumer is better off by having low electricity bills in the long term.

Mr. GARMAN. You have raised a number of issues, and I will try to constrain my comments to the most recent one.

But the--

Let me, first of all, point out that the matter on the legality is an issue before the United States Court of Appeals for the Second Circuit, and we will not resolve that issue here today. So if I can put that issue of whether or not a 12 SEER is legal under the provisions of EPCA, we just need to put that aside.

I want to make it very clear, we are not arguing and it has not been argued, to my knowledge, that it is not technically possible to make an air conditioner that has a SEER 13 standard or a 15 standard or actually even a 18 standard. It is technically possible. Residing the compressor, increasing the size of the cooling array, and other steps can be taken. It is not a technological issue.
It is an economic issue. It is economically unwise to, you know, in terms of its impact on consumers and the industry, to move to this standard this quickly. This is not to say the consumers in areas of the country where they can achieve a quick payback are not free to buy these air conditioners. They are. They are available on the market, and they can buy them. And if you live in Phoenix or Miami you should by them.

But if you live in Minnesota or Wisconsin and you are a low-income person who wants to live in his own home and you want to buy an air conditioner that is going to have a reasonable payback period, keep in mind we are promulgating a minimum national standard that has to apply in all regions of the country. If you want an Energy Star air conditioner that has a higher SEER standard, that is certainly available.

The question and the tests that are put in the law that we are supposed to use in promulgating these standards don't rest on the single issue of energy efficiency alone. We are told to evaluate the economic impact of the standard on the manufacturers and the consumers. We are told to evaluate the savings and operating costs throughout the life of the product. We are told to evaluate the total projected amount of energy that can be saved. In total, seven items in the law that we are required to evaluate in setting these standards. It is a balancing act. What the administration
Mr. Bart. Okay. Thank you. We need to move on. We are 8 minutes and 56 seconds on that one. So, Mr. Garman, I now yield myself 5 minutes for purposes of questioning.

I would like to follow up on this issue of the SEER standards and the other recommendations that the Bush administration did adopt. Can you go back through those, the ones that you did adopt and the energy savings levels for each of those appliances? Because, for some of us, air conditioning is not the biggest user of power, especially if you are in the rather cool Northwest. It is heating. It is water heating. And I wonder if you could go back through the ones that you did adopt.

Mr. Garman. Yes, sir. Adopted were standards covering washing machines, water heaters, commercial heating and cooling systems.

I would also want to point out that in the national energy policy we were expressly directed to look to new areas that--.

Mr. Bart. What are those new areas?

Mr. Garman. Well, they didn't specify it. But we are looking at everything ranging from, of course, it has been
mentioned earlier, distribution transformers, residential
furnaces and boilers, small electric motors, gas cooking
products, residential or larger commercial central air
conditioners and heat pumps, oil and gas-fired commercial
package boilers, tankless gas-fired instantaneous water
heaters, a whole range of things that we are looking at for
possible new standards.

Mr. BARTON. So is the SEER standards on air conditioning
from 13 recommended by Secretary Richardson? Was that figure
the figure recommended by the professional staff of the
Department of Energy?

Mr. GARLAN. My understanding is that the--and again,
this is anecdotal and I wasn't there. But it has--I have
been told that the general staff recommendation presented to
Secretary Richardson based on the technical support document,
the same numbers developed by the same staff put before
Secretary Abraham was to adopt the 12 SEER standard.

Mr. BARTON. So you are saying the 12 SEER standard is
the one that the staff recommended based on your knowledge,
not the 13.

Mr. GARLAN. Yes, sir.

Mr. BARTON. And what savings would people see on a 12
standard versus a 13?

Mr. GARLAN. It depends on the region of the country,
where they lived, how--.
Mr. BARTON. Right.

Mr. GARMAN. You know, it varies widely. I can give you a very kind of gross median savings.

Mr. BARTON. Well, my understanding is the industry estimates that the cost of an air conditioner will increase by $407, 16.9 percent increase at 12 SEER, and $712 or a 29.5 percent increase at a 13 SEER. So the difference is nearly double between the 12 and 13, just in the cost of the air conditioner. Correct?

Mr. GARMAN. Yes, sir. The DOE numbers are actually lower than those numbers provided I think by the air conditioning manufacturers' trade. But they still are significant. It is—we estimate, particularly when you look at heat pumps, a SEER 13 heat pump is projected to cost $4,000 when these regulations take place.

Mr. BARTON. A SEER 13 would cost four thousand---.

Mr. GARMAN. $4,000. And that is lower DOE number estimate.

Mr. BARTON. And what would a SEER 12 cost?

Mr. GARMAN. The SEER 12--I don't have that number at my fingers. But you are leading me to a very important point, and it goes right the issue of energy efficiency. The choice that a consumer makes between air conditioners and heat pumps is a very important one.

Mr. BARTON. Why?
Mr. GARMAN. Because what can happen, as I said, the installed price of a 13 SEER heat pump is projected to be $4,000 compared to $2,571 for a split air conditioning system. Now, if we were to go to the 13 SEER, there would be an incentive for the consumer to team up the lower priced air conditioning system with a resistance heater furnace at a lower cost to get their heating and cooling. If only 4 percent of the consumers buying new equipment did this, they would erase the energy savings achieved by the 13 SEER standard.

Mr. BARTON. Can you say that again? Because I think that is a critical point in this debate if we are trying to get energy conservation.

Mr. GARMAN. If the price difference between a 13 SEER heat pump and a 13 SEER air conditioner, which is significant, drives only a fraction of consumers, 4 percent, to opt for the lower cost up front cost of teaming up an air conditioner with a resistance heating unit or resistance heating furnace--.

Mr. BARTON. Right.

Mr. GARMAN. --they will more than erase the nationwide savings that would be achieved.

Mr. BARTON. So if 96 percent of consumers go for the 14 SEER air conditioner, if that is the new requirement--.

Mr. GARMAN. Heat pump.
Mr. BARTON. Heat pump. I am sorry--then you would erase
the savings achieved by the higher standards because you
would drive people to go to the other.
Mr. GARMAN. That is right. I mean, that is the other
thing.
Mr. BARTON. So in fact the regulations we put in place
could actually have an inverse response by consum... d you
could end up then consuming more energy.
Mr. GARMAN. That is right. 13 SEER could have the
unintended effect of actually making us take a step backward
in terms of energy conservation.
Mr. BARTON. All right. My time has expired. Thank you,
Mr. Garman.
The Chair now yields 5 minutes to the gentleman from
Michigan, Mr. Dingell.
Mr. DINGELL. Mr. Chairman, I thank you.
I would simply observe that the policies of this
administration on these matters appear to be a triumph of
conservative ideology of over technology and good sense, and
I yield to my good friend from Massachusetts.
Mr. MARKEY. I thank the gentleman very much.
Let me move back in, Mr. Garman, about the
administration's concern for poor people. And, by the way,
congratulations. Because the New York Times poll yesterday,
poling all voters in the United States, when asked the
question of which Americans the Bush administration favors most, an astounding 57 percent of all Americans—Bush policies generally favor the rich—57 percent of Americans say the rich, 8 percent say middle class, and 2 percent of all voters say that the Bush administration favors poor people. So congratulations. You seem to have found the one issue where the Bush administration is favoring poor people.

Now let's explore that concern as the driving force for rolling back this air conditioning standard.

So there are about 15 million people, Mr. Garman, who live at or below the poverty line in the United States. Now, 3.7 million of those households use central air conditioning, 60 percent of those rent. So we are talking maybe 2.2 million households now. Now, understanding the way the population of the United States works for central air conditioning, most of those homes would be in Texas and Florida and California. They would be in the warmer States, obviously. Almost by definition, those are the people who would need it most, and that is where they would be centralized.

Now, central air conditioners last about 18 years and cost between $2,000 and $5,000. According to DOE's high-cost estimates, a 30 percent improved standard will cost about $340 more than current basic models. If a landlord chose to attempt to recoup this increment by raising rent over an
18-year product life, the rent increase would be less than $2 per month.

Now the 40 percent of the 3.7 million low-income households with central air conditioning who own their homes at some point would face the cost of replacing a central air conditioning system, and there—I think you would agree that for most of these households the monthly utility bill savings from the strongest standard over the life of the home will outweigh the incremental cost of financing a more inefficient air conditioner. So, again, could you go back through this analysis and tell me why the low-income renter or owner is worse off having a national SEER 13 standard 5 years from now than having a 12 standard over the lives of their families?

Mr. GARMAN. I will again reiterate as best I can the consumer impact comparison between 12 and 13 SEER for split air conditioners and heat pumps. The median payback period for an average consumer and the 12 SEER standard is 10 years, according to DOE analysis, notwithstanding the fact that the law tells us to use as a general guidepost a rebuttable presumption of a 3-year payback. But, nevertheless, the administration placed the emphasis and the importance of energy efficiency as saying that we are going to promulgate a minimum national standard that the average consumer could not recoup until 10 years. The low-income consumer would take 12 years to recoup it. In the case of the 13 SEER standard,
those numbers become 11 years to 14 years.

Mr. MARKEY. What is the electricity price that you assume in that?

Mr. GARMAN. These are minimum payback periods.

Mr. MARKEY. No. What is the minimum?

Mr. GARMAN. It depends, because electricity prices vary with region.

Mr. MARKEY. How long would it take the electricity rates that have been in California for the last year and that the Bush administration refuses to interject themselves to use cost of service rate, how long would it take to get a recovery for California low-income users?

Mr. GARMAN. For, of course, a much shorter time in any area of the country--

Mr. MARKEY. Thank you.

Mr. GARMAN. --where rates are higher or when temperatures are higher and air conditioners are used more often.

Mr. MARKEY. How about in Texas? How long would it take to get a return?

Mr. GARMAN. It should not--it should take a matter of several years to get a return in Texas.

Mr. MARKEY. What do you mean, "several years"?

Mr. GARMAN. Well, again, it depends on a number of factors.

Mr. MARKEY. So you would get the return after maybe 3 or
5 years in Texas or California, and then for every other year after that there would be savings which the consumer or the landlord would be enjoying.

Mr. GAR MAN. Correct. Remember, sir, we are promulgating a minimum national standard. Consumers in Texas or Louisiana are free to buy Energy Star devices today in the marketplace.

Mr. MARKEY. But you understand that the landlord has no incentive.

Mr. BARTON. The gentleman's time has now expired.

Mr. MARKEY. If I may just finish my thought. The landlord has no incentive to buy an efficient central air conditioning system since they can pass the cost on to the tenant, to the poor tenant; and so it is not the poor person who makes that decision. The poor person is subjected--

Mr. BARTON. The gentleman's time is expired.

We want to thank the panelists for their presentations today. If members have further questions, they are welcome to submit them in writing.

We have a number of panelists who are here today to testify in our next panel, so we would welcome them up to the committee table at this time.

We want to welcome our panelists this morning. Each of you will have 7 minutes to make your presentations. We have your written testimony which has been entered into the official record of the committee. Feel free to work off of
September 25, 2001

The Honorable Joe Barton
Chairman
Subcommittee on Energy and Air Quality
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:


Enclosed are two inserts requested by Representatives Boucher and Tauzin to complete the bearing record. It has been determined that no action is required for the insert requested by Representative Burr.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Lillian Owen, at (202) 586-2031.

Sincerely,

Dan Brouillette
Assistant Secretary
Congressional and Intergovernmental Affairs

Enclosures
their assumption is that as the price of oil escalates, fuel
cells become more competitive because they can bring the fuel
cell cost down and the oil cost is going to go up.

I may have misinterpreted his reaction, but my
interpretation of his reaction was, they haven't given any
thought to what happens when OPEC says, oh, fuel cells are
becoming pretty efficient. We had better lower the price of
oil so that internal combustion engines are still
competitive. We better pump more.

If your only asset is hundreds of billions of barrels of
oil reserves, and the Western economy moves to fuel cells and
says, the heck with the internal combustion engine, then you
don't have an asset. So all these projections that oil
prices are going to $50, $60, $70, $80 a barrel, that is only
if we don't develop an alternative.

If we really develop an alternative, those prices are
going to go down to stay competitive. I don't think that at
least the GM people had thought about that. We need to think
about that if we are going to put all of our eggs into fuel
cell technology, because the people that are providing the
oil are not crazy people. They are going to eventually say,
we have got to lower our price to stay competitive.

The gentleman from Virginia is recognized for 5 minutes
for questions.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman.
And, Mr. Garman, I also want to congratulate you on your appointment and thank you very much for being here today and say that we look forward to working with you as we develop the energy conservation and efficiency portions of our national energy strategy legislation. Let me direct your attention to a provision in the report of the administration's Energy Task Force, recently released, which recommends—and I will simply quote this; that will save you actually having to open it up. You are probably familiar with this direction, in any event. The recommendation is that "the President direct the Secretary of Energy to establish a national priority for improving energy efficiency."

I would like for you, if you would this morning, to give us a sense of how that direction is going to be translated into concrete recommendations. Give us a status report, if you would, on your work in developing the recommendations stemming from that direction.

Here is where you may want to take a note or two. In particular, I would appreciate your indicating how the Department of Energy would propose to have energy efficiency improvements in the following areas. And I will be very precise about the areas that I would like for you to address.

First of all, how soon do you intend to update the existing standards for a residential dishwasher and for

Obtained and made public by the Natural Resources Defense Council, May 2002
refrigerators, residential dishwashers and refrigerators?

Secondly, how soon do you expect to complete the ongoing proceedings, which I think have been under way for a matter of years, extending well back into the last administration, relating to electricity distribution transformer efficiency?

Then, third, will the administration support new efficiency standards for the following: commercial refrigerators, exit signs, traffic lights, icemakers, and commercial unit heaters?

The reason I have selected these precise latter topics is because we are getting recommendations from other witnesses who will appear this morning that in our legislation we include these precise items with directions that energy efficiency improvement standards be established. So anticipating those recommendations, I would like to get your view on those subjects.

I will yield the balance of my time to you for that.

Mr. GARMAN. One of the things that we are working to do--and I will be candid with you, looking at that particular recommendation that you cited, making energy efficiency a national priority, gives us something of an open field.

What the Secretary has directed, the Deputy Secretary, the number two official in the Department, us to do is to take this document and to translate it into implementation actions. We were in a meeting yesterday in his office going...
over some of these very points.

It is going to require in most cases a collaboration
between the other agencies--the Department of Transportation,
the Environmental Protection Agency--frankly, a level of
collaboration we haven't always seen in the past. So in
addition to the fundamental issue of translating this, we are
going to have to refashion the dialogue and improve...
dialogue between the disparate Federal agencies to begin to
put some meat on the bones of these recommendations.

Now, that process is under way, and on a weekly basis, we
have updated matrixes to try to implement the policy and
really put a fine point on it.

With respect to the specific standards, we are well along
the way on distribution transformers, and I can't give you an
exact time frame because, of course, it is a regulatory
process and there are opportunities for some of the
stakeholders in the process to lengthen or expedite depending
on--but let me--.

Mr. BOUCHER. Can you just give us a general sense?

Mr. GARKAN. Sure. I think we can--I think that
distribution transformers are an opportunity for a reasonably
expeditious win. I think that--and part of this, because one
of the programs that we are actually going to review in the
context of this strategic review are our rulemaking processes
on setting new standards for these various items.
I can tell you that some that you have mentioned, refrigeration, commercial, are on our higher priority list. And I would beg the indulgence of the committee—and perhaps this is something I can provide you for the record—something of a matrix of our current thinking on the prioritization of these various appliances and the general time frames in which we think we will be turning to them.

Mr. BOUCHER. Mr. Chairman, thank you. My time has expired. Let me simply conclude by thanking Secretary Garman for his attendance here and his answer to this question.

And, Mr. Secretary, I would very much welcome at the earliest time that you could provide it that written response to this question that establishes these priorities and some suggested time frames for completing these various rulemakings. And to the extent that you can talk about your level of support for the specific items that I indicated in the last part of the question for refrigerators and the other items, that would be welcome, too.

Now, we are proceeding on a fairly rapid schedule here to adopt legislation on this set of issues, and so if you could provide an answer perhaps by next week, that would be timely and helpful to us. And I thank you and thank you, Mr. Chairman.

[The information follows:]
### Summary of Priorities

#### Standards and Determinations (D)

<table>
<thead>
<tr>
<th>High Priority Products</th>
<th>Low Priority Products</th>
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<tr>
<td>Residential Central AC/HP*</td>
<td>Clothes Dryers</td>
</tr>
<tr>
<td>Distribution Transformers</td>
<td>Clothes Washers*</td>
</tr>
<tr>
<td>Residential Furnaces and Boilers</td>
<td>Cooking Products - Electric*</td>
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<tr>
<td>Air-Cooled Central Air Conditioners and Air-Source Heat Pumps, 65-240 kBtu/h</td>
<td>Direct Heating Equipment, Gas</td>
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<td>Packaged Terminal Air Conditioners and Heat Pumps</td>
<td>Dishwashers</td>
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<td>Small Electric Motors (D)</td>
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<tr>
<td>Niche Products-Residential A/C</td>
<td>Fluorescent Lamp Ballasts*</td>
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<td>Cooking Products - Gas</td>
<td>High Intensity Discharge Lamps (D)</td>
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<tr>
<td>Lamps</td>
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<td>Plumbing Fixtures/Fittings</td>
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<td>Medium Priority Products</td>
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<td>Residential Water Heaters*</td>
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<td>Oil- and Gas-Fired Commercial Packaged Boilers</td>
<td>Room Air Conditioners *</td>
</tr>
<tr>
<td>Tankless Gas-Fired Instantaneous Water Heaters</td>
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* Dropout to Low Priority upon Completion

* Final rules for these products have been recently published

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Obtained and made public by the Natural Resources Defense Council, May 2002

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28828
Mr. GARMAN. But, as you pointed out, there are new modifications and possibilities that it affords. I think--particularly in some of, you know, [energy, renewable] where an external heat source can be applied.

Mr. TAUZIN. We are also told that in distributive energy systems Sterling engines can be extraordinarily useful, particularly new designs. I would love to have something from you to complement what Charlie Bass has brought on our committee, if you can to give us your latest of its potential as part of a conservation and distributive energy initiative.

Finally, I just wanted a comment from both of you on one of the most important elements of conservation. In California, when California had price caps on the retail market on its electricity, we discovered in our surveys in California a drop in conservation of 8 percent. It shouldn't have surprised us. Price controls tend to encourage demand and weaken conservation efforts. Price increases have the opposite results always. We saw a 13 percent increase in conservation in California the moment it was announced that those price controls would be lifted on the retail market.

Is the price of gasoline going up, shortage of natural gas, prices of natural gas going up? How much do prices and increases in prices under your analysis create conservation incentives? What is the relationship in that? Is it a one-to-one relationship? Is it a one-to-two?
Stirling engines have several attributes that make them attractive for distributed energy applications as well as renewable energy applications:

1. **Flexible.** Stirling engines are external combustion engines and can accept heat input from a variety of sources, including solar energy. Stirling engines can be designed to burn more than one fuel and operate in a "Hybrid" mode. DOE has worked with several engine manufacturers (such as STM Corporation) to develop an engine that is capable of using solar energy and/or biogas in combination with natural gas, landfill gas, and hydrogen. This would provide a potentially dispatchable power supply for grid-connected utility as well as off-grid remote applications.

2. **Efficient.** The efficiency of the Stirling engine is approximately 40 percent as compared to 30 percent for microturbine technologies. This is the reason why the Stirling technology is currently the engine of choice for solar dish systems. Solar dish systems, with a Stirling engine at the focal point, have an overall system solar-to-AC power efficiency of nearly 30 percent.
(3) Modular. Current Stirling engines range in size from several hundred watts to 25 kilowatts, with applications including refrigeration, cryogenics, cogeneration, and power generation. This makes them ideal for on-site power applications.