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4 ``AMERICAN ENERGY SECURITY AND INNOVATION: AN ASSESSMENT OF

5 PRIVATE-SECTOR SUCCESSES AND OPPORTUNITIES IN ENERGY

6 EFFICIENT TECHNOLOGIES''

7 TUESDAY, FEBRUARY 26, 2013

8 House of Representatives,

9 Subcommittee on Energy and Power

10 Committee on Energy and Commerce

11 Washington, D.C.

12 The Subcommittee met, pursuant to call, at 10:08 a.m.,

13 in Room 2123 of the Rayburn House Office Building, Hon. Ed

14 Whitfield [Chairman of the Subcommittee] presiding.

15 Members present: Representatives Whitfield, Scalise,

16 Shimkus, Pitts, Terry, Burgess, Cassidy, Olson, McKinley,

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17 Gardner, Pompeo, Kinzinger, Griffith, Upton (ex officio),
18 Rush, McNerney, Tonko, Capps, Barrow, Matsui, Castor, Welch,
19 and Waxman (ex officio).

20 Staff present: Nick Abraham, Legislative Clerk; Gary
21 Andres, Staff Director; Charlotte Baker, Press Secretary;
22 Mike Bloomquist, General Counsel; Matt Bravo, Professional
23 Staff Member; Allison Busbee, Policy Coordinator, Energy and
24 Power; Patrick Currier, Counsel, Energy and Power; Carolyn
25 Ferguson, Staff Assistant; Tom Hassenboehler, Chief Counsel,
26 Energy and Power; Heidi King, Chief Economist; Ben Lieberman,
27 Counsel, Energy and Power; Gib Mullan, Chief Counsel,
28 Commerce, Manufacturing, and Trade; Mary Neumayr, Senior
29 Energy Counsel; Andrew Powaleny, Deputy Press Secretary;
30 Chris Sarley, Policy Coordinator, Environment and Economy;
31 Lyn Walker, Coordinator, Admin/Human Resources; Jeff Baran,
32 Democratic Senior Counsel; Phil Barnett, Democratic Staff
33 Director; Greg Dotson, Democratic Staff Director, Energy and
34 Environment; Caitlin Haberman, Democratic Policy Analyst; and
35 Alexandra Teitz, Democratic Senior Counsel, Environment and
36 Economy.

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|
37 Mr. {Whitfield.} Good morning, and I would like to call
38 this hearing to order this morning. I will recognize myself
39 for an opening statement.

40 Anyone who focuses on energy issues, I believe, has been
41 amazed at recent discoveries of resources that make it
42 possible for America to be energy independent, both
43 generating electricity and producing fuel for transportation
44 purposes. Certainly, supply and demand affects price and if
45 we can control price, we can be more competitive in the
46 global marketplace, strengthen our economy, and create jobs.
47 That is certainly a goal to which we all aspire.

48 Now, we have had several hearings about supply in this
49 subcommittee, and today, we are going to focus on demand, and
50 specifically, energy efficiency. In fact, today's hearing is
51 entitled ``American Energy Security and Innovation: An
52 Assessment of Private-Sector Successes and Opportunities in
53 Energy Efficient Technologies.'' Just as we have been
54 successful in finding additional resources for energy
55 production, we have also made great strides in energy
56 efficiency, and we can do even more.

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57 History teaches us that nothing is more efficient than
58 the free market. The only thing you need to spur than
59 improve energy efficiency is profit-seeking companies
60 responding rationally to high energy bills. Any company that
61 doesn't use energy as wisely as possible will lose ground to
62 a competitor that does. This is why free economies are the
63 most efficient and have the lowest energy inputs per units of
64 gross domestic product when you contrast that particularly
65 with centrally-planned economies, which are certainly not as
66 efficient.

67 We all understand that government has a very important
68 role to play and has contributed much in this area, such as
69 utilizing the latest advances to improve efficiency in
70 federal buildings, and in conducting energy efficiency
71 research. And all of us are fans of the energy savings
72 performance contract program over at DOE, and it continues to
73 do a great job, and we look forward to making sure that it
74 continues to make that kind of contribution.

75 We have a great panel of witnesses today. We have three
76 panels, and on the first panel, we are very fortunate to have
77 two United States senators. We have Senator Lisa Murkowski

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78 of Alaska, who has been a leader in the energy sector.
79 Senator, we really appreciate your taking time to be with us
80 today. And Senator Shaheen of New Hampshire was given a
81 speaking engagement this morning, and she is on her way, and
82 it is not seldom that we have two senators over here, so we
83 are always going to pay particular attention to what they
84 say, because as they say, the House and the Senate need to
85 work closely together on all these issues. So we are excited
86 about the witnesses this morning, and I will introduce the
87 three panels as we come to them.

88 [The prepared statement of Mr. Whitfield follows:]

89 ***** COMMITTEE INSERT *****

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|
90 Mr. {Whitfield.} And with that, Mr. Rush, I would
91 recognize you for an opening statement.

92 Mr. {Rush.} I want to thank you, Mr. Chairman, for
93 holding today's hearing on the successes and opportunities in
94 energy efficiency technology. It is my sincere hope that
95 after hearing from today's panel of witnesses, members on
96 both sides of the aisle will be able to come together and
97 move their country's energy policy forward by working to
98 enact common sense energy efficiency legislation.

99 Mr. Chairman, I remain optimistic that this subcommittee
100 may return to the days of enacting bipartisan and
101 comprehensive energy policy like we did most recently in '05
102 and '07. I believe that the area of energy efficiency may,
103 in fact, be the opportunity for us to do so.

104 The story of energy efficiency is one that is filled
105 with success stories that I really hope propel our Nation
106 forward by making us more independent and more secure, while
107 also reducing the cost of energy, both in our pocketbooks and
108 its impact on the environment. According to a recent ACCC
109 study, U.S. energy consumption in 2010 was less than half of

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110 what it would have been without the energy efficiency
111 improvements made since 1970.

112 Mr. Chairman, while today's hearing focuses on the
113 progress made in the private sector, let us not forget that
114 it was the leadership of State and Federal Government
115 activities that paved the way for many of these energy
116 efficiency successes. DOE rulemaking spurred dozens of
117 national efficiency standards for appliances and equipment
118 since 1987. ACCC--EEE, rather, found that these existing
119 standards will provide net savings of \$1.1 trillion through
120 2035, while also reducing carbon pollution by the equivalent
121 amount of taking approximately 118 coal-fired power plants
122 offline by that same year. In fact, in 2010, overall U.S.
123 energy use was 7 percent less than it would have been without
124 these extending--existing, rather, standards.

125 However, Mr. Chairman, it is important to note that the
126 ACEEE also found, and I quote, ``The prospect for future
127 improvements is large.'' In fact, the report estimates that
128 additional energy efficiency efforts could reduce U.S. energy
129 use by 42 to 59 percent over current projections, which will
130 create over one million jobs and increase U.S. GDP by \$100 to

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131 \$200 million by the year 2050.

132 So, Mr. Chairman, it is important that the Federal
133 Government does not abdicate its responsibility, its
134 leadership role, of promoting, of encouraging, of enticing
135 interested stakeholders to continue with the progress that
136 has already been made in energy efficiency technologies so
137 that we may keep moving forward, moving our Nation forward.
138 We have a rich and strong legacy to stand on, Mr. Chairman,
139 and let us not abandon the work that has already been done.
140 Energy efficiency has been the low-hanging fruit that may,
141 indeed, as I said earlier, bring both sides together in a
142 legislative manner while also making our Nation safer, more
143 secure, and more attentive to the impacts of climate change.

144 Mr. Chairman, I look forward to hearing from these
145 outstanding members of the other body, our Nation's leaders,
146 and I look forward to this hearing. And with that, I yield
147 back the balance of my time.

148 [The prepared statement of Mr. Rush follows:]

149 ***** COMMITTEE INSERT *****

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150 Mr. {Whitfield.} Well thank you, Mr. Rush.

151 At this time, I recognize the chairman of the full
152 committee, Mr. Upton, for a 5-minute opening statement.

153 The {Chairman.} Well thank you, Mr. Chairman. I want
154 to thank both of our senators for being here. Thanks for
155 crossing the Capitol this morning to provide your perspective
156 on energy efficiency innovation. Energy efficiency is not
157 only a bipartisan issue, but as your presence here today
158 demonstrates, there is bicameral interest as well.

159 You know, for an economy to thrive, it does need energy.
160 In fact, increased energy consumption is often a harbinger of
161 economic growth, a very good thing by any measure. When we
162 talk about energy efficiency, I believe our goal is to
163 maintain and enhance our economic growth by finding ways to
164 maximize the ways that we use energy, to get the most bang
165 for the buck. Energy efficiency measures are some of the
166 simplest and most affordable ways to address U.S. energy
167 demand. The U.S. has steadily improved its energy
168 productivity as a result of advances in technology driven by
169 private sector innovation. Reducing waste and consuming less

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170 energy are common sense strategies to cut costs, which is why
171 the industrial and manufacturing sectors have undertaken
172 significant efforts to improve efficiency and reap the
173 resulting economic benefits. But significant energy
174 efficiency opportunities remain, and we will hear about some
175 of those opportunities, as well as the challenges, from our
176 distinguished panelists today.

177 We have got to remember that as the sequester takes
178 center stage this week, that the Federal Government is the
179 Nation's largest user of energy, and sensibly utilizing
180 energy-saving techniques can significantly reduce the amount
181 of taxpayer dollars spent on federal energy costs.

182 So on behalf of all of our colleagues, I welcome both of
183 you here, and yield the balance of my time to Mr. Gardner.

184 [The prepared statement of Mr. Upton follows:]

185 ***** COMMITTEE INSERT *****

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|
186 Mr. {Gardner.} Thank you, Mr. Chairman, and thank you,
187 Chairman Whitfield and Ranking Member Rush, thank you for
188 holding this hearing today. Over the past 2 years, I have
189 become increasingly more interested in this topic of energy
190 efficiency, and look forward to hearing our witness's
191 testimony this morning.

192 There is a lot more that the Federal Government in
193 particular could be doing to become more energy efficient,
194 since we truly are the largest energy consumer in the Nation.
195 That is why I have partnered with Mr. Welch of Vermont, who
196 also serves on this committee, to form a caucus solely
197 focused on advancing energy efficiency in a way that helps
198 the environment and the taxpayer. Our caucus focuses on
199 performance contracting, whether they be energy savings
200 performance contracts, or utility energy service contracts.
201 ESPCs and UESCs allow private companies to perform energy
202 upgrades by taking on all the risks associated with those
203 improvements. The company only gets paid when the monetary
204 savings materialize. They are a win-win for government and
205 the taxpayer, creating private sector jobs along the way.

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206 I truly believe that energy efficiency is an issue that
207 Republicans and Democrats can come together on, as we have
208 done in Colorado. And during times when this city can seem
209 so partisan to the rest of the country, I think we should
210 jump at this opportunity to do so. I will point out,
211 however, that there is one minor impediment to moving forward
212 with ESPCs, and in the way that many of us in this room would
213 like to do so. While OMB does not score ESPCs, CBO does.
214 Even though it saves money, it has no appropriated dollars
215 with it. It is unfortunately restricting our ability to
216 utilize a tool that makes complete sense during an economic
217 downturn, and during a time when the Federal Government is
218 trying to find a way to save money.

219 I look forward to working with everyone on this issue,
220 and the others in this room as we discuss what we can do to
221 encourage energy efficiency here in Congress.

222 Thank you, Mr. Chairman. I yield the remainder of my
223 time.

224 [The prepared statement of Mr. Gardner follows:]

225 ***** COMMITTEE INSERT *****

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|
226 Mr. {Whitfield.} Well thank you, Mr. Gardner, and at
227 this time, I recognize the ranking member of the full
228 committee, the gentleman from California, Mr. Waxman, for 5
229 minutes.

230 Mr. {Waxman.} Thank you, Mr. Chairman.

231 At its heart, energy efficiency is about reducing waste,
232 doing more with less. This frees up energy supply, saves
233 money, and reduces dangerous carbon pollution. Energy
234 efficiency is good for consumers, good for business, good for
235 our economy, and job creation and good for fighting dangerous
236 climate change.

237 A recent report from the International Energy Agency
238 highlights the critical role of energy efficiency in slowing
239 dangerous climate change. IEA concluded that if the world
240 does not take action to reduce carbon pollution by 2017, then
241 the energy infrastructure existing at that time will make it
242 impossible to limit warming to 2 degrees Celsius. In other
243 words, we have just 4 years to take serious actions to reduce
244 carbon pollution, or we will be locked into a path forward
245 that is going to lead us to devastating climate change. But

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246 if we invest now in energy efficiency, we can give ourselves
247 more time.

248 According to the IEA, the rapid deployment of energy
249 efficiency measures would give the world at least 5
250 additional years to develop long-term solutions. IEA also
251 found that there are huge efficiency opportunities available.
252 Cost effective energy efficiency measures using technology
253 available today could reduce expected future energy use by
254 over 40 percent. These measures, of course, would save
255 consumers and businesses over \$11 trillion through 2050.
256 Two-thirds of the potential energy efficiency savings remain
257 untapped. Existing efficiency standards will provide net
258 savings of over \$1 trillion through 2035, while reducing
259 annual carbon emissions by 470 million metric tons. That is
260 equivalent to the annual emissions from over 100 coal-fired
261 power plants. Without these existing standards, a typical
262 household's electricity use would be about 35 percent higher.
263 Buildings account for about 40 percent of our total energy
264 consumption, and there is a lot we can do to make them more
265 efficient. Tools such as efficiency include building codes,
266 performance goals, information disclosure, technical support,

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267 innovative financing approaches, and reduction of market
268 barriers.

269 We are going to hear today from two very distinguished
270 members of the Senate. Senator Shaheen worked together with
271 Senator Portman on a bipartisan bill that includes many good
272 ideas. Senator Murkowski in the last Congress worked with
273 Senator Bingaman on a package of consensus energy efficient
274 standards--efficiency standards. We should build on both of
275 these bipartisan efforts.

276 We need to be ambitious. Study after study has
277 identified a myriad of ways we could save energy, save money,
278 and reduce carbon pollution.

279 I look forward to hearing the testimony from our two
280 senators and other witnesses today, and working on a
281 bipartisan basis to do something that I think is in the best
282 interest of the American people. Yield back the balance of
283 my time.

284 [The prepared statement of Mr. Waxman follows:]

285 ***** COMMITTEE INSERT *****

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|
286 Mr. {Whitfield.} Thank you, Mr. Waxman, and that
287 concludes the opening statements, so it is my pleasure now to
288 introduce our first panel of witnesses. They have already
289 been introduced, but I will do it again. We have Senator
290 Lisa Murkowski, a U.S. Senator from Alaska, who is the
291 ranking member of the Senate Energy and Natural Resources
292 Committee, and we have the Honorable Jeanne Shaheen, U.S.
293 Senator from New Hampshire, and as has already been stated,
294 both of you all have worked on these issues and in a very
295 bipartisan way, and so we welcome you to this committee. It
296 is my understanding that when you finish your opening
297 statements, that you both have some other responsibilities,
298 so we will not be asking you any questions, but do look
299 forward to your testimony, and Senator Murkowski, I will
300 start with you and recognize you for 5 minutes.

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|
301 ^STATEMENTS OF HON. LISA MURKOWSKI, A UNITED STATES SENATOR
302 FROM THE STATE OF ALASKA, RANKING MEMBER, SENATE ENERGY AND
303 NATURAL RESOURCES COMMITTEE; AND HON. JEANNE SHAHEEN, A
304 UNITED STATES SENATOR FROM THE STATE OF NEW HAMPSHIRE

|
305 ^STATEMENT OF HON. LISA MURKOWSKI

306 } Senator {Murkowski.} Thank you, Mr. Chairman, Ranking
307 Member Rush, Mr. Waxman, Mr. Upton, thank you for the
308 opportunity to be here this morning to focus on an energy
309 efficiency specifically. I don't know how you do this, but
310 the fact that you actually have your cups this morning that
311 talk about energy efficiency--I don't know if you do this for
312 every hearing over here, but kudos to the committee here for
313 being on subject.

314 You note in your introduction of me that as the ranking
315 member on the Energy Committee, I would obviously have an
316 interest in this, but coming from the State of Alaska, as I
317 do, where in some of our remote, rural communities, Alaskan
318 families are spending up to 47 percent of the family's budget

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319 on energy. There is every reason to be efficient. There is
320 every reason to squeeze everything that you can out of the
321 energy that comes our way, so I have taken a very keen
322 interest in it, and as a consumer of energy, as we all are,
323 we should all be focused on energy and what we can do to make
324 a difference.

325 Before I get into the specifics of energy efficiency, I
326 want to offer some context for it in the position of a
327 broader, more comprehensive look at energy policy. I brought
328 with me today one of the Hill's best sellers, this is Energy
329 20/20, a brilliant piece of 115 pages focusing on all things
330 energy. And it is not very often around here that we
331 actually see 200 recommendations on energy policy come out, a
332 focus on energy as the bigger picture in terms of what we can
333 do to strengthen our economy. I would commend it to you. It
334 is available on my website. But let me give you the Reader's
335 Digest condensed version. It starts with a simple premise
336 that energy is good. You can distill it in a bumper sticker,
337 but it--think about it. It provides the basis for modern
338 society. It allows us to lead happy and productive lives.
339 It allows us to produce food, to manufacture, to communicate,

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340 to move. It is all good.

341 And to give you five easy principles when we talk about
342 energy, we should strive to make energy abundant, affordable,
343 clean, diverse, and secure. And to accomplish all this,
344 again, I outline about 200 different recommendations, but as
345 we think about energy policy here in this Congress and how to
346 move forward in an area that really can help us be more
347 efficient in our use, just think of it in context of these
348 five attributes as a way to evaluate legislative actions that
349 affect energy. And I would hope that taken together, we can
350 agree that these are the attributes that should allow our
351 policies to advance.

352 Now, as your focus on American energy security and
353 innovation reminds us, energy--efficiency is more than just
354 driving energy consumption down. As I say in the blueprint
355 here, using energy more efficiently is akin to developing
356 more fuel. It also encompasses the more efficient production
357 of energy.

358 Now, we must do more. We must do more to discourage the
359 inefficiencies that I think we see oftentimes with regulation
360 and how that is introduced into our energy supply chain. Our

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361 aim with energy efficiency policies should be to require less
362 energy per unit of gross domestic product, and it is worth
363 emphasizing that what we want is a rising GDP here as a
364 measure of increasing prosperity.

365 To underscore for the discussion of efficiency, we must
366 never lose sight of the fact that we want our Nation--in
367 fact, we want the world to be more prosperous, and we know
368 prosperity is an aid to peace and human development, and
369 energy is an aid to prosperity, so the title for the hearing
370 today reminds us that we must see efficiency within the
371 context of energy security and innovation.

372 I am honored to be here with Senator Shaheen, who has
373 been a leader on efficiency during her tenure on the Energy
374 Committee with me. She continues to work with Senator Rob
375 Portman on their version of a comprehensive energy efficiency
376 bill. It was, and it thankfully remains, a bipartisan effort
377 to make progress in an area where you all have pointed out,
378 agreement is imminently possible, and I think that we saw
379 this as the last Congress waned down. We managed to pass an
380 efficiency bill, the American Energy Manufacturing Technical
381 Corrections Act. There were only two Members of Congress

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382 that voted against that, so again, when you think about those
383 things that we can do together, we should be looking to
384 efficiency.

385 So where do we go on efficiency this year as we look at
386 ways to boost the efficiency of everything that we are doing,
387 whether it is from the buildings here, our vehicles, our
388 appliance, everything? The bill that Senator Shaheen and
389 Senator Portman will offer, I think provides a promising path
390 that is worthy of our consideration. You will see,
391 complements of their work with reports from private sector
392 associations like the Business Roundtable, the National
393 Association of Manufacturers, the Alliance to Save Energy, we
394 must continue to encourage outside stakeholders to reach
395 these voluntary consensus agreements so that efficiency does
396 not become synonymous with this top down approach of mandates
397 that are issued by the Federal Government. I think given the
398 constraints on federal finances that has been mentioned and
399 the failure of mandates to deliver on certain promised
400 results, those of us in the Federal Government should also
401 put our own House in order. And as a start, I am going to be
402 calling upon the GAO to review current funding and past

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403 performance of residential, commercial, and industrial energy
404 efficiency programs within DOE, and then propose new
405 authorization levels based on this review.

406 Now finally, you have appropriately called attention
407 with this hearing to private sector successes and
408 opportunities, and as private--as President Reagan's
409 Administration reminded us more than 25 years ago, the
410 greatest gains in energy efficiency come from the private
411 sector in a growing economy. So here, the government's
412 priority should be the removal of barriers that stand in the
413 way of their investments and the economic growth that make
414 them possible.

415 Again, I thank you for the opportunity to come over. I
416 think it is important that we share our ideas between the two
417 Houses, certainly amongst members and our parties, and I
418 welcome the opportunity for future dialogue on energy
419 efficiency and all things energy.

420 Thank you for the opportunity to be here this morning.

421 [The prepared statement of Ms. Murkowski follows:]

422 ***** INSERT 1 *****

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|
423 Mr. {Whitfield.} Well Senator Murkowski, thanks so much
424 for your testimony and your continued leadership, and
425 welcome, Senator Shaheen. We--at this time, I would like to
426 recognize you for 5 minutes for your opening statement.

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427 ^STATEMENT OF HON. JEANNE SHAHEEN

428 } Senator {Shaheen.} Thank you very much, Mr. Chairman,
429 Ranking Member Rush, and the members of the committee. Thank
430 you for holding this very important hearing today. Like--I
431 am especially pleased to be joined by Congressman Waxman, the
432 ranking member of the full committee, and I was pleased to
433 see Chairman Upton here as well.

434 I share the views, I think, of all of you that we have
435 just heard from that energy efficiency is a win-win-win. We
436 can save energy, save pollution, we can protect our national
437 security, and we can also create jobs. And so it is a great
438 place to start, and it has bipartisan support.

439 I am also pleased to be joining my former ranking
440 member. I served for 4 years on the Energy Committee with
441 Senator Murkowski, and I know what great leadership she has
442 provided on this issue, as well as so many other energy
443 issues. She pointed out that with the assistance of this
444 committee, last session we passed the American Energy
445 Manufacturing Technical Corrections Act, which is a mouthful,

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446 but it included many energy efficiency provisions, including
447 several from the Shaheen-Portman legislation that really
448 helped to lay a foundation, I think, for further discussion
449 about energy efficiency.

450 I want to talk a little bit about the legislation that
451 Senator Portman and I have introduced, but I want to begin by
452 putting it in a little bit of context, as Senator Murkowski
453 did. I think all of us would agree that we need a
454 comprehensive national energy policy. We remain overly
455 dependent on foreign oil. We remain reliant on an outdated
456 energy infrastructure that harms American businesses and
457 gives our overseas competitors an advantage. I think we have
458 to utilize a wide range of energy sources, including natural
459 gas, oil, nuclear, and renewables, like wind, biomass, and
460 solar to address our future energy needs, and that this gives
461 us an energy future that is more stable and gives us a
462 stronger economy.

463 As you all will highlight in today's hearing, we can't
464 just talk about the supply side of energy; we also have to
465 talk about how we consume energy once we have it.
466 Efficiency, as we all know, is the cheapest, fastest way to

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467 deal with our energy needs and our economy's energy
468 independence.

469 I wanted to start with a couple of examples that I think
470 are important as we think about the successes we can achieve
471 through energy efficiency. One of the most well-known is the
472 recent makeover of the Empire State Building, which reduced
473 energy costs by \$4.4 million a year. It created 252 jobs,
474 and it is estimated to have saved 4,000 metric tons of carbon
475 emissions. They did things like install 6,500 new windows, a
476 chiller plant retrofit, new building controls, and a web-
477 based tenant energy management system.

478 I had the opportunity not too long ago to visit a New
479 Hampshire company called High Liner Foods, which is in
480 Portsmouth, on the sea coast of New Hampshire. It is an
481 energy-intensive seafood processing plant that requires a
482 tremendous amount of energy to operate. At one point, the
483 180,000 square foot facility consumed roughly 2 megawatts of
484 power at any given time during normal operations. So next to
485 the cost of personnel and fish, their biggest cost was
486 energy. But by installing efficient lighting, new boilers,
487 and various demand response techniques, the company has made

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488 great strides in reducing its energy consumption, which
489 allows them to expand their business footprint in the State,
490 and be more cost effective in their production.

491 We can also benefit from those companies that are
492 producing energy efficiency technologies. We have a company
493 in New Hampshire called Warner Power that has made the first
494 breakthrough in transformers in over 100 years. It is called
495 the hexaformer, and if we look at the--where we lose power,
496 about 5 percent of all electricity generated in the United
497 States is lost through inefficiencies in transformers. So
498 with wide scale use of this transformer, the company
499 estimates that 1.5 percent of all transformer energy losses
500 could be eliminated, saving the country 60 terawatts of
501 electricity per year. Now, you all may know more about
502 terawatts than I do, but I translate that into five times New
503 Hampshire's annual electricity consumption, so significant
504 savings.

505 As Senator Murkowski pointed out, energy efficiency
506 enjoys diverse support among industry advocates. Because,
507 you know, too much of our debate around energy has been
508 fossil fuels versus alternatives. It has been about whether

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509 we benefit in the Northeast versus who benefits in the South
510 or the West or Alaska, and everybody benefits from energy
511 efficiency. It is one of the great places where we can
512 really come to some common agreement.

513 Senator Portman and I have done that over the last
514 couple of years. We introduced legislation last year. As I
515 pointed out, some of those provisions were signed into law as
516 part of the Act. Those provisions required federal--the DOE
517 to utilize advanced metering tools, the Department of Energy
518 to study and better understand the barriers to the deployment
519 of industrial energy efficiency. And we are reintroducing
520 the legislation this year. It will include provisions around
521 buildings that are voluntary, not mandatory, but critical
522 because it will provide incentives, and as we all know,
523 buildings use about 40 percent of our energy each year. It
524 will assist the manufacturing sector, which consumes more
525 energy than any other sector of the U.S. economy, and it will
526 require the Federal Government, as you all pointed out, the
527 single largest energy user, to adopt more efficient building
528 standards, smart metering technology, and Congressman
529 Gardner, I certainly agree. We need to do more to make sure

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530 that people can take advantage of performance contracting.
531 The bill will have a real measurable benefit to our economy
532 and our environment. A study by the American Council for an
533 Energy Efficient Economy found that last year's version of
534 the bill would have saved consumers \$4 billion by 2020, and
535 helped businesses add 80,000 jobs to the economy. It would
536 also cut carbon dioxide emissions by the equivalent of taking
537 five million cars off the road. And in the process, it would
538 have increased the deficit of this country at all.

539 We passed in the committee last session the Shaheen-
540 Portman legislation with broad bipartisan support. We had
541 more than 200 endorsements from a wide range of businesses,
542 environmental groups, think tanks, trade associations, from
543 the U.S. Chamber of Commerce to the National Association of
544 Manufacturers, and the Natural Resources Defense Council, not
545 usually a coalition that comes together around legislation.
546 These are the kinds of nontraditional alliances that allowed
547 us to make progress. I think we have the opportunity working
548 together, both in a bipartisan way and a bicameral way, to
549 build on the success of the last session, and to do something
550 significant around energy efficiency.

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551 I thank this committee very much for the opportunity to
552 be here, and for the work that you are doing, and look
553 forward to partnering with you.

554 [The prepared statement of Ms. Shaheen follows:]

555 ***** INSERT 2 *****

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|
556 Mr. {Whitfield.} Well Senator Shaheen, thanks very
557 much, and once again, I want to thank both of you for coming
558 over. We look forward to continuing a dialogue and working
559 with members of the Senate in coming up with some solutions
560 to these problems, and we look forward to working with you in
561 the future. So thank you very much, and good luck in getting
562 back over to the Senate.

563 Senator {Murkowski.} That is the hardest part of our
564 job.

565 Mr. {Whitfield.} At this time, I would like to call up
566 the witness on the second panel, and that is the Honorable
567 Dr. Kathleen Hogan, who is the Deputy Assistant Secretary for
568 Energy Efficiency, the Office of Energy Efficiency and
569 Renewable Energy, at the Department of Energy. So Dr. Hogan,
570 if you would please step forward?

571 Dr. Hogan, welcome. Thanks so much for taking time to
572 join us this morning. Before I introduce you, I just want to
573 make one comment. You know, we have these hearings and we
574 really value the testimony that is provided to the committee,
575 and we do have a rule that we try to follow, being able to

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576 receive the testimony 2 days prior to the hearing, and
577 unfortunately, we received yours last night around 7:00 p.m.
578 I know that you have a very busy schedule, but I hope that in
579 the future if you all testify here, that you might be able to
580 get here a few days early on this testimony so we have an
581 opportunity to really look at it.

582 But thank you for being with us today. We do look
583 forward to your testimony and your expertise, and I will
584 recognize you for 5 minutes for your opening statement.

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|
585 ^STATEMENT OF HON. DR. KATHLEEN HOGAN, DEPUTY ASSISTANT
586 SECRETARY FOR ENERGY EFFICIENCY, OFFICE OF ENERGY EFFICIENCY
587 AND RENEWABLE ENERGY, U.S. DEPARTMENT OF ENERGY

588 } Ms. {Hogan.} Thank you, Chairman Whitfield, Ranking
589 Member Rush, and members of the subcommittee for inviting me
590 to testify today on behalf of the Department of Energy. I
591 think, as noted by many that have spoken already, energy
592 efficiency is a large, untapped resource in the United
593 States. It offers important benefits for the country,
594 improved competitiveness, billions in consumer savings,
595 growth in domestic jobs, greater reliability of our energy
596 systems, and reduced reliance on foreign oil, as well as
597 environmental benefits.

598 This year’s State of the Union address included a goal
599 to cut energy wasted by our homes and businesses by half over
600 the next 20 years, and to double our energy productivity.
601 The Department of Energy’s energy efficiency portfolio is
602 making important contributions towards these goals, including
603 helping to ensure the long-term competitiveness of the United

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604 States.

605 Though much more needs to be done, we can start by
606 looking at our homes and buildings. They do consume about 40
607 percent of U.S. energy at a cost of about \$400 billion a
608 year, and there are many savings opportunities. DOE R&D has
609 advanced new technologies, lighting, heating and cooling
610 systems, windows that offer significant savings. Our work
611 with leading home builders offers new homes with 50 percent
612 savings over typical homes, as well as good indoor air
613 quality and durability. We are working with organizations,
614 and a number of them, on home upgrade programs to address the
615 large number of existing homes, most built before modern
616 codes, and these programs offer savings of 15 to 30 percent,
617 and we have recently reached the major milestone of
618 weatherizing more than a million low income homes since 2009,
619 helping these families save hundreds of dollars each year.
620 We have also partnered with over 100 commercial, industrial,
621 and public sector organizations representing billions of
622 building square feet, and \$2 billion in financing. They have
623 taken the President's Better Buildings Challenge, with a goal
624 of saving 20 percent or more on their energy bills by 2020,

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625 and then showcasing for others how to do it. Our minimum
626 energy conservation standards that we implement now span more
627 than 60 categories of appliances and equipment, and are
628 currently saving consumers and businesses tens of billions of
629 dollars each year, and as we have heard a lot of discussion
630 this morning, as the Nation's single largest user of energy,
631 the Federal Government does continue to lead by example. We
632 have reached large energy savings, water savings, and
633 renewable energy goals, and are on target to meet the
634 President's challenge to implement \$2 billion in performance-
635 based contracts by December, 2013, investments, as we have
636 heard, that will reduce our energy use at no cost to the
637 taxpayer.

638 Turning to manufacturing, we are working on next
639 generation technologies, processes, and materials that offer
640 substantial improvements in efficiency, and which will
641 position U.S. competitively for the future. In the State of
642 the Union address, President Obama called for a network of
643 manufacturing institutes that would help address cross
644 cutting challenges and help accelerate progress across the
645 country. DOE is a partner in these efforts, for example,

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646 through a new pilot effort on additive manufacturing in
647 Youngstown, Ohio, and we have recently announced a new energy
648 innovation hub on critical materials at Ames Laboratory to
649 develop solutions to domestic shortages of rare earth
650 materials and other materials critical to U.S. energy
651 security. We also have a strong track record with combined
652 heat and power, which now has new market opportunities with
653 lower cost natural gas, and we are supporting the President's
654 goal of 40 new gigawatts by 2020.

655 Finally, DOE manages a diverse transportation research
656 portfolio that spans many technologies and addresses light
657 duty passenger cars to heavy duty trucks. Building on a past
658 DOE research successes, the President has launched the EV
659 Everywhere Grand Challenge to spur American innovation and to
660 make electric vehicles more affordable and convenient to own
661 and drive than today's gasoline-powered vehicles within the
662 next 10 years. Electric vehicles do offer the potential for
663 \$1 a gallon gasoline equivalent, as well as a number of
664 consumer conveniences, and the U.S. needs to continue to lead
665 in this marketplace.

666 So we are pleased to be part of meeting these challenges

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667 and contributing to a more secure, resilient, and competitive
668 energy economy. We look forward to see what more we can do
669 together with you, and thank you again for the opportunity to
670 be here today. I am happy to answer any questions.

671 [The prepared statement of Ms. Hogan follows:]

672 ***** INSERT 3 *****

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|
673 Mr. {Whitfield.} Well, Dr. Hogan, thanks so much for
674 your comments. We appreciate, as I said, your being here,
675 and I will recognize myself for 5 minutes of questions.

676 I know you have a large portfolio of responsibilities,
677 and certainly one of them does relate to the energy savings
678 performance contracts. Would I be accurate in saying that
679 part of your responsibility is working with other agencies of
680 the Federal Government to encourage them to identify ways to
681 be more efficient in their areas of responsibility? And do
682 you know how many existing energy savings performance
683 contracts are active at this time?

684 Ms. {Hogan.} So you are accurate in saying that my
685 portfolio includes the Federal Energy Management Program that
686 does work with the other agencies to help them achieve a
687 variety of energy, water, and renewable energy targets, and
688 to help them with energy savings performance contracts.
689 Currently, there are over 250--I think more like 270, 280
690 performance contracts in place, worth a better driving
691 investment of more than \$2.5 billion in building
692 improvements.

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693 Mr. {Whitfield.} Right, and my understanding, the
694 private companies that get these contracts, they provide the
695 financing for this and the government simply pays it back
696 over time with a nominal interest charge. Is that correct?

697 Ms. {Hogan.} Yeah, energy savings, yes. So there is a
698 sort of shared savings mechanism.

699 Mr. {Whitfield.} And generally, how long do these
700 contracts--what is the repayment terms on the contract, the
701 length of time?

702 Ms. {Hogan.} They can vary based on what is necessary
703 so that the performance contracting firm--you know, that it
704 works for them. It can be 10, 15, 20 years.

705 Mr. {Whitfield.} Well, you know, recently I attended a
706 luncheon, and there were a large number of company
707 representatives there, and all of them were uniformly excited
708 about this program and very optimistic and positive about it.
709 And I left that luncheon excited myself, because they were
710 talking about all the great accomplishments they had made.
711 And then, really to my surprise, about 3 days later, a group
712 of employees at a federal installation came into my office,
713 and they were complaining about a contract that had been

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714 completed on their installation and they were talking
715 specifically about some sensor detectors that did not work
716 right and some impact that it had on boilers, and it ended up
717 costing a lot more money. And they had to bring people in on
718 overtime to take care of these problems, and they ended up
719 even disconnecting some of the systems. And we all know that
720 you can find something that didn't work correctly, but
721 generally speaking, what sort of oversight do you have to
722 ensure that at least those experiences are minimal?

723 Ms. {Hogan.} So I have the Federal Energy Management
724 Program under my purview, and we do work with all the federal
725 agencies around best practices to be following up with their
726 energy service contracts. There are best practices for how
727 to do evaluation, measurement, verification on what is being
728 achieved with these contracts, and we are happy to work with
729 any sort of issues that address and help those agencies work
730 them through so that we are getting the bang for the buck
731 that ESPCs have to offer.

732 Mr. {Whitfield.} So they can always come back to you
733 all and say hey, we have got--this is really not working the
734 way it is supposed to be working.

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735 Ms. {Hogan.} Absolutely.

736 Mr. {Whitfield.} Okay. Well, I have no further
737 questions at this time. Mr. Rush, I will recognize you for 5
738 minutes of questioning.

739 Mr. {Rush.} I want to thank you, Mr. Chairman, and
740 Secretary Hogan, it is certainly a pleasure to have you
741 before the committee again here. I am proud of the many
742 accomplishments that you have made and that your agency--the
743 Department has made.

744 I want to just focus on an area that centers on low
745 income households. It has been well-established that low
746 income households pay a disproportionate amount of their
747 paychecks on energy bills, and many urban constituents, those
748 who live in my district, the First Congressional District of
749 Chicago--Illinois, rather, live in older homes and older
750 buildings that are less energy efficient, and therefore, they
751 are more expensive in the summer to cool and in the winter to
752 heat. This leads to higher energy bills, and so my question
753 to you is of the many programs that President Obama has
754 implemented, many of his proposals on energy efficiency, I
755 would like to know which ones do you think that are most

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756 important, that will have the most impact on our urban and
757 low income communities? And so which one of the programs do
758 you think that would happen?

759 Ms. {Hogan.} Well certainly the weatherization
760 assistance program has had a large impact in lowering the
761 energy bills of low income households. That is a several-
762 decade old program at this point that has weatherized six
763 million or so homes over this period of time, a million or so
764 since the Recovery Act was put into place, and it is helping
765 these households at this point save billions of dollars. We
766 are doing a lot with that program to try and sort of expand
767 its use so it can be more effective in multi-family housing
768 and engage with the home--the building owners of those
769 buildings that sort of need different mechanisms with which
770 to engage with the Federal Government. So that has just been
771 a very power program that way.

772 Mr. {Rush.} And the public housing-owned apartments,
773 rental units, do you have any segmentation of the energy
774 costs and are they--especially in newer public housing
775 developments, are they meeting energy standards--our higher
776 energy standards? Are you monitoring those, and what is

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777 going to be effective of those rental units and public
778 housing?

779 Ms. {Hogan.} Yes, so newer buildings certainly are
780 meeting higher efficiency levels than the vast number of the
781 older buildings that are out there, and we continue to work
782 with HUD around standards for sort of federally-owned
783 buildings, and work to continue to engage with those building
784 owners of tenant-occupied space.

785 Mr. {Rush.} I have--I think that in order to have a
786 more vibrant and effective energy policy and energy culture
787 more into the future, it is important that we frame--it is
788 important that we introduce--it is important that we teach
789 young people, even in the early grades of grammar school or
790 grade school, the importance of energy. Do you see that as
791 being a part of what you have done and what you plan to do in
792 the future in terms of working with the school systems across
793 the Nation?

794 Ms. {Hogan.} Yes. We have done a number of educational
795 initiatives with students in the schools around energy
796 challenges and other means so that we can educate people
797 about sort of energy in the school, energy at home, and

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798 create such a culture. I am happy to engage with you more on
799 those topics.

800 Mr. {Rush.} Well, I would like to work with your office
801 to identify the different types of programs and incentives
802 that exist for lower income constituents.

803 Mr. {Whitfield.} Gentleman's time is expired.

804 Mr. {Rush.} Thank you, Mr. Chairman.

805 Mr. {Whitfield.} At this time, I recognize the
806 gentleman from Illinois, Mr. Shimkus, for 5 minutes.

807 Mr. {Shimkus.} Thank you, Mr. Chairman. I am going--I
808 will be real brief.

809 The original mission of the Department of Energy was to
810 decrease our reliance on imported crude oil. The mission
811 statement that I pulled up recently has changed a little bit.
812 There are reports today that we have actually imported more
813 crude oil from Saudi Arabia over the last month than we have
814 in the last previous years. So put me down as a skeptic
815 about the benefits of parts of the Department of Energy.

816 Having said that, Mr. Chairman, I would like to put into
817 the record a press release from the National--from the
818 Consumer Electronics Association and National Cable and

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819 Telecommunications Association--announced today these
820 companies, Comcast, DirectTV, DISH, Time Warner Cable, Cox,
821 Verizon, Charter, AT&T, Cablevision, Bright House Networks,
822 and CenturyLink, and Manufacturers Cisco, Motorola, and
823 EcoStar Technologies, and Aris, they have come to an
824 agreement to obviously establish set box--set top boxes that
825 have--are energy efficient, use the same technology as some
826 of the electronics, you know, the sleeping modes and stuff.
827 This is an example of the industry doing it without
828 government assistance or help. I also believe in the
829 consumers, and I am also concerned that if we push
830 environmental standards and rules and regs on the individual
831 homeowners, that folks in the poorer regions of this country
832 can't afford the more expensive homes that require new
833 technology, versus homes that they want to purchase and live
834 in.

835 So with that, Mr. Chairman--

836 Mr. {Whitfield.} Without objection.

837 [The information follows:]

838 ***** COMMITTEE INSERT *****

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|
839 Mr. {Shimkus.} And I yield back my time.

840 Mr. {Whitfield.} Gentleman yields back his time.

841 I recognize the gentleman from California, Mr. Waxman,
842 for 5 minutes.

843 Mr. {Waxman.} Thank you, Mr. Chairman.

844 Dr. Hogan, I want to ask you some questions about the
845 national energy efficiency standards for appliances and
846 equipment, but before I turn to that, I want to briefly
847 discuss a DOE rulemaking under Section 433 of the Energy
848 Independence and Security Act. Section 433 requires new and
849 substantially rebuilt federal buildings to meet strong
850 efficiency performance standards to reduce the use of energy
851 generated from fossil fuels. DOE issued a proposed rule in
852 2010, but it lacks sufficient detail for stakeholders to
853 evaluate how the standards would operate in practice.

854 Last summer, Senator Bingaman and I wrote to Secretary
855 Chu requesting DOE to issue a supplemental notice of proposed
856 rulemaking to address issues raised by stakeholders and allow
857 for additional public comment. Your response indicated
858 willingness to issue such a proposal, but we have been

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859 waiting since last August.

860 Dr. Hogan, is DOE committed to issuing a supplemental
861 proposal for implementing Section 433, and if so, by when?

862 Ms. {Hogan.} So I am happy to be here to be able to
863 relay that, indeed, we are committed to issuing a
864 supplemental proposed rule. We actually do have that
865 supplemental proposed rule at this point with the Office of
866 Management Budget under review, which is part of our process
867 before it can be shared with stakeholders. So if you rolled
868 back the clock just a few weeks, if you looked at the OMB
869 system, it would have shown that there was a final rule under
870 for review and now it will show that there is a proposed rule
871 under review.

872 I think also in the letter that we sent to you, we
873 indicated that we did understand some of the issues that were
874 being raised, both by federal agencies and stakeholders, and
875 things that needed to be reconsidered, such as using
876 renewable energy credits potentially to meet some of the
877 requirements, how to define a retrofit or renovation, as well
878 as how to deal with CHP and those are the types of issues
879 that we will be addressing in this supplemental notice.

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880 Mr. {Waxman.} Will this proposal address the concerns
881 stakeholders have raised regarding how to define major
882 renovation that potential use of energy credits for
883 compliance and clarifying the treatment of combined heat and
884 power?

885 Ms. {Hogan.} Yes.

886 Mr. {Waxman.} Section 433 was intended to reduce carbon
887 pollution by promoting energy efficiency and renewable energy
888 in government buildings in a common sense and reasonable
889 manner. For example, it directs the Secretary to consider
890 whether there are significant opportunities for substantial
891 improvements in energy efficiency in determining whether a
892 renovation is major and subject to the standards. Dr. Hogan,
893 will you commit to work closely with the stakeholders
894 throughout the rulemaking process to ensure that the rule is
895 practical, reasonable, and effective?

896 Ms. {Hogan.} Absolutely we will make that commitment.

897 Mr. {Waxman.} Thank you. Dr. Hogan, in your testimony
898 you referenced this tremendous effectiveness of energy
899 efficiency standards for appliances and equipment. Could you
900 please elaborate on that?

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901 Ms. {Hogan.} Sure. So appliance standards is a program
902 that the Department of Energy implements. We implement them
903 due to, you know, under congressional authorization to do so.
904 I think there is always an interesting conversation around
905 these standards. One of the ways to look at it is we are
906 typically given authority to implement these standards when
907 there is sort of a--different States are taking different
908 approaches, which creates a patchwork effect across the
909 country that is very difficult for manufacturers to deal
910 with. That is typically when they go to the Congress and ask
911 for the Department to have such authorities.

912 Mr. {Waxman.} Dr. Hogan, as I understand, the
913 Department implements minimum energy conservation standards
914 for more than 60 categories of appliances and equipment. As
915 a result of these standards implemented since 1987, energy
916 users are estimated to have saved tens of billions of dollars
917 on their utility bills in 2010. Is that right?

918 Ms. {Hogan.} That is right. These standards that
919 create a minimum level for the products that can be sold in
920 this country are saving tens of billions of dollars.

921 Mr. {Waxman.} I understand there are at least five

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922 proposed or final efficiency standards that have been sitting
923 at OMB for over a year, and I understand that DOE has missed
924 the rulemaking deadlines for another four standards that have
925 not yet gone to OMB. I assume this is a correct--this is
926 correct? Am I right?

927 Ms. {Hogan.} That is in the ballpark, yes.

928 Mr. {Waxman.} Well, it makes no sense. These standards
929 save money, strengthen our economy, and reduce pollution. I
930 urge the Administration to move forward and get them
931 finalized.

932 Thank you so much for your--

933 Ms. {Hogan.} Thank you.

934 Mr. {Waxman.} --participation in the hearing. Thank
935 you, Mr. Chairman.

936 Mr. {Whitfield.} Thank you, Mr. Waxman.

937 I might just say that in the spirit of all of the above
938 energy policy, many of us would like to get rid of Section
939 433, because it certainly discriminates against area of
940 energy supply.

941 At this time, I would like to recognize the gentleman
942 from Louisiana, the vice chairman, Mr. Scalise, for 5

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943 minutes.

944 Mr. {Scalise.} Thank you, Mr. Chairman. I appreciate
945 you being with us, Ms. Hogan, and you know, as the chairman
946 referenced, Section 433--and I think the ranking member of
947 the full committee just was talking about that, too, and the
948 rulemaking process. Can you tell me what kind of concerns
949 you all have heard about these supplemental rules being
950 developed?

951 Ms. {Hogan.} What we hear is stakeholder who are
952 looking for a fair amount of flexibility in the
953 implementation of the standards. So some of the questions
954 that have been raised are around the definition of a major
955 renovation, so what actually sort of triggers these, you
956 know, significant savings requirements, whether or not you
957 can use renewable energy credits to meet some of these
958 savings targets, and how it is that CHP would be counted.
959 Those are the types of issues that we think we can address
960 through a notice of proposed rule and effectively engage
961 stakeholders in getting to resolution.

962 Mr. {Scalise.} And it is something that concerns a lot
963 of us, you know, just that section in general, you know, and

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964 I think we will be looking at it some more.

965 The Federal Government is the largest user of
966 electricity and fuel in the country, so I would like to know
967 what steps you are taking to actually go throughout federal
968 agencies and achieve real efficiencies and savings in the
969 Federal Government.

970 Ms. {Hogan.} So the Federal Government currently is
971 subject to a number of savings targets, either through
972 congressional action or through executive orders.

973 Mr. {Scalise.} Which ones are actually saving taxpayers
974 money? I am not talking about objectives and goals down the
975 road years from now. How are you saving the tax--I mean,
976 when we came in 2 years ago into the Majority, we said we
977 need to start controlling spending, because 40 cents of every
978 dollar is borrowed money, and we started with ourselves. We
979 actually cut our own budgets here in the House. We cut the
980 budgets for congressional offices, because we felt like you
981 have to put your money where your mouth is. So, you know, as
982 you all are going around telling everybody else to change
983 their lifestyles, what kind of things are you doing within
984 the Federal Government to save taxpayers money in terms of--

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985 Ms. {Hogan.} Sure. So take energy, the energy
986 intensity of the Federal Government has been reduced by
987 approximately 15 percent over the last 10 years or more.
988 Also on water savings, we are meeting significant savings
989 targets there as well. Both of those lead to substantial,
990 you know, dollar savings across the federal fleet.

991 Mr. {Scalise.} I think a lot of us would say if you
992 just, you know, turned out all the lights over at, you know,
993 some of these agencies that are putting radical regulations
994 in place that are costing us jobs and making families have to
995 pay more for food and for electricity and for gasoline, you
996 would probably not only become more efficient, you would help
997 families and get this economy moving again.

998 I just throw one suggestion out there as we are talking
999 about efficiency, you know, the President today and every day
1000 for the last couple of days has sequesters going around. He
1001 has been flying around on Air Force One all around the
1002 country, trying to scare people about the effects, many of
1003 which are not even accurate on this sequester. I think you
1004 could probably be a lot more efficient, you might want to
1005 call the White House to tell him, just park Air Force One. I

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1006 mapped it out. It is only less than 2 miles for the
1007 President just to drive right down here to the Capitol and
1008 sit down and let us work this thing out instead of flying all
1009 around the country, tens of thousands of miles, and using who
1010 knows how much fuel. You know, just park Air Force One and
1011 go the maybe 2 miles down here and just sit around a table
1012 and figure this thing out. But that might be a way to save a
1013 lot of energy. I am not sure if you want to pass that on to
1014 the White House. It might be a good idea.

1015 With that, I yield back the balance of my time, Mr.
1016 Chairman.

1017 Mr. {Whitfield.} Thank you, Mr. Scalise.

1018 At this time, I recognize the gentleman from California,
1019 Mr. McNerney, for 5 minutes.

1020 Mr. {McNerney.} Thank you, Mr. Chairman, and I
1021 appreciate your opinion on that, Mr. Scalise.

1022 I thank you, Dr. Hogan, for coming and testifying today,
1023 and for your hard work in the Department. I just have a
1024 question about rate of return. What--do you have sort of an
1025 average rate of return a household might experience by
1026 investing in energy efficiency technology? How many years

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1027 would it take back--to pay back a \$5,000 investment in new
1028 windows or something like that, if it is just taking out of
1029 energy savings?

1030 Ms. {Hogan.} Yes, so every home can be a little bit
1031 different, but I think there is a fair number of improvements
1032 somebody in their home can make that can have a payback of 3,
1033 4, 5, 6, 7 years.

1034 Mr. {McNerney.} So--and that is not including federal
1035 subsidies, or is that including?

1036 Ms. {Hogan.} That would be without any type of
1037 subsidies. That would just be based on doing, you know,
1038 insulation, windows, a more efficient furnace, et cetera.

1039 Mr. {McNerney.} So the homes in lower income areas are
1040 going to be less efficient than the new homes in the more
1041 affluent areas, so they would have quicker rate of return,
1042 perhaps, than the newer homes, so federal help in that would
1043 be very effective in terms of reducing energy use and saving
1044 people money?

1045 Ms. {Hogan.} Yeah, I think people use incentives for
1046 any number of reasons. One is to help buy down the cost of
1047 these improvements, but also, as we know from utility

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1048 programs around the country, you use some incentives just to
1049 even get people's attention, just to help get those
1050 improvements moving.

1051 Mr. {McNerney.} Thank you. I was very thrilled to hear
1052 you talk about water savings. You know, I am from California
1053 and we have water wars out there, and water savings is a
1054 double win, because you are not only saving water, but you
1055 are saving energy because so much energy is needed to produce
1056 and deliver water. Are there significant programs in place
1057 to incentivize western users, particularly in southern
1058 California, to save water?

1059 Ms. {Hogan.} We can look into that and get back.
1060 Certainly not at the federal level, but there is certainly
1061 the issues with water in California are being addressed by a
1062 number of the California agencies, and I know they are trying
1063 to put programs in place very similar to what the energy
1064 utilities have been doing for years.

1065 Mr. {McNerney.} Okay, one more area of questioning.
1066 Again, I was thrilled to hear you talk about electric
1067 vehicles, but I have heard some concern about companies
1068 installing equipment that might service all kinds of

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1069 vehicles. Are you working with companies to address
1070 potential concerns of these businesses for installing
1071 stations that can accommodate all vehicles? What is the plan
1072 in terms of getting this out there in the business world?

1073 Ms. {Hogan.} Yes, so we are trying to engage with
1074 organizations of all kinds around building out the right
1075 infrastructure around alternative vehicles. We have a Clean
1076 Cities Program that works with cities around, you know,
1077 helping them plan for the right infrastructure and build it
1078 out based on sort of what makes sense in their regions, and
1079 want to be doing this in as an efficient and effective a way
1080 as possible.

1081 Mr. {McNerney.} So we are moving forward aggressively
1082 in that?

1083 Ms. {Hogan.} Yes.

1084 Mr. {McNerney.} And I think the new automobile
1085 efficiency standards are going to go a long ways in terms of
1086 getting us to use less fuel, and I applaud your efforts on
1087 that.

1088 Ms. {Hogan.} Thank you.

1089 Mr. {McNerney.} Thank you. With that, I yield back,

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1090 Mr. Chairman.

1091 Mr. {Whitfield.} Thank you very much.

1092 At this time, I recognize the gentleman from Texas, Dr.
1093 Burgess, for 5 minutes.

1094 Dr. {Burgess.} Thank you, Mr. Chairman. I appreciate
1095 you having the hearing, appreciate the opportunity to hear
1096 from the Department of Energy.

1097 Let me just say for the record, I am a big believer in
1098 energy efficiency. I do think that is the low-hanging fruit.
1099 I think that is the common ground that where certainly we can
1100 meet on many of these issues. Every July, I do an energy
1101 efficiency summit in the district back home in Texas. We
1102 have had speakers as diversified as David Porter for the
1103 Texas Railroad Commission to James Woolsey, the former
1104 Director of the CIA. I have tried to construct things in my
1105 life around energy efficiency, the home we live in, the
1106 hybrid car that I drive. So I am a believer in energy
1107 efficiency. I made those decisions based upon what was right
1108 for me and my family, not based on anything that the Federal
1109 Government told me to do.

1110 But since you are here, let me ask you a question. The

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1111 number one question everyone in my district is asking is why
1112 are gas prices so high right now? Gasoline prices.

1113 Ms. {Hogan.} I guess it is based on the cost of
1114 production and the cost of moving it through our systems.

1115 Dr. {Burgess.} Well, if you are in the Department of
1116 Energy, presumably you have these discussions, correct?

1117 Ms. {Hogan.} The Department of Energy does have
1118 discussions and it does have discussions about what we can do
1119 in the short term and in the long term to address gas prices.
1120 I think in the short term what we can do is really give
1121 people, you know, the tips about how to use the gasoline that
1122 they are using as efficiently as possible, and then in the
1123 longer term, we can clearly be figuring out how to increase
1124 low-cost supply, as well as use alternative fuel vehicles and
1125 further development in that space.

1126 Dr. {Burgess.} Well, it is of concern that here we are
1127 in February, and back home in Texas right before I came up
1128 here, I filled up the hybrid with gasoline that cost \$3.70 a
1129 gallon in Texas in February. That means in New York, after
1130 Memorial Day, they will be closing in on \$5 a gallon
1131 gasoline. So I think this is a matter of some importance,

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1132 and since the Department of Energy is involved in this, and
1133 this may have a direct effect on our economy generally. No
1134 one can forget that just before the meltdown that occurred in
1135 2008, our gasoline prices and diesel prices were sky high,
1136 and they certainly had an effect on the economy, so I would
1137 think this would be something that you would be discussing
1138 internally and maybe even some interagency discussions. Do
1139 you ever pick up the phone and call the people at the
1140 Commodities Futures Trading Commission?

1141 Ms. {Hogan.} We do engage in conversations across the
1142 Federal Government, and we, of course, are very concerned
1143 about these prices and are doing what we can do at this
1144 point, yes.

1145 Dr. {Burgess.} What does Mr. Ginsler at CFTC tell you
1146 that he is doing that may dovetail with what you are doing
1147 with the energy efficiency in the Department of Energy?

1148 Ms. {Hogan.} We can give you a more detailed
1149 explanation, if you would like, on what the Federal
1150 Government is doing in this--

1151 Dr. {Burgess.} I would appreciate that very much, and
1152 again, I think that would be of general interest to people

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1153 who are maybe watching this on C-SPAN.

1154 Now, in answer to--or actually, Mr. Waxman made a point
1155 about that he wanted to see things that were common sense
1156 directions and applied in a reasonable manner, and I think he
1157 was talking about the Federal Energy Management Program. So
1158 you have the jurisdiction of federal buildings under your
1159 control, the energy efficiency of federal buildings? Is that
1160 correct?

1161 Ms. {Hogan.} That is correct.

1162 Dr. {Burgess.} Is this building under your control?

1163 Ms. {Hogan.} I believe this under the Office of the
1164 Architect.

1165 Dr. {Burgess.} But you know, I will just say from my
1166 observation, having been in the congressional office
1167 buildings now for a few years, since 2007, 2008. Someone
1168 came in and changed all my light bulbs to CFLs. Nobody told
1169 me they were going to do it. Nobody warned me not to break
1170 one over my head one night, but there I was. I had CFLs in
1171 all the offices. Well, that is great. We are perhaps saving
1172 some energy by doing that, but no one has ever done, as far
1173 as I can tell, an energy audit of the Rayburn Building and

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1174 discussed the effect of having single-pane glass on all of
1175 the windows. I have an office that faces west. In the
1176 summertime, it gets beastly hot. Is this something that your
1177 office might be interested in?

1178 Ms. {Hogan.} We are happy to have a conversation about
1179 how to do an audit of the Capitol buildings--

1180 Dr. {Burgess.} Well, I am just shocked that the
1181 architect of the Capitol has not reached to you, as part of
1182 your mission is for the energy efficiency of federal
1183 buildings, and this is a big federal building that consumes a
1184 lot of energy. You changed all the light bulbs, but maybe
1185 there were other things you should have been looking at as
1186 well.

1187 Ms. {Hogan.} Well I think if we engage the Office of
1188 Architect, we will see that they are doing a lot more around
1189 the Capitol buildings, and probably just started with, as
1190 what we were saying, the low-hanging fruit, and certainly
1191 doing those audits is a cornerstone of what we are doing
1192 across the entire federal family.

1193 Dr. {Burgess.} So can I assume that there are
1194 conversations between your office and the Office of the

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1195 Architect of the Capitol as far as the energy efficiency of--
1196 the energy consumption of federal buildings, at least on the
1197 House side?

1198 Ms. {Hogan.} We have been engaged with the Office of
1199 the Architect in their plans, yes.

1200 Mr. {Whitfield.} Gentleman's time is expired.

1201 Dr. {Burgess.} Well, Mr. Chairman, maybe if you could
1202 share some of that information with our office as well. We
1203 would appreciate that.

1204 Mr. {Whitfield.} Okay.

1205 Dr. {Burgess.} Thank you, and I will yield back.

1206 Mr. {Whitfield.} At this time, I recognize the
1207 gentleman from New York, Mr. Tonko, for 5 minutes.

1208 Mr. {Tonko.} Thank you, Mr. Chair.

1209 Dr. Hogan, welcome, and I have a couple of questions
1210 about combined heat and power, and the President's 2012
1211 Executive Order on industrial energy efficiency.

1212 What role do you see for the--is the federal procurement
1213 going to play in achieving the President's goals of deploying
1214 more combined heat and power systems?

1215 Ms. {Hogan.} So certainly as the largest energy user

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1216 and as a big procurer of equipment, the Federal Government
1217 has a big role to play, and I think we are currently trying
1218 to put together a broader strategy on what that role could
1219 look like. Though what we are doing in the immediate term is
1220 exploring extending a pilot program that we have underway in
1221 the ESPC space. We have been standing up a pilot program
1222 called ENABLE to allow the ESCOs to engage in the--sort of
1223 the smaller buildings that are within the federal family that
1224 typically get overlooked, and we are looking to expand that
1225 ENABLE pilot to encourage combined heat and power or allow
1226 investments in a performance contracting way.

1227 Mr. {Tonko.} Thank you, and as part of the effort to
1228 identify policy or regulatory barriers to investing, NCHP,
1229 the Executive Order states that federal agencies will convene
1230 stakeholders to solicit their ideas and input. Is DOE
1231 involved in that list of agencies?

1232 Ms. {Hogan.} Yes, if I am thinking about the same. So
1233 the Executive Order encouraged us to go out and engage any
1234 number of stakeholders around how to advance CHP. We are
1235 having a set of regional dialogues on this topic, the next
1236 one in a couple of weeks in Baltimore, around the things that

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1237 we can do, and then we are also engaging in a report to
1238 Congress that was part of the energy bill passed this past
1239 December to do a much more detailed analysis around the
1240 barriers in the way of CHP and the things we can do to remove
1241 them.

1242 Mr. {Tonko.} I know that back in--I think it was '98, a
1243 roadmap was developed to take the--to double CHP from, what
1244 was it, 46 gigawatts to 92, in that neighborhood--

1245 Ms. {Hogan.} Yes.

1246 Mr. {Tonko.} --and they somewhat met that goal, that
1247 target deadline. Where do you believe the best opportunities
1248 exist today for deployment of CHP?

1249 Ms. {Hogan.} I think we are at a very interesting point
1250 right now for CHP in that there are many, many, many
1251 opportunities, from large heat process type industries to
1252 smaller industries and into the residential and commercial
1253 sectors. I think you will hear from another panel member
1254 today on this topic, but I think also as we look at sort of
1255 the post-Sandy period of time, there is a lot more interest
1256 in things that offer enhanced, you know, energy security
1257 linked to stave off on the aftermaths of these storms.

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1258 Mr. {Tonko.} And in the midst of all of that, do you
1259 see a particular industrial sector that might be targeted for
1260 best retrofitting to CHP?

1261 Ms. {Hogan.} So the industrial sectors that make the
1262 greatest sense are ones that have some amount of heat load,
1263 so again, that can be pretty broad, but--and a lot of it.

1264 Mr. {Tonko.} In the efforts of the State of the Union
1265 for the race to the top for energy efficiency, how is that
1266 going to be developed? I am asking that from my perspective
1267 in the State of New York, which has been rather aggressive
1268 about doing energy efficiency. Do we get impacted for being
1269 a progressive State in regard to a baseline that might be
1270 well in advance of other States? How would we fare in that
1271 whole race to the top?

1272 Ms. {Hogan.} So we will be happy to engage stakeholders
1273 in a conversation about how this program will be designed.
1274 At this point, the next point when there will be more
1275 information about this program will be in the rollout of the
1276 President's budget, and then after that we will be happy to
1277 engage with you more directly.

1278 Mr. {Tonko.} I would just indicate a concern there that

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1279 if you have done great work, you ought to be rewarded for
1280 that and continue to do more, and the consumers should not be
1281 held back or impacted--negatively impacted because of it.

1282 I am just about out of time. I was going to go into
1283 weatherization, but then let me just make a pitch for
1284 weatherization activities. Even though the stimulus did a
1285 great deal of investment to the good, I believe there is a
1286 lot of unfinished business and would strongly encourage that
1287 opportunity. Thank you very much.

1288 Mr. {Whitfield.} At this time, I recognize the
1289 gentleman from Nebraska, Mr. Terry, for 5 minutes.

1290 Mr. {Terry.} Thank you, Mr. Chairman, and thank you for
1291 being here today.

1292 What is the biggest barrier to an increased use of the
1293 energy savings performance contracts by the Federal
1294 Government? The barriers that are of concern?

1295 Ms. {Hogan.} I think one of the barriers is really just
1296 getting over the hurdle of having many different agencies go
1297 down this path. It takes a fair amount of knowledge to go
1298 and do that, and that is what the Federal Energy Management
1299 Program is set up to do. But if--just because we offer those

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1300 services, doesn't mean people necessarily want it. And
1301 again, it is just because everybody is doing so much, you
1302 know in their day-to-day jobs. And I think that is one of
1303 the, then, barriers that the President's Performance
1304 Contracting Challenge is really helping overcome.
1305 Challenging the agencies to commit to \$2 billion with in
1306 energy savings performance contracting means each agency has
1307 their own goal and each agency is working through a set of
1308 projects to meet those goals. So I think we will have
1309 largely addressed that particular barrier by December, 2013.

1310 Mr. {Terry.} All right. On weatherization, you may
1311 have read some stories from my district where there were
1312 several million dollars issued for weatherization in the
1313 city, and it was something like 14 or 15 homes that were
1314 actually provided the services. But yet, the money is gone.
1315 And so weatherization, at least in our area, is not a program
1316 that is held in high esteem. It is an example of the waste
1317 and fraud.

1318 So could you point out the internal DOE structure to
1319 oversee the weatherization program and to ensure that 80
1320 percent of it, the dollars that are provided, aren't being

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1321 used for administrative purposes?

1322 Ms. {Hogan.} Sure. I mean, first let me say that
1323 issues with weatherization really were the exception and not
1324 the rule, but--and there is a very comprehensive set of
1325 quality assurance procedures in place, on top of the fact
1326 that only a certain portion of the dollars can be used for
1327 administrative purposes.

1328 Mr. {Terry.} And what percentage is that?

1329 Ms. {Hogan.} It is--in all, I think it is about 20
1330 percent.

1331 Mr. {Terry.} Twenty percent is allowed for
1332 administrative purposes--

1333 Ms. {Hogan.} In all.

1334 Mr. {Terry.} --and then the rest has to--

1335 Ms. {Hogan.} Be put to work to improve low-income
1336 family homes. So yes.

1337 Mr. {Terry.} And so when--how would--there were several
1338 stories in our local paper outing this scam. Do those rise
1339 up to--in DOE, do people catch those so you can begin an
1340 investigation, and how is an investigation into that type of
1341 waste and fraud--well, what triggers an investigation? Can

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1342 you investigate that?

1343 Ms. {Hogan.} Absolutely we can investigate that. So--
1344 and there have been any number of--any time we hear of an
1345 issue, it is investigated and we do everything in our power
1346 to correct it and recoup any dollars that may have been
1347 misused.

1348 Mr. {Terry.} Will you check for me and get back to me
1349 of what you have done on the Omaha situation with the waste
1350 and fraud in that program?

1351 Ms. {Hogan.} We would be happy to do that.

1352 Mr. {Terry.} Thank you. Yield back.

1353 Mr. {Whitfield.} Thank you, Mr. Terry.

1354 At this time, I recognize the gentlelady from
1355 California, Ms. Matsui, for 5 minutes.

1356 Ms. {Matsui.} Thank you very much, Mr. Chairman. Thank
1357 you, Dr. Hogan, for being here.

1358 Energy efficiency is a key component for shifting our
1359 Nation towards a clean energy economy. We have made great
1360 progress in changing the way we use and conserve energy, but
1361 we need to do much more. I believe one area where we can
1362 make a significant impact is by providing sound financing

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1363 mechanisms to individuals eager to make energy efficiency
1364 upgrade to their home. In fact, last fall in my district of
1365 Sacramento, we launched a revamped public-private partnership
1366 born out of the Recovery Act funds to encourage residential
1367 energy upgrades.

1368 The demand for residential energy retrofits is strong.
1369 Property Assess Clean Energy, or PACE programs, are one
1370 approach to financing home retrofits. With PACE, homeowners
1371 can finance energy efficiency improvements without an unfit
1372 cost through a voluntary assessment on their property.
1373 Unfortunately, PACE programs have faced some major hurdles.

1374 Dr. Hogan, does DOE support innovative financing
1375 mechanisms that would help homeowners make these important
1376 upgrades?

1377 Ms. {Hogan.} Yes, through our work at the Department of
1378 Energy, we are very supportive of innovative financing
1379 mechanisms and doing everything that we can to help pull out
1380 the lessons learned and share them with others, as well as
1381 working to help States and local governments continue to
1382 leverage some of the--and improve the effectiveness of the
1383 loan--of the revolving loan funds that they were able to

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1384 stand up with Recovery Act dollars.

1385 Ms. {Matsui.} Okay, now is there a way to get PACE
1386 programs back on track through administrative means? Are you
1387 or the White House still engaging FHA to restore this
1388 program?

1389 Ms. {Hogan.} I think what we have all heard from FHA is
1390 FHA would like more data to better understand what the, you
1391 know--how these loans perform, and so the Department of
1392 Energy is actively engaged in working with others to try and
1393 pull together the type of data that the finance industry
1394 needs to understand this loan performance.

1395 Ms. {Matsui.} So you are looking at probably similar
1396 approaches to facilitate this growing demand?

1397 Ms. {Hogan.} Exactly.

1398 Ms. {Matsui.} Okay, great.

1399 Dr. Hogan, some have suggested that we don't need
1400 government policies to boost energy efficiency. They say
1401 that if customers really wanted energy efficiency, the market
1402 will supply it. But my understanding is that there are a lot
1403 of market failures in this area. The classic example is the
1404 situation where the landlord has no incentive to weatherize

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1405 an apartment because a tenant pays the utility bills. Dr.
1406 Hogan, could you please discuss some of the market failures
1407 that allow energy waste to persist, even when it could be
1408 cost effective to deploy efficiency measures, and are these
1409 market failures significant?

1410 Ms. {Hogan.} I think we can see from the opportunity
1411 that we all talk about over and over with energy efficiency
1412 that there are a list of market barriers that hinder people
1413 from making what might be sort of the economically rational
1414 choice, and that can just be that some of the more efficient
1415 products do cost a little bit more up front, even if they do
1416 have a very attractive payback associated with them. And
1417 some of it is just hard to get the information so that you
1418 know what that payback would look like. So those are the
1419 types of things around which policies can be very helpful in
1420 helping people get the savings that are there to be gotten.

1421 Ms. {Matsui.} Could you explain further on that what
1422 the policies might be?

1423 Ms. {Hogan.} Better information and clearly, the reason
1424 we do appliance standards as well is because we can help
1425 consumers get the savings that are there from the more

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1426 efficient products whenever there is sort of a cost effective
1427 opportunity to do so.

1428 Ms. {Matsui.} Okay. I just also want to follow up on
1429 what my colleague from New York has talked about, about the
1430 race to the top for efficiency. You know, California has
1431 been involved in this a long time, since the '70s with the
1432 grandfather of energy efficiency, Art Rosenberg, and so we
1433 don't want to be, you know, in a sense, starting from
1434 baseline, which is artificial in a sense, so we would love to
1435 have that discussion with you.

1436 I have no further questions, so I yield the balance of
1437 my time.

1438 Mr. {Whitfield.} Thank you very much. At this time, I
1439 recognize the gentleman from Louisiana, Dr. Cassidy, for 5
1440 minutes.

1441 Dr. {Cassidy.} I am going to defer to my gentleman--my
1442 colleague from Texas for a turn, please.

1443 Mr. {Whitfield.} Gentleman from Texas is recognized.

1444 Mr. {Olson.} I thank the chair, and good morning, Dr.
1445 Hogan. Welcome. I appreciate your time and expertise.

1446 One of the instances where energy is lost, you know,

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1447 regardless of the initial source, is in transmission. The
1448 wires we use are largely copper. They lose significant
1449 amounts of energy as they travel from place to place. Many
1450 people may not realize this because Texas is the number one
1451 producer of oil and gas, but we are the number one producer
1452 of wind in America. The problem with our wind is it is
1453 generated in the panhandle in western Texas. We need it in
1454 eastern Texas, Houston, Dallas, Ft. Worth, San Antonio,
1455 Austin--in some cases, 700 miles away. But University of
1456 Houston is trying to change that. Having recently been named
1457 a Tier I research university and being led by an innovative
1458 and hands-on chancellor, Dr. Randy Coture, U of H has created
1459 an energy research park. One project that they are doing at
1460 the University of Houston energy research park is working on
1461 superconducting wires that are up to 20 percent more
1462 efficient than current wires. This is not just an academic
1463 project. U of H intends to prove this works by rewiring
1464 their main campus with these superconducting wires. In true
1465 Texas tradition, they are going all in, putting their future--
1466 --and more importantly, the future of over 300,000 students--
1467 on the line. Are you aware of this project being developed

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1468 at the University of Houston energy research park?

1469 Ms. {Hogan.} I personally am not, but it certainly does
1470 sound very exciting.

1471 Mr. {Olson.} Well since you are not familiar with it, I
1472 would like to offer you a chance to come down and see it. I
1473 mean, if you have got some time, we go right here to Reagan
1474 International Airport, have a direct shot on United Airlines
1475 to Intercontinental Airport down in Houston. I would love to
1476 take you down there and see the energy research park.

1477 Ms. {Hogan.} We would be very interested.

1478 Mr. {Olson.} Earlier today I had a meeting with the
1479 people from ABS, which is the American Bureau of Shipping.
1480 One energy efficiency they are looking at is natural gas, in
1481 fact, liquid natural gas for transports of maritime vehicles.
1482 In fact, Nasco, the shipbuilder, is actually building their
1483 first project where one of the big ships will be powered by
1484 LNG, going to the Caribbean area and that part of the
1485 country. What do you think about that issue for energy
1486 efficiency, natural gas as opposed to traditional fossil
1487 fuels?

1488 Ms. {Hogan.} Certainly we can have a conversation about

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1489 that as well.

1490 Mr. {Olson.} Okay. Well one further question for you,
1491 ma'am. I mean, again, our biggest challenge right now--one
1492 thing we have in west Texas as well, getting to the Defense
1493 Department, they are being very innovative with their energy
1494 resources, their needs. Fort Bliss in El Paso, the largest
1495 base--the largest geographic base in America, is actually
1496 doing great things with solar because they have the sun out
1497 there. In fact, they are hoping to be actually a net
1498 exporter some time, getting energy off the base and helping
1499 local communities. I mean, that is one example of what the
1500 Federal Government can do, but again, my biggest concern,
1501 what I am hearing from back home, is let the market decide
1502 what the technology is. Don't enforce some sort of
1503 technology from--so I ask your assistance going forward.
1504 Listen to the market and help us--you know, get this
1505 superconducting technology going on. Come on down and see
1506 it. I would really appreciate it.

1507 Ms. {Hogan.} Terrific.

1508 Mr. {Olson.} Thank you. Yield back the balance of my
1509 time.

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1510 Mr. {Whitfield.} At this time, I recognize the
1511 gentlelady from Florida, Ms. Castor, for 5 minutes.

1512 Ms. {Castor.} Thank you, Mr. Chairman, and welcome.
1513 Secretary Hogan. Thank you for meeting with me a couple of
1514 months ago to advise on all the great things that are going
1515 on with energy efficiency. I think there is so much more to
1516 do all across the country for families and businesses, so I
1517 encourage you to keep at it, and we can unleash the powers of
1518 American ingenuity and really empower families and
1519 businesses, and save money at the same time.

1520 I also wanted to thank you for your attention to the
1521 historic investments under weatherization. Under the
1522 Recovery Act, I think you said we were able to weatherize one
1523 million homes. And let me tell you what that means in my
1524 area, in the Tampa Bay area in Florida. That means that
1525 thousands of the folks that I represent are saving money on
1526 their energy bills, while at the same time, we created a lot
1527 of jobs. We created a lot of jobs in a time when the
1528 unemployment rate was really hurting families, and the legacy
1529 it has left is very important. Now our community colleges,
1530 with that investment, have ongoing weatherization training

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1531 initiatives. They are still creating jobs, even though the
1532 money, the investments from the Recovery Act have tapered
1533 off. For families that struggle to get by, if they are able
1534 to save a few hundred dollars or a thousand dollars a year on
1535 their electric bill, that is very meaningful to them. That
1536 means they can do better at the grocery store, they can do
1537 better with other bills that come in. So thank you for your
1538 attention to that.

1539 Is all of the investments under the Recovery Act for
1540 weatherization, is that all invested now, or are States
1541 across the country still rolling out any of those monies?

1542 Ms. {Hogan.} The vast majority of the Recovery Act
1543 dollars for weatherization is now spent, so yes, it is--

1544 Ms. {Castor.} And what is the status of ongoing
1545 weatherization efforts?

1546 Ms. {Hogan.} That is a good question. Right now, given
1547 the continuing resolution that we are now under, we are
1548 working hard to give the States the information they need to
1549 go into their next program. It is a little bit complicated
1550 because of the continuing resolution which continues the
1551 weatherization budget at a level well below where it had been

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1552 historically--

1553 Ms. {Castor.} It is just such a huge payback for the
1554 federal dollars that we can invest back home in our local
1555 communities that save our constituents money, so that money
1556 comes back to them, then we create jobs, and we are still
1557 kind of stuck at this 7.9 unemployment rate, and it is just
1558 difficult to watch the Congress self-inflict a wound and set
1559 us back at a time when the economy is getting better and I
1560 see great improvements and people are hiring.

1561 So we--that is our responsibility here, and I encourage
1562 my colleagues to think about that as these indiscriminate
1563 across-the-board cuts--this is an area that we should
1564 continue to invest in, because it has paid such great
1565 dividends across the country.

1566 And for my colleagues that worry about gas prices, I
1567 have to say, we are fortunate to be living through a time
1568 when we have made such progress in fuel economy for our
1569 vehicles. You know, I have a member of the family that
1570 bought--is leasing one of those electric vehicles. Since
1571 October, he has not visited a gas station. He has not
1572 purchased gas. I know my friends from Louisiana and the gas

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1573 producing areas, they probably don't like that, but you know
1574 how much money that is saving and how much that is saving
1575 families across the country? This is remarkable progress.
1576 It is saving consumers money. If you can buy a fuel-
1577 efficient vehicle, on average, that means that \$1,700 back in
1578 the pocket of consumers where they can spend it on their
1579 families or their small businesses. It helps with climate
1580 change because the carbon dioxide from burning gasoline and
1581 diesel contributes to the--to global warming and changes in
1582 the climate. It is reducing our oil dependence costs.
1583 Dependence on oil makes us vulnerable to oil market
1584 manipulation and price shocks. It increases energy
1585 sustainability. Oil is a non-renewable resource, and we
1586 cannot sustain our current rate of use indefinitely. So
1587 using it wisely and conserving is, frankly, just smart.

1588 Looking ahead, what are the challenges you see with fuel
1589 economy and lengthening the life of the batteries of these
1590 vehicles, and what are you optimistic about?

1591 Ms. {Hogan.} I think we are very optimistic about what
1592 we can do across a whole set of vehicle technologies.
1593 Certainly I already spoke to the new research effort around

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1594 electric vehicles and what we can do there to make them much
1595 more cost competitive over the next 10 years, as well as
1596 convenient from the standpoint of the consumer, and then, of
1597 course, make available something along the lines of a dollar
1598 per gallon gasoline in the electric--you know, through
1599 electricity.

1600 I think we are also interested in what we can do with
1601 advanced combustion. We are doing a lot more there as well,
1602 and we think we will be very well-positioned to be working
1603 with U.S. auto manufacturers to meet the CAFÉ standards as
1604 they continue to ramp up in the coming years.

1605 Mr. {Whitfield.} The gentlelady's time is expired.

1606 At this time, I recognize the gentleman from Louisiana--
1607 oh, Mr. McKinley from West Virginia for 5 minutes.

1608 Mr. {McKinley.} Thank you, Mr. Chairman, and thank you
1609 for your patience, Dr. Hogan.

1610 Let us just start by saying I am very supportive of all
1611 the initiatives on energy efficiency, and as one of just two
1612 engineers in Congress, it is a delight to be able to try to
1613 work and improve that a little further.

1614 But I have got two questions for you. The GAO came out

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1615 2 years ago with a report that said there are 11 agencies
1616 handling green buildings or 11 agencies offering 94 separate
1617 initiatives, and they said that--by their own report, they
1618 are saying that we can benefit with more collaboration. Can
1619 you share with us briefly what you have accomplished over the
1620 last 2 years in either combining them, because with budget
1621 constraints right now, wouldn't it make more sense instead of
1622 having 11 agencies handling green buildings to just a handful
1623 or fewer? Have you accomplished any of that?

1624 Ms. {Hogan.} Yeah, we are doing a lot of coordination
1625 across the federal agencies--

1626 Mr. {McKinley.} Different than what you were prior to 2
1627 years ago?

1628 Ms. {Hogan.} We are. I think we are getting more and
1629 more efficient, you know, as we go forward. I would also
1630 say, just going back to that GAO study, when you just count
1631 things it makes it look like there may be more duplication
1632 overlap than there may actually be, because certainly, you
1633 know, I oversee the Federal Energy Management Program. It
1634 has got an important role in engaging with each of the
1635 agencies around--with their senior sustainability officials

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1636 around their work.

1637 Mr. {McKinley.} Could you get back to me, please, with
1638 some of the--what you have done to help consolidate, so that
1639 we can use the money--instead of doing it administratively,
1640 wouldn't it make more sense if we could pass that on to the
1641 consumers in some fashion by reducing those costs at the
1642 Federal Government level?

1643 The second issue I have is a bit of a paradox. Someone
1644 at my former firm--we designed a lot of schools and a lot of
1645 public buildings, and we knew that often what the cost was
1646 for operation of an older building, because they didn't meet
1647 all the new standards, the air quality and/or air quality
1648 standards. There was a cost that you can assume in the
1649 operation, but now under the new standards, new buildings are
1650 typically--for operational costs are increasing in costs
1651 primarily because of the standards that are set for fresh air
1652 to come into a classroom where you have to have four to
1653 twelve air changes per minute--per hour, as compared to where
1654 it had been before where we had--maybe sometimes where you
1655 had an individual unit, they would close the damper and there
1656 was no fresh air coming into Johnny's classroom. So now we

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1657 are introducing that. So we have a paradox. We are trying
1658 to improve our air quality and efficiency, but we are
1659 increasing costs to the consumer. How do you--how are you
1660 dealing with that?

1661 Ms. {Hogan.} We certainly understand that issue and we
1662 are working to make sure that we are looking holistically at
1663 the costs for these buildings. Certainly we want to be
1664 promoting technology that meets our national objectives, but
1665 in a way that, you know, also keeps the costs in a good space
1666 for the people that have to pay those bills, and really offer
1667 the savings that are there to be gotten. So we are looking
1668 at the O&M costs.

1669 Mr. {McKinley.} You do recognize, then, that the new
1670 standards--and I subscribe to them. I am in agreement with
1671 them because they are improving our indoor air quality, but
1672 they are raising the cost of operation.

1673 Ms. {Hogan.} When you need mechanical ventilation there
1674 is a cost there, but I think when you look across everything
1675 that is going on in these buildings, you see that that can be
1676 done in a very low cost way. So you are delivering a much
1677 more, you know, lower cost building for people to be living

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1678 in.

1679 Mr. {McKinley.} Do you see--with these standards, do
1680 you accept--I guess I am building back off that same premise,
1681 because I am glad we are providing fresher air into that, but
1682 do you acknowledge that perhaps the old buildings--in some of
1683 these buildings, the indoor air quality wasn't as good as it
1684 is today by what we are doing, by bringing in fresh air?

1685 Ms. {Hogan.} I think that is a complicated question
1686 that requires a longer conversation.

1687 Mr. {McKinley.} Stop by. I am over in Cannon. Let us
1688 see if we can't follow up with that, because I think we have
1689 a dilemma here in Congress about indoor air quality versus
1690 outdoor air quality, and I would like to make sure we have a
1691 good discussion about that so when those asthma attacks that
1692 people refer to often perhaps are being caused by our indoor
1693 air quality and the fact that we are not adhering to the
1694 various codes and standards that have been set forth. So if
1695 you could please stop, I would like to do that very much.

1696 Thank you very much. I yield back my time.

1697 Mr. {Whitfield.} Gentleman's time is expired.

1698 Mr. Griffith, do you have any questions? Mr. Gardner?

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1699 Dr. Cassidy? Dr. Cassidy is recognized for 5 minutes.

1700 Dr. {Cassidy.} Good afternoon.

1701 Young families want the most square footage they can get
1702 in the place with the best school district. For them to
1703 invest in energy saving things which have only a payoff over
1704 10 years really defeats that purpose, and so the way they are
1705 trying to scrape money together, how can I get the best
1706 square footage in the best school district if I invest \$3,000
1707 in which the payoff is only over 10 years, that is that many
1708 fewer square feet I can purchase. Does that make sense? You
1709 look quizzical, so I am not sure I am being clear.

1710 Ms. {Hogan.} I understand what you are saying.

1711 Dr. {Cassidy.} So really if we are talking about market
1712 mechanisms, it seems like much of what we discuss almost is
1713 by fiat, almost by definition, because really under the
1714 current way we finance mortgages, that family, again, has to
1715 make that tradeoff, less square footage or not as good a
1716 school district in order to have some of these things which
1717 we all agree would be wise for energy efficiency. Again,
1718 does that make sense?

1719 Ms. {Hogan.} Yeah, I think the way we have been looking

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1720 at some of these home purchases is through like the total
1721 cost of ownership, so if you look at the cost of a mortgage
1722 plus the cost of the energy bill--

1723 Dr. {Cassidy.} Now that, though, right now--we have
1724 investigated this. The cost of energy bill is not currently
1725 used by mortgage underwriters in terms of discerning
1726 someone's ability to get a mortgage. So when you look at it,
1727 is that really impacting that young family with three kids
1728 trying to get the better home sort of thing?

1729 Ms. {Hogan.} Yes, there is an issue as to where that
1730 young family is and how much--how large a mortgage they can
1731 get and whether they are sort of at that maximum level of a
1732 mortgage. But I think what we have seen in recent years is
1733 that hasn't been sort of the biggest barrier.

1734 Dr. {Cassidy.} Now, I will tell you, when I saw--this
1735 came to mind last year because of Senators Isaacson and
1736 Bennet put forward their SAVE Act, we have been thinking the
1737 same concept, but when I spoke to bankers, they really do not
1738 include the energy cost in a mortgage, or somebody's
1739 suitability. Frankly, we can't talk about market mechanisms
1740 until we address this if we are thinking of that young

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1741 family. Would you concede that, and if so, how do we
1742 proceed?

1743 Ms. {Hogan.} Well, I mean, I think we can proceed in a
1744 number of ways. One is let us continue to have the
1745 conversation on sort of the role of energy bills, because
1746 certainly a lower energy bill does give a household more
1747 money to spend--

1748 Dr. {Cassidy.} But again, if the payoff is 10 years for
1749 that energy saving intervention, really, that family doesn't
1750 look at that 10-year savings. Does that make sense?

1751 Ms. {Hogan.} You mean because it is--

1752 Dr. {Cassidy.} They are on a cash flow basis. It is
1753 not as if they have got a lot of money in the bank that they
1754 can invest and see the payoff over 10 years. They are just
1755 now meeting their bills, and anything that pays off over 10
1756 years is probably not uppermost in their mind.

1757 Ms. {Hogan.} There is the standpoint from the family.
1758 There is the standpoint from the banker, right, but from the
1759 standpoint of the family, if you have a more efficient home
1760 and you had to pay a little bit extra and it is rolled into
1761 your mortgage, as an example--

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1762 Dr. {Cassidy.} Yes, but that doesn't occur right now.

1763 Ms. {Hogan.} But it can. Those mortgages are

1764 available. Energy efficient mortgages are available. Part

1765 of it is sort of an access and awareness issue as opposed to-

1766 -

1767 Dr. {Cassidy.} I would love to see that, because when I

1768 spoke to the bankers--we had some people come in because we

1769 were pursuing this--and the bankers said listen, we have a

1770 proprietary mechanism by which we determine if somebody is

1771 eligible--it is proprietary to our bank, not industry-wide,

1772 and we do not include this and we are not quite sure how.

1773 Ms. {Hogan.} Okay.

1774 Dr. {Cassidy.} So if you have those, we would love it

1775 if you could see that.

1776 Do you have awareness of Isaacson and Bennet's SAVE Act?

1777 Ms. {Hogan.} I do.

1778 Dr. {Cassidy.} What are your thoughts about that?

1779 Ms. {Hogan.} I think in general we are very supportive

1780 of the goals of the proposals that can help motivate home

1781 improvements.

1782 Dr. {Cassidy.} So let me just switch subjects. When I

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1783 speak to home builders, they look at the regulations put out
1784 by DOE and they feel that sometimes something that is
1785 proscribed for one place wouldn't apply in another. And
1786 little things, for example, in my State, in Louisiana, if you
1787 plant an oak tree on the west or south side, frankly, you
1788 will get a heck of a lot of benefit, but there is no kind of
1789 calculation in terms of that, in terms of the overall cost
1790 efficiency of a home. Their suggestion was that you bring in
1791 stakeholders coming up with metrics so that someone could
1792 pick and choose, saying listen, insulation really works well
1793 here. It is worth bang for the buck, and this other
1794 intervention cost me a heck of a lot of money, but I am not
1795 going to get a payoff for 20 years. Probably I will have
1796 sold the home by then. Any possibility of that sort of
1797 thing?

1798 Ms. {Hogan.} I think there is a robust conversation
1799 ongoing through the codes organizations on how to have the
1800 right sort of--you are talking about a more performance-based
1801 path to get to an outcome in the least costly way. I think
1802 people are always interested--

1803 Dr. {Cassidy.} So they feel as if your DOE regulations,

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1804 though, are not outcomes based but rather they are sort of
1805 you put in this amount of foam and this amount of this, and
1806 their criticism--and I have learned to say what I have been
1807 told, not what I know, so Dr. Hogan, you may say oh my gosh,
1808 you are totally wrong on this, but their criticism is that
1809 your standards are less performance-based and more ``you
1810 shall put in 6 inches of foam'' sort of thing.

1811 Ms. {Hogan.} And both pathways are there. There are
1812 performance-based provisions in the codes. I would also--I
1813 wouldn't quite call them our codes. These are codes that are
1814 created by model code authorities and the Department of
1815 Energy's role has been to do an energy savings determination
1816 relative to those codes to show that they do offer meaningful
1817 savings over the prior code, so they are a stakeholder-driven
1818 process that the Department of Energy will also bring
1819 technical information to the table for consideration, which
1820 is why there is an ongoing venue through which we can have
1821 all of these conversations.

1822 Dr. {Cassidy.} Thank you. Thank you, and I yield back.

1823 Mr. {Whitfield.} Gentleman's time is expired.

1824 At this time, I am going to recognize the gentleman from

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1825 New Hampshire as a valuable member of the Energy and Commerce
1826 Committee. He doesn't happen to serve on the Energy and
1827 Power Subcommittee, and so he has waited patiently until the
1828 end, and now he is recognized for 5 minutes for questions.

1829 Mr. {Welch.} Mr. Chairman, I thank you very much, Mr.
1830 Ranking Member. By the way, having this hearing on
1831 efficiency this early in our congressional term is
1832 tremendous, so I want to thank you and I think all of do.

1833 In listening to this and talking to my colleagues, a
1834 couple of things. Number one, there does seem to be strong
1835 bipartisan cooperation and leadership on efficiency, and then
1836 second, there is really three questions that this committee
1837 has got to sort through, I think. Number one, what can the
1838 government do on its own. Congressman Gardner and I are
1839 really focused on these energy saving performance contracts,
1840 and I want to come back to this, but that is completely
1841 within the ability of government on its own to do useful
1842 things to save the taxpayer money, and also make a
1843 contribution to cleaning up our environment.

1844 Second, there is a question of what can private citizens
1845 and companies do on their own? And I know Congressman

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1846 Burgess has been very much--on his own personal situation,
1847 very much focused on energy efficiency and has some
1848 skepticism about steps that government takes that are either
1849 unnecessary or get in the way. Those are fair questions, and
1850 I hope our committee will ask those so that it ends up that
1851 we do is helpful and doesn't get in the way of what private
1852 sector folks can do on their own.

1853 But then third, there are areas where it is possible for
1854 the private sector and the public sector to cooperate and
1855 then leverage the partnership to be successful. Congressman
1856 McKinley and I are working on efforts to try to provide
1857 incentives to homeowners to be able to do things that
1858 otherwise they would not be able to do.

1859 So this is really just a plea to some extent to our
1860 committee that even though there will be a lot of legitimate
1861 questions raised on a practical level about what is the
1862 government role, what is the private role, what is the
1863 partnership role, I hope we will sort through those questions
1864 to have as the outcome, Mr. Chairman, productive steps that
1865 will allow the taxpayer and a company and the individual to
1866 save money. And this initial hearing is really helping us on

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1867 our way.

1868 I do want to talk to you about the energy saving
1869 performance contracts that I mentioned Mr. Gardner and I are
1870 really quite focused on. The President had a goal of \$2
1871 billion. I mean, what is better than being able to get a
1872 company to sign up and be paid essentially by sharing in the
1873 savings? How is that coming along, and is it possible, if
1874 this is successful, that reports I hear, that there could be
1875 up to \$20 billion in savings that we could expand this
1876 effort?

1877 Ms. {Hogan.} Yes, so this was announced a little over a
1878 year ago, \$2 billion, and then each agency took on a goal
1879 that adds up to that \$2 billion, and the agencies are moving
1880 forward to put those projects in place and sitting here
1881 today, we are on track to meet that \$2 billion savings goal
1882 by December, 2013, which indeed is very exciting, and I think
1883 that will allow the agencies to step back and work with the
1884 White House to hopefully come up with a phase two to this
1885 effort, but it is probably a little premature to say what
1886 that would look like.

1887 Mr. {Welch.} And how about the utility performance

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1888 contracts, the private sector efforts by our utility
1889 companies?

1890 Ms. {Hogan.} So this challenge by the President
1891 included both ESCOs as well as the utility energy savings
1892 contracts, and those are in this mix as well.

1893 Mr. {Welch.} Okay. Dr. Cassidy has left, but I was
1894 listening very carefully to his concern about performance-
1895 based approach. Vermont does have--I think we are the only
1896 State that has an energy savings utility, and it is because
1897 there has been a sense in Vermont that the best--the cheapest
1898 electricity and the--is the unit of electricity that we don't
1899 utilize. But the performance-based approach does seem to
1900 make an awful lot of sense to the Vermont electricity
1901 efficiency utility. How about to you?

1902 Ms. {Hogan.} So I think performance-based approaches
1903 really do make sense for all the reasons that people were
1904 raising earlier. You are not trying to pick a technology,
1905 you are trying to get to an outcome. So I think conceptually
1906 it really does make sense.

1907 I think the flip side of it is when builders are
1908 building a home, a lot of them say we just want to know what

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1909 to do in this region that is going to meet that performance-
1910 based approach. They don't want to be doing detailed--

1911 Mr. {Welch.} So you would be glad to work with the
1912 committee or folks like Dr. Cassidy to focus on that
1913 performance-based outcome?

1914 Ms. {Hogan.} Yes.

1915 Mr. {Welch.} Okay, thank you.

1916 Thank you very much, Mr. Chairman. I yield back.

1917 Mr. {Whitfield.} Peter, I knew you were from Vermont.
1918 I am sorry, I said New Hampshire.

1919 Mr. {Welch.} Well, that is okay, but--

1920 Mr. {Whitfield.} We are glad you are here.

1921 Mr. {Welch.} Thank you. It is good to be here.

1922 Mr. {Whitfield.} Well, that concludes the testimony of
1923 Mrs. Hogan and questions for her, so Dr. Hogan, thank you so
1924 much for being with us today. We look forward to working
1925 with you as we continue forward.

1926 At this time, I would like to call up the third and
1927 final panel. On the third panel, we have Mr. Kevin Kosisko,
1928 who is Vice President Service, North America ABB, and he is
1929 testifying on behalf of the National Electrical Manufacturers

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1930 Association and the Industry Energy Efficiency Coalition. We
1931 have Ms. Britta MacIntosh, who is Vice President of Business
1932 Development, NORESKO, who is testifying on behalf of the
1933 Federal Performance Contracting Coalition. We have Mr. James
1934 Crouse, Executive Vice President of Sales and Marketing,
1935 Capstone Turbine Corporation, who is testifying on behalf of
1936 the U.S. Combined Heat and Power Association. We have Ms.
1937 Ellen Burt, Senior VP and Chief Customer Officer, Pacific Gas
1938 and Electric Company. We have Mr. Neal Elliott, Associate
1939 Director for Research, American Council for Energy Efficient
1940 Economy, and we have Mr. Ted Gayer, Co-Director, Economic
1941 Studies and Joseph Pechman Senior Fellow at the Brookings
1942 Institution.

1943 So I would like to welcome all of the members of this
1944 panel. Thank you for your patience, and thanks for agreeing
1945 to join us today to give us your views, thoughts, and
1946 expertise on this important subject. As you know, each one
1947 of you will be given 5 minutes for your opening statement,
1948 and I would remind you to just be sure that your microphone
1949 is on. You will notice a couple of boxes on the table in
1950 which--when it is green, it means talk. When it is red, it

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1951 means stop, but we frequently go over, so--but anyway,

1952 welcome and we will begin with you, Mr. Kosisko.

1953 Mr. {Kosisko.} Kosisko.

1954 Mr. {Whitfield.} Kosisko. We will begin with you, and

1955 you are recognized for 5 minutes.

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|
1956 ^STATEMENTS OF KEVIN C. KOSISKO, VICE PRESIDENT SERVICE,
1957 NORTH AMERICA, ABB, INC., ON BEHALF OF NATIONAL ELECTRICAL
1958 MANUFACTURERS ASSOCIATION AND INDUSTRIAL ENERGY EFFICIENCY
1959 COALITION; BRITTA MACINTOSH, VICE PRESIDENT, BUSINESS
1960 DEVELOPMENT, NORESKO, ON BEHALF OF FEDERAL PERFORMANCE
1961 CONTRACTING COALITION; JAMES CROUSE, EXECUTIVE VICE PRESIDENT
1962 OF SALES AND MARKETING, CAPSTONE TURBINE CORPORATION, ON
1963 BEHALF OF U.S. COMBINED HEAT AND POWER ASSOCIATION; HELEN A.
1964 BURT, SENIOR VICE PRESIDENT AND CHIEF CUSTOMER OFFICER,
1965 PACIFIC GAS AND ELECTRIC COMPANY; R. NEAL ELLIOTT, ASSOCIATE
1966 DIRECTOR OF RESEARCH, AMERICAN COUNCIL FOR AN ENERGY-
1967 EFFICIENT ECONOMY; AND TED GAYER, CO-DIRECTOR, ECONOMIC
1968 STUDIES AND JOSEPH A. PECHMAN SENIOR FELLOW, THE BROOKINGS
1969 INSTITUTE

|
1970 ^STATEMENT OF KEVIN C. KOSISKO

1971 } Mr. {Kosisko.} Chairman Whitfield, Ranking Member Rush,
1972 and members of the subcommittee. Thank you for allowing me
1973 to testify on the successes and opportunities for energy

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1974 efficiency in the industrial sector.

1975 I am Kevin Kosisko, Vice President of Services for ABB
1976 in North America. I oversee services for asset management,
1977 process safety and industrial energy efficiency, as well as
1978 maintenance operations for ABB in the U.S., Canada and
1979 Mexico.

1980 By way of background, ABB is a Fortune 500 producer of
1981 power and automation products and services. We employ
1982 147,000 people in over 100 countries, providing energy
1983 efficient solutions for our industrial, utility, and
1984 government customers.

1985 I am honored to be here representing the National
1986 Electrical Manufacturers Association (NEMA) and the
1987 Industrial Energy Efficiency Coalition (IEEC).

1988 NEMA is the trade association of electrical equipment
1989 and medical imaging manufacturers. Its member companies
1990 produce everything from power transmission and distribution
1991 equipment to lighting systems, factory automation and
1992 controls and medical diagnostic imaging systems.

1993 The IEEC is a coalition of six of the largest global
1994 industrial automation and control system companies. Those

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1995 companies are Eaton Corporation, GE, Rockwell Automation,
1996 Schneider Electric, and Siemens, in addition to ABB. We are
1997 technology providers that industry uses to make their
1998 processes more energy efficient, reduce costs and increase
1999 competitiveness.

2000 ABB and IEEC believe that energy efficiency is the
2001 cheapest, cleanest alternative fuel. It drives competition
2002 and industrial success, and the good news is that there are
2003 proven, available technologies that are already having an
2004 impact. My written statement offers examples of energy
2005 efficiency successes and case studies from each member of the
2006 IEEC. Yet together, our examples barely touch the breadth of
2007 current deployments and future possibilities.

2008 A recent survey of manufacturing executives demonstrates
2009 their understanding of the importance of energy efficiency
2010 and the impediments to its use. Executives report basing
2011 their energy efficiency investment decisions on cost benefit
2012 analyses and the price of energy far more than other
2013 considerations. Regulatory compliance was a distant third.
2014 Yet fewer than 40 percent of those surveyed had invested in
2015 efficiency in the past 3 years. In the U.S., the situation

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2016 is even starker with only 21 percent having invested in
2017 equipment to improve energy use in the last 3 years. The
2018 majority of those were in highly energy-intensive
2019 manufacturing industries such as mining, metals, chemical
2020 production, and petroleum refining. This gap between
2021 awareness and action was attributed to three key factors.
2022 Nearly half of the respondents cited the lack of clear
2023 business case as a reason for inaction. Twenty-eight percent
2024 identified inadequate funding or financing as a critical
2025 barrier, and a lack of adequate information on efficiency
2026 options was reported as the third greatest obstacle by 27
2027 percent of those executives surveyed.

2028 These responses point to the need for further education,
2029 benchmarking, and identification of available technologies
2030 and/or application, and to the importance of access to
2031 funding or financing to enable investments.

2032 Encouraging the efficiency enhancements needed to ensure
2033 our competitiveness will require both industry’s and
2034 government’s involvement. We must supply the missing
2035 information and provide the necessary funding. At ABB and
2036 the IEEC, we are striving to do just that. We work

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2037 continually to educate manufacturers on available
2038 technologies and industrial best practices. We train
2039 engineers, assessors, and finance teams to provide accurate,
2040 reliable energy audits, and estimates on return on
2041 investment. We provide directly or assist in securing
2042 necessary financing, and we invest in ongoing research and
2043 development to continue innovation.

2044 In the areas of industrial energy efficiency, government
2045 has historically focused on reducing consumption in energy-
2046 intensive industries. While these industries represent a
2047 major portion of potential energy savings, the public sector
2048 has the ability to expand the visibility of conservation
2049 opportunities to industrial players both large and small.
2050 Hearings like this, well-informed Department of Energy and
2051 Environmental Protection Agency activities, and federal
2052 support for research, audit, and deployment programs all
2053 raise awareness of the availability and value of energy
2054 saving technologies. This is particularly true for the small
2055 and mid-sized companies with less knowledge of or expertise
2056 in newer efficiency tools. Tax policies and other incentives
2057 can encourage investment. Advanced systems that deploy

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2058 networks of sensors, controls, and automation to achieve
2059 significant energy savings can benefit from incentives to
2060 provide a faster rate of return.

2061 Government is unique in its ability to support basic
2062 science and energy research, and State governments have the
2063 principle role in setting the grid investment policies and
2064 utility rate structures that enable deployment of critical
2065 line loss reduction, power quality management, and grid
2066 reliability technologies like Volt/VAr optimization.

2067 There is no doubt of the ability of the U.S. industry to
2068 compete and succeed. America's competitive edge is the high
2069 level of productivity of our workers and the technologies and
2070 processes we deploy to secure greater output from fewer
2071 resources, including energy. At ABB, at NEMA, and at the
2072 IEEEC, we work daily to support that effort.

2073 Mr. Chairman, thank you for the opportunity to testify.
2074 I would ask that a copy of our latest energy efficiency white
2075 paper be included in the record, and I am happy to answer any
2076 questions the committee might have.

2077 [The prepared statement of Mr. Kosisko follows:]

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2078 ***** INSERT 4 *****

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|
2079 Mr. {Whitfield.} Thank you. It will be included in the
2080 record.

2081 Ms. MacIntosh, you are recognized for 5 minutes.

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|

2082 ^STATEMENT OF BRITTA MACINTOSH

2083 } Ms. {MacIntosh.} Good afternoon, Chairman Whitfield and
2084 members of the subcommittee.

2085 Mr. {Whitfield.} Is your microphone on?

2086 Ms. {MacIntosh.} Yes, sir. Can you hear me now?

2087 I am Britta MacIntosh, Vice President of Business
2088 Development for NORESKO, one of the largest energy service
2089 companies in the United States. NORESKO is part of UTC
2090 Climate, Controls and Security Systems, a unit of United
2091 Technologies Corporation, a leading provider to the aerospace
2092 and building systems industry worldwide. Thank you for the
2093 opportunity to appear to you--before you today on behalf of
2094 the Federal Performance Contracting Coalition.

2095 The FPCC is a coalition of energy services companies
2096 that, like NORESKO, implement projects that reduce federal
2097 spending on energy and maintenance using private sector
2098 funding. Our work is conducted using energy savings
2099 performance contracts, or ESPCs--

2100 Mr. {Rush.} Would you please speak into the mike?

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2101 Ms. {MacIntosh.} Our work is conducted using energy
2102 savings performance contracts, or ESPCs. Since the 1990s,
2103 ESPC projects have reduced waste in federal utility bills.
2104 Across the industry, more than 570 comprehensive energy
2105 projects have been implemented by 25 federal agencies,
2106 creating \$13 billion in guaranteed energy cost savings, and
2107 eliminating over 32 trillion BTUs of annual energy demand.
2108 By using performance-based contracting to upgrade facility
2109 infrastructure, we deliver energy and maintenance savings to
2110 government and private sector entities. Performance-based
2111 contracting means our company's compensation is tied to the
2112 realization of savings for the projects we install. In other
2113 words, if we don't perform, we don't get paid. At NORESKO,
2114 our projects have delivered more than \$3 billion in facility
2115 improvements at more than 2,000 sites.

2116 An ESPC redirects inefficient spending on energy into
2117 needed infrastructure improvements that conserve energy and
2118 dollars. Under an ESPC, energy services companies engineer
2119 and install upgrades for outdated and inefficient equipment
2120 financed by the energy services company and at no upfront
2121 cost to the government. An agency will repay the government

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2122 over time--the company over time with funds saved on utility
2123 costs. The projected energy savings are guaranteed upfront
2124 by the company and are measured and verified during the
2125 contract period. At no time does the government pay more
2126 than it would have paid for utilities, had it not entered
2127 into an ESPC.

2128 In 2010, for example, NORESCO, working together with the
2129 architect for the Capitol, modernized the heating, cooling,
2130 water, temperature control, and lighting systems here in the
2131 Rayburn Building, and then also in the other House office
2132 buildings. This project has cut Congress's energy and water
2133 bills by more than \$3.2 million annually.

2134 The Federal Government is the Nation's largest energy
2135 consumer, costing taxpayers over \$7 billion annually. An
2136 aggressive government-wide effort to eliminate energy waste
2137 in buildings could easily cut that number by 20 percent or
2138 more.

2139 Despite the opportunity to better steward the taxpayer's
2140 investments in public facilities, several difficult obstacles
2141 stand in the way. I would like to talk about three of those.

2142 First, there is a lack of compliance with existing

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2143 congressional mandates. In 2010, Congress directed agencies
2144 to audit their facilities to identify energy and water
2145 projects that would pay for themselves within 10 years or
2146 less. Currently, it is not clear where agencies stand on
2147 this audit process, because those comprehensive reports
2148 requested by Congress have not yet been delivered. Even less
2149 clear is where agencies stand on implementing the energy
2150 savings measures these audits have also identified. This
2151 information is critical to understanding how much taxpayer
2152 money is being wasted through inaction and inattention.

2153 Second, there is a lack of an apples to apples
2154 comparison between the use of appropriations and private
2155 sector investment to provide agencies and Congress with the
2156 information needed to make good decisions. Oak Ridge
2157 National Laboratory has outlined in multiple studies that
2158 facilities which use appropriated funds to replace outdated
2159 equipment failed to properly budget for the ongoing
2160 maintenance of the new equipment. ESPCs require the
2161 provision of ongoing maintenance and savings verification to
2162 ensure that long-term persistence of savings and proper
2163 operation of the equipment is achieved. In 2007, Congress

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2164 also directed agencies to implement a uniform approach to
2165 maintenance and savings verification to ensure that the
2166 government realizes the promised savings from any efficiency
2167 upgrades, although most agencies have appeared to ignore this
2168 direction for appropriated projects. We recommend that you
2169 ask how agencies--that you ask agencies how and when this
2170 simple requirement will be implemented for all efficiency
2171 projects, regardless of how they are funded.

2172 Third, the current approval process for ESPC contracts
2173 is excessive, with multiple redundant layers of review in
2174 many agencies. Officials with limited knowledge of the
2175 facility, project, or recommended technologies are often
2176 required to review and sign off on projects before they can
2177 proceed. Congress should push agencies to streamline their
2178 review process, allowing more projects to begin generating
2179 savings more quickly.

2180 In order to confirm that we are making true progress
2181 toward meeting our Nation's energy and efficiency goals,
2182 Congress needs to complete--needs complete information about
2183 available energy savings opportunities at our agency's
2184 facilities, each agency's plans for implementation, and full

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2185 transparency and accountability on all spending related to
2186 efficiency projects. We recommend that you take appropriate
2187 steps to ensure that prior congressional direction on these
2188 items is acted upon.

2189 Thank you again for your time and attention. I will be
2190 glad to answer any questions that you have.

2191 [The prepared statement of Ms. MacIntosh follows:]

2192 ***** INSERT 5 *****

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|

2193 Mr. {Whitfield.} Thank you, Ms. MacIntosh.

2194 Mr. Crouse, you are recognized for 5 minutes.

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|

2195 ^STATEMENT OF JAMES CROUSE

2196 } Mr. {Crouse.} Can you hear me?

2197 Thank you. Chairman Whitfield, Ranking Member Rush, and

2198 distinguished members of the committee, my name is Jim Crouse

2199 and I am the Executive Vice President of Sales and Marketing

2200 for Capstone Turbine Corporation.

2201 Capstone is the world's leading producer of low emission

2202 microturbine systems. A microturbine is a small, fuel-

2203 flexible, typically sized 1 megawatt and below, and can be

2204 best described as a jet engine in a filing cabinet sized box.

2205 Other forms of combined heat and power, or CHP, we are able

2206 to provide either base load or backup power to deficiencies

2207 exponentially greater than the grid.

2208 I am delighted to be here today to testify on behalf of

2209 the U.S. Combined Heat and Power Association. USCHPA is a

2210 non-profit trade association formed in 1999 to promote

2211 deployment of CHP systems in the United States through

2212 education and advocacy.

2213 I am going to speak today about the opportunity for

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2214 natural gas-fired CHP and the barriers to greater deployment
2215 of CHP that policy makers can address.

2216 Currently, there are 82 gigawatts, or about 7 percent of
2217 all U.S. generating capacity produced by CHP systems. The
2218 technical potential for additional CHP from existing sites in
2219 the U.S. is approximately 130 gigawatts, or 12 percent of the
2220 U.S. generation capacity. This is readily available
2221 capacity, provided policies are established to support
2222 further CHP deployment. Access to low cost U.S. natural gas
2223 resources makes supporting CHP a no-brainer, and is an easy
2224 route to lower emissions across the United States.

2225 Microturbines and other CHP systems are used by
2226 customers throughout the world in a variety of applications.
2227 Just to name a few examples, they can be used in onshore and
2228 offshore oil and gas sites, like the many transmission sites
2229 in Mr. McKinley's district, offshore platform in Mr.
2230 Scalise's district, military applications like the one at
2231 MacDill Air Force Base, offices like our government office
2232 project in Mr. Olsen's district, multi-unit residential
2233 buildings, hospitals, like the VA hospital in Mr. Dingell's
2234 district, schools and universities like--school in Ms.

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2235 Capps's district, factories like American River Packaging in
2236 Ms. Matsui's district, hotels and other commercial sites like
2237 Proctor's theater in Mr. Tonko's district, and wastewater
2238 treatment plants, like the plants in Mr. Griffith's district
2239 and Ms. McMorris Rodgers's district.

2240 As referenced in my prepared remarks, CHP generally and
2241 Capstone specifically offers customers reliable off grid
2242 power that as witnessed during Superstorm Sandy provides
2243 critical power and thermal energy to hospitals, nursing
2244 homes, shelters, and data centers.

2245 Despite these opportunities, our company and the CHP
2246 industry continue to encounter numerous regulatory economic
2247 barriers that prevent greater deployment. There are
2248 pragmatic, cost effective solutions that policy makers can
2249 champion to mitigate these issues.

2250 To begin, we would like to see greater top level
2251 leadership from the government. While the recent Executive
2252 Order calling for 40 gigawatts of new CHP is helpful, we
2253 would be better served if the government were to lead by
2254 example through increased procurement of CHP to meet federal
2255 energy efficiency goals. Additionally, as the EPA implements

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2256 Boiler MACT, CHP should be strongly encouraged as a
2257 compliance strategy for those currently burning coal or oil.
2258 As part of this process, facility managers faced with
2259 compliance can seek site-specific technical and cost
2260 information from the DOE's clean energy assistance centers.
2261 Similarly, we hope States will look to EPA's guidance on
2262 output-based emission regulations, which unlike input based
2263 standards, recognize both efficiency and pollution prevention
2264 benefits of CHP. Output-based standards encourage cost
2265 effective long-term pollution prevention through efficiency.
2266 Likewise, we were glad to hear FERC proposed reforms to small
2267 generator air connections. Interconnection continues to be a
2268 barrier, but we continue to work with our friends in the
2269 utility industry to demonstrate the benefits that CHP
2270 provides for the grid and for consumers as a clean, reliable,
2271 distributor resource. In addition, both States and utilities
2272 should include CHP in their energy planning policies. The
2273 CHP industry is eager to be an active stakeholder and support
2274 a fair, interconnected standards in CHP rates.

2275 Finally, we note that there are several technologies
2276 that currently benefit from government support through

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2277 various levels of an investment tax credit. We believe the
2278 lack of parity in support levels for decentralized and
2279 renewable energy technologies blur the marketplace. We
2280 support parity in the treatment of various types of clean
2281 energy sources, and would encourage a focus on performance-
2282 based measures to best spur market competition.

2283 To wrap up, let me highlight again the opportunity
2284 exists today to generate clean, reliable power through CHP
2285 systems at existing industrial commercial sites across the
2286 United States using U.S. natural gas. We appreciate your
2287 help in overcoming these barriers that exist to greater
2288 deployment of our innovative U.S.-made technology.

2289 Thank you for the opportunity to testify at today's
2290 hearing, and I look forward to answering any questions you
2291 may have.

2292 [The prepared statement of Mr. Crouse follows:]

2293 ***** INSERT 6 *****

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|
2294 Mr. {Whitfield.} Thank you, Mr. Crouse.

2295 Ms. Burt, you are recognized for 5 minutes.

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|
2296 ^STATEMENT OF HELEN A. BURT

2297 } Ms. {Burt.} Thank you. Good afternoon, Chairman
2298 Whitfield, Ranking Member Rush. Let me begin by thanking you
2299 and members of the committee for this opportunity to testify
2300 today. I am Helen Burt, Chief Customer Officer for Pacific
2301 Gas and Electric Company.

2302 PG&E is one of America's largest combined gas and
2303 electric utilities. We serve about 15 million people in
2304 northern and central California, and over the last 30-plus
2305 years, together with the State of California, we have helped
2306 customers achieve extraordinary benefits when it comes to
2307 energy productivity.

2308 For us, these efforts are about being smarter when it
2309 comes to using energy. They are not about making do with
2310 less. They are about doing more with the energy we consume,
2311 helping customers get the most value of their energy dollars.
2312 Working as partners, utilities and our State policy makers
2313 have been able to support and encourage innovation and
2314 adoption of new technologies, and we have developed the most

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2315 successful customer energy efficiency programs in the
2316 country.

2317 Sometimes we are working with the end use customers like
2318 homeowners or small business owners. Other times we are
2319 moving further up the value chain, working directly with
2320 manufacturers, distributors, retailers, and contractors. The
2321 point is, we take a comprehensive approach and the results
2322 reflect that.

2323 If you look just at PG&E since our programs began some
2324 30-odd years ago, the customer savings have been more than
2325 \$20 billion. We have also avoided the need to build more
2326 than 25 power plants, saving all our customers money and
2327 providing tremendous environmental benefits.

2328 What is remarkable is that the potential gains look even
2329 greater today, thanks to the growing intersection between IT
2330 and energy. Technologies like SmartMeters are creating huge
2331 new opportunities. By enabling two-way communications on the
2332 grid, they are opening the door for wider adoption of
2333 advanced technologies like electric vehicles, smart
2334 thermostats, and other energy management tools. But most
2335 significantly, they are giving people more control over their

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2336 energy bills. PG&E customers can now get near real time
2337 information on their energy usage. Last year, we were able
2338 to create an online tool called the Green Button, which
2339 allows them to download that data. They can then use various
2340 apps to help them understand and then come up with options to
2341 achieve savings.

2342 As significant as the potential is to achieve further
2343 gains, we need the right policies. These include
2344 constructive tax policies, support for research, development,
2345 and deployment, supportive regulatory and rate structures,
2346 codes and standards, and programs that empower consumers and
2347 help companies share best practices. As you and others in
2348 Congress consider ways to help drive further progress, I
2349 would to highlight several areas where our experience shows
2350 you can have the greatest impact.

2351 One is encouraging regulatory approaches that incent
2352 utilities to pursue efficiency. Many utilities still face
2353 strong disincentives, changing this one key to success. At
2354 PG&E, we now treat energy efficiency projects as a resource,
2355 just like we do new traditional generation facilities.

2356 Another area is improving regulatory consistency.

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2357 Programs work best when everyone can operate from a
2358 consistent set of policies that they can count on for longer
2359 periods of time. That way, they can make multi-year
2360 commitments to support commercialization and deployment
2361 efforts.

2362 We also recommend encouraging consistent and clear
2363 methods for measuring and verifying the results of energy
2364 efficiency projects.

2365 A third area is encouraging public-private cooperation
2366 between utilities and government. For example, PG&E manages
2367 energy efficiency turnkey projects for federal customers
2368 through our Utility Energy Services Contracts Program. One
2369 effort now underway at the NASA Ames Research Center is
2370 expected to save more than \$1.5 million annually in water and
2371 energy costs. Nationally, UESC projects are saving taxpayers
2372 roughly \$400 million a year. We should continue to encourage
2373 these efforts.

2374 Finally, a fourth area is building codes and appliance
2375 standards. These provide a foundation for other energy
2376 efficiency efforts, and drive new technologies, programs, and
2377 practices.

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2378 Our hope is to work collaboratively with many members of
2379 this committee, who are already exchanging good policy ideas
2380 around energy productivity. New ideas and approaches will
2381 evolve just as quickly as the technology around us. As PG&E
2382 in California has demonstrated, energy efficiency can save
2383 money, spur innovation, provide consumers with more choices,
2384 and make our economy more productive and benefit the
2385 environment.

2386 Thank you again for this opportunity. I look forward to
2387 answering your questions.

2388 [The prepared statement of Ms. Burt follows:]

2389 ***** INSERT 7 *****

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|
2390 Mr. {Whitfield.} Thank you.

2391 Mr. Elliott, you are recognized for 5 minutes.

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|
2392 ^STATEMENT OF R. NEAL ELLIOTT

2393 } Mr. {Elliott.} Thank you, Chairman Whitfield, Ranking
2394 Member Rush, members of the committee. I appreciate the
2395 opportunity to speak today. My name is Neal Elliott. I am
2396 the Associate Director for Research at the American Council
2397 for an Energy Efficient Economy, frequently called ACEEE. We
2398 are a private, nonprofit, nonmember research institute based
2399 here in Washington, D.C.

2400 As Ranking Member Rush said in his opening remarks,
2401 ACEEE has looked at the impact of energy efficiency on the
2402 U.S. economy and found it to be a significant contributor to
2403 economic growth over the last 40 years. In particular, I
2404 would note that as has been noted by many of the witnesses so
2405 far today, energy efficiency represents the least cost energy
2406 resource in the U.S. economy, and a recent analysis suggests
2407 that in 2010 it contributed about half as much as all of the
2408 conventional resources to the U.S. economy.

2409 I mentioned in my written testimony five areas that we
2410 think the committee should consider for action in the coming

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2411 Congress, and wanted to focus three of those in my oral
2412 remarks.

2413 The first, which is has come up several times, is
2414 appliance standards, and I wanted to mention that since 1987,
2415 with the passage of the EPCA, Energy Policy Conservation Act,
2416 energy standards have saved 3.4 quads of energy and that the
2417 standards that are in place today are projected to save \$1.1
2418 trillion through 2035.

2419 We have many other standards that are currently in
2420 development, and I wanted to bring to the attention of the
2421 committee that one of the important ways that these are being
2422 developed now is through a negotiated process in which the
2423 energy efficiency advocates, people--stakeholders such as
2424 PG&E and other utilities, and the manufacturers come together
2425 to develop consensus proposal. The Energy Policy Act of 2005
2426 enabled DOE to accept those consensus standards directly into
2427 rule and we have begun to see that move forward in the
2428 process. There are a number of negotiations that are
2429 currently underway. In the past, these negotiations have
2430 been enacted as part of the federal energy legislation, and
2431 we hope the committee will consider several of the provisions

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2432 that are currently under development, as they look at
2433 legislation. This is a very efficient and effective way to
2434 bring consensus between the manufacturers and stakeholders,
2435 and move the market forward together.

2436 Second issue I wanted to raise to the committee is
2437 building codes. As has been noted, buildings consume
2438 approximately 40 percent of the energy in the U.S. economy,
2439 and codes represent the easiest and most cost effective way
2440 for consumers to benefit from energy efficiency. It is
2441 important that we continue to revise and look at best
2442 practices that exist in terms of building codes, but it is
2443 also equally important that we focus on the implementation of
2444 the building codes in the marketplace. A building code on
2445 the books means nothing if the builders out there in the
2446 market are actually not implementing it, and we would
2447 encourage DOE to work with State and local governments to
2448 build the capacity, both within the enforcement side of this,
2449 but also work with the contracting community and building
2450 community out there to implement the codes so that the energy
2451 efficiency benefits are available to all customers.

2452 Finally, the last area I wanted to speak about is

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2453 manufacturing. U.S. manufacturing sector is poised for a
2454 major expansion and reinvestment, and until recently, has not
2455 received a lot of attention at the federal level. In
2456 particular, we would recommend three things the Department
2457 should--the committee should consider.

2458 First, we think it is important that the DOE's
2459 manufacturing program be reenergized. There has been a lack
2460 of leadership for over a decade there, and we think there is
2461 some opportunities for it to move forward. Specifically, we
2462 would recommend that the Department be directed to establish
2463 an industrial steering committee to ensure a strong working
2464 relationship exists between manufacturers, the Department,
2465 and other stakeholders, and that that partnership should work
2466 to leverage private sector funding. In the past, this
2467 program R&D area has been among the most successful R&D
2468 efforts in the entire Federal Government, and was able to
2469 leverage \$3 in private sector funding for every \$1 that was
2470 spent by the Federal Government.

2471 Second, we think it is important to maintain a balance
2472 between your term R&D, long-term R&D, and deployment, and all
2473 of these need to be targeted in cooperation with the

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2474 manufacturers so that we receive maximum efficiency.

2475 Finally, I wanted to mention the idea of smart

2476 manufacturing. This is--as we look, we have already

2477 mentioned intelligence in the marketplace. We think

2478 manufacturing will benefit from that and encourage you to

2479 direct the Department to initiate a smart manufacturing

2480 program to explore those resources.

2481 Thank you for the opportunity to present, and I look

2482 forward to questions. Thank you.

2483 [The prepared statement of Mr. Elliott follows:]

2484 ***** INSERT 8 *****

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|
2485 Mr. {Whitfield.} Well thank you, Mr. Elliott, and Mr.
2486 Gayer of the Brookings Institution, you are recognized for 5
2487 minutes.

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|

2488 ^STATEMENT OF TED GAYER

2489 } Mr. {Gayer.} Great, thank you. Chairman Whitfield,
2490 Ranking Member Rush, and members of the subcommittee, thank
2491 you very much for the opportunity to appear here today. My
2492 comments will cover the market incentives for energy
2493 efficiency innovation, the most cost effective means of
2494 reducing pollution stemming from energy use, and the
2495 limitations and problems associated with government energy
2496 efficiency mandates.

2497 First on market incentives. I believe that market
2498 prices are good at conveying information about the strength
2499 of consumer demand for a good, and the scarcity of supply for
2500 that good, allowing for a balancing of buyers and seller's
2501 interest. In the market for appliances, prices reflect how
2502 consumers value features such as energy efficiency and
2503 convenience. If the price of energy increases, consumers are
2504 willing to pay more for more efficient appliances, providing
2505 a clear incentive to suppliers to respond. The importance of
2506 energy prices for the bottom line of consumers and businesses

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2507 provides a strong incentive for producers to provide the
2508 innovative energy efficient products we see arriving on the
2509 market today, and these market incentives account for the
2510 preponderance of energy efficiency gains that have been
2511 mentioned in this hearing today.

2512 In addition to providing incentives for energy
2513 efficiency, another important benefit of the market process
2514 is that consumers with different preferences can find
2515 products that best suit their needs. It is important to
2516 remember that there is no uniformly right amount of energy
2517 efficiency for any given product. However, market prices can
2518 provide misleading signals, to the extent that they do not
2519 account for the pollution costs stemming from energy use. In
2520 other words, the price that shows up on one's electric bill
2521 accounts for the private cost of energy, but it does not
2522 include any environmental--additional environmental damages
2523 that impact others due to one's energy use. Economists refer
2524 to these latter costs as ``negative externalities.'' The
2525 best approach to addressing this problem is for the
2526 government to price these costs directly. Consumers and
2527 businesses would then face the full cost of energy use and

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2528 markets would respond through some combination of new
2529 technologies, alternative fuels, and conservation.

2530 There are a number of reasons why this market-oriented
2531 approach of setting a price on pollution is more cost-
2532 effective than regulations such as energy efficiency
2533 mandates. First, the one-size-fits-all energy efficiency
2534 mandates ignore the substantial diversity of preferences,
2535 financial resources, and personal situations that consumers
2536 and businesses must align in order to make their decisions.
2537 Second, energy efficiency mandates do not promote
2538 conservation. For example, an energy efficiency standard for
2539 air conditioners increases the incentive to run the air
2540 conditioners longer. Third, energy efficiency standards must
2541 squeeze energy reductions out of new products only, and can
2542 even create incentives for consumers and businesses to retain
2543 older, and thus less energy-efficient, products.

2544 In recent work I did with Kip Viscusi of Vanderbilt
2545 University, we examined a number of recent government
2546 regulations that mandate energy efficiency standards for
2547 vehicles and appliances. Despite the fact that these
2548 regulations frequently are touted as pollution-reducing

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2549 initiatives, by the agencies' own estimates, they confirm
2550 that the environmental benefits tend to be quite small and
2551 are often outweighed by the costs that they estimate.

2552 In order to justify these regulations, the agencies
2553 assert that consumers and firms are making incorrect purchase
2554 choices and that they therefore benefit if product choices
2555 are restricted to those that meet the agencies' mandated
2556 standards. Dismissing consumer preferences outright in this
2557 way is a significant departure from the well-established
2558 principles for conducting cost-benefit analyses, both in the
2559 economics literature, and I would add, by the
2560 Administration's Office of Management and Budget.

2561 By claiming regulatory benefits from the correction of
2562 so-called ``consumer irrationality,' ' agencies are shifting
2563 regulatory priorities from the important goal of reducing the
2564 harm individuals impose on others, through pollution, towards
2565 the nebulous and unsupported goal of reducing harm
2566 individuals cause to themselves by purchasing purportedly
2567 uneconomic products. This shift from environmental
2568 protection to consumer protection results in a host of costly
2569 regulations that are far less effective than a government

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2570 policy that simply sets a price on pollution. It is
2571 important to emphasize that these costs are real and that
2572 they harm economic well-being. Raising the costs of consumer
2573 products and products used by businesses through government
2574 mandates does not lead to economic growth or job creation.
2575 It also establishes a dangerous precedent: If agencies can
2576 justify regulations on the unsubstantiated premise that
2577 consumers and businesses, but not the regulators, are
2578 irrational, then they can justify the expansive use of
2579 regulatory powers to control and constrain virtually all
2580 choices consumers and businesses make.

2581 To summarize, I believe that markets generally work well
2582 to provide incentives for energy efficiency and to satisfy
2583 consumers' diverse tastes. To the extent that prices fail to
2584 incorporate the environmental cost of energy use, the most
2585 sensible government response is to price the pollution costs
2586 directly, and then allow consumers and businesses to respond
2587 to the higher prices. Regulations and mandates are inferior
2588 policies, but still may be better than doing nothing if the
2589 benefits exceed the costs. Unfortunately, by the agencies'
2590 own estimates, many of these mandates lead to minimal

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2591 environmental benefits that are far less than the costs that
2592 they estimate themselves. In an effort to justify these
2593 regulations, the agencies have deviated from well-established
2594 economic principles by asserting that consumers and
2595 businesses benefit from government mandates that restrict
2596 choice. The evidence for this view, I believe, is weak, and
2597 assuming that citizens are not capable of making sensible
2598 decisions that affect their own pocketbooks is not the right
2599 way to advance the important goal of enhancing the quality of
2600 our environment.

2601 Thank you very much.

2602 [The prepared statement of Mr. Gayer follows:]

2603 ***** INSERT 9 *****

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2604 Mr. {Whitfield.} Thank you, Mr. Gayer, and thank all of
2605 your for your testimony, and once again for being here with
2606 us today.

2607 Ms. Burt, I want to ask you a question to start off
2608 with. I notice in your testimony you were talking about the
2609 per capita use of energy in California has been flat since
2610 1970, so we are talking about 30 or 40 years. You are
2611 talking about the new technologies that have been launched.
2612 You talked about the new policies of the government and
2613 working with the utilities. You talked about \$20 billion in
2614 savings. You talked about the lack of necessity to build 25
2615 new generating plants. With all of those efficiencies and
2616 everything else, why is it that the California electricity
2617 rates are among the highest in the country, with the
2618 exclusion of Alaska or Hawaii? You all have been so
2619 productive in so many ways. Why is it that electricity rates
2620 are so high out there?

2621 Ms. {Burt.} Well thank you, Mr. Chairman, for the
2622 question and for the opportunity.

2623 California electric rates are high, and matter of fact,

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2624 they are within the top 25 across the country of major
2625 utilities. The bills of Californians, however, are among the
2626 lowest, and so I think you have to look at both of those in
2627 collaboration.

2628 Mr. {Whitfield.} How is that possible? How does that
2629 work?

2630 Ms. {Burt.} Well, energy rates in California are higher
2631 the more you use. It is an inclining tier structure and it
2632 is designed that way to encourage energy efficiency. The
2633 lower rates, though, however, are very comparable to other
2634 parts of the United States. And so when we talk about rates,
2635 that is one slice of it, but we actually work with our
2636 customers to lower their bills, and that is really what they
2637 are about. You know, again, we serve about 15 million
2638 Californians across northern and central California, and we
2639 have a wide variety of customer groups.

2640 Mr. {Whitfield.} What would you say the average per
2641 kilowatt hour is for industrial use in California?

2642 Ms. {Burt.} You know, Mr. Chairman, I don't have that
2643 with me directly but I can certainly get back to you with
2644 that information.

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2645 Mr. {Whitfield.} I am assuming that it--I mean, I am
2646 not complaining about it or anything, but I am assuming it
2647 must be much higher, because if you have residential use
2648 really cutting down on their consumption, and then that is
2649 low as the average utility bill in America, that must mean
2650 the industrial use must be a lot more expensive.

2651 Ms. {Burt.} Thank you, Mr. Chairman, let me clarify a
2652 little bit more. We actually have energy efficiency programs
2653 that span across all of our customers. So within our energy
2654 users that are high industrial customers are refineries, and
2655 we have many in California. We have oil producers in
2656 California, we have food processors within our service
2657 territory. We have programs that work directly with each of
2658 those types of businesses to lower their energy costs--

2659 Mr. {Whitfield.} But even though the individual bills
2660 may be low, why is it that the production is so high, the
2661 cost?

2662 Ms. {Burt.} Well again, the energy policies across
2663 California are designed to encourage conservation, encourage
2664 energy efficiency. On the industrial side, however, again,
2665 what the industrial customer--and frankly, what our

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2666 commercial customers and residential customers care about are
2667 the size of their monthly bills. And the size of their
2668 monthly bills are among the lowest in the Nation.

2669 Mr. {Whitfield.} The size of your--

2670 Ms. {Burt.} Of their monthly bills, so their usage is--

2671 Mr. {Whitfield.} And we are talking about who and here
2672 now, residential users?

2673 Ms. {Burt.} Mr. Chairman, actually all of our
2674 customers. The size of their monthly bills are among the
2675 lowest--

2676 Mr. {Whitfield.} Are among the lowest in the country?

2677 Ms. {Burt.} Yes, among the lowest in the country. They
2678 certainly aren't the lowest, but they are among the lowest.

2679 Mr. {Whitfield.} Mr. Crouse, let me ask you a question.
2680 The Section 433 prohibits the use of fossil fuels in new or
2681 modified federal buildings by the year 2030 or so. Now you
2682 were testifying on behalf of the Combined Heat and Power
2683 Association. Wouldn't a prohibition such as that make it
2684 more difficult on the adoption of high efficiency
2685 technologies, such as combined heat and power for federal
2686 buildings?

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2687 Mr. {Crouse.} Well, I think it certainly could. One of
2688 the opportunities, though, is to look at biogas or other
2689 means of destructing organic waste to use, then, the fuel or
2690 the natural gas, the methane that comes off of the anaerobic
2691 digesters, or in some cases, gas that would come from other
2692 processes on those bases. The other, you know, option would
2693 be for us to look at using natural gas as a fuel, as a
2694 transition fuel, and look down the road at possibly using
2695 those new fuels that come online and the new products that
2696 would become available in that timeframe, to use them,
2697 including some of the new biofuels that are looking at being
2698 generated from algae and from other sources.

2699 Mr. {Whitfield.} Okay. Mr. Kosisko, my time is running
2700 out, but I did pay attention to what you did with Archema
2701 down in my district. That \$300,000 annual savings was quite
2702 impressive, and I want to thank you for mentioning that.

2703 At this time, I recognize the gentleman from Illinois,
2704 Mr. Rush, for 5 minutes.

2705 Mr. {Rush.} Ms. Burt, you talked in your testimony
2706 about PG&E's comprehensive approach to energy efficiency.
2707 You included different strata of individuals and demographic

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2708 groups in your statement. The question that I have is do
2709 some of these outreach programs that you discussed, have you
2710 engaged young people, young students in some of this outreach
2711 and could you speak to the educational activities and
2712 initiatives that you have with the youngest of our citizens?

2713 Ms. {Burt.} Thank you, Mr. Rush. Yes, absolutely,
2714 Congressman Rush, we--our programs do contain a very large
2715 component of education, both--primarily in the post-high
2716 school area. In fact, we have three education centers across
2717 our service territory, one in Stockton, one in San Francisco,
2718 and one in the East Bay area that are really focused on
2719 training and developing even job skills within energy
2720 efficiency. We have got the oldest existing training
2721 facility in Stockton that has been in place since 1978, and I
2722 believe we have trained something in the neighborhood of over
2723 91,000 people to really go out and be productive in the jobs
2724 arena around really being energy auditors, installing
2725 weatherization, all of the different phases of energy
2726 efficiency within those three centers. So we have a pretty
2727 broad record on that.

2728 Mr. {Rush.} So you create some jobs with these

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2729 programs? I am trying to focus on young, even younger than
2730 high school. It seems the earlier we include energy
2731 efficiency and an understanding of the energy demand, energy
2732 sector, the energy issues, including costs, but also
2733 efficiencies, the earlier we include that in the education of
2734 our younger children, the more we change the culture. I
2735 think we will have some tremendous benefits. Do you engage,
2736 say, even at the grade school level?

2737 Ms. {Burt.} Yes, Congressman Rush, we do. We have
2738 several programs. One of them is our Solar Schools Program
2739 where we really engage elementary age students around energy
2740 in totality. So renewable resources, the value of solar--we
2741 actually install solar panels on schools and use them in
2742 demonstration--classroom demonstration pieces. We have a
2743 number of other classroom demonstrations, both around energy
2744 efficiency and energy in general within the school systems
2745 that are used throughout our service territory.

2746 Mr. {Rush.} In your opinion, how is the Federal
2747 Government faring in these areas? Are there some things that
2748 we are doing--are we doing enough as a Federal Government to
2749 raise the level of consciousness of our grade school-level

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2750 students, high school-level students? Are we doing enough as
2751 a Federal Government?

2752 Ms. {Burt.} Thank you. That is a wonderful point. I
2753 think all of us can do more to engage the next generation
2754 around energy, and not just energy production, but using
2755 energy efficiency as a source of production. And I think
2756 learning what new technology--and again, the combining of
2757 really this new--the new IT and smart grid with what energy
2758 efficiency can do is going to be an amazing future for that
2759 generation. I think the Federal Government can do more. I
2760 think we can all do more to encourage education.

2761 Mr. {Rush.} Thank you, Mr. Chairman. I yield back.

2762 Mr. {Whitfield.} Gentleman yields back.

2763 At this time, I recognize the gentleman from Texas, Dr.
2764 Burgess, for 5 minutes.

2765 Dr. {Burgess.} Thank you, Mr. Chairman. I appreciate
2766 the recognition.

2767 Ms. MacIntosh, let me ask you. You heard the testimony
2768 of Dr. Hogan and the first panel. Do you work with the--with
2769 their office, the Department of Energy Efficiency and
2770 Renewable Energy?

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2771 Ms. {MacIntosh.} We do. All of the member companies of
2772 the Federal Performance Contracting Coalition work hand-in-
2773 hand with the Department of Energy. They oversee the
2774 indefinite delivery and definite quantity contracts that we
2775 all operate under to implement energy savings performance
2776 contracting for the Federal Government.

2777 Dr. {Burgess.} Now you referenced that there, in fact,
2778 was a congressional mandate that required some of this
2779 performance standards. Do you recall when that congressional
2780 mandate was passed? In your written testimony, you
2781 referenced 1986 and said implementation was occurring in the
2782 '90s. So--and this is a well-established pattern, is that
2783 correct?

2784 Ms. {MacIntosh.} Correct.

2785 Dr. {Burgess.} This is not something that is new that
2786 should be--

2787 Ms. {MacIntosh.} Performance contracting? Oh, no.

2788 Dr. {Burgess.} --a surprise to--

2789 Ms. {MacIntosh.} It should not be a surprise to anyone.

2790 Dr. {Burgess.} --Dr. Hogan? Well--

2791 Mr. {Whitfield.} Ms. MacIntosh, would you mind using

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2792 Mr. Crouse's microphone, because we--and--

2793 Ms. {MacIntosh.} Is this a little better?

2794 Mr. {Whitfield.} Yes, that is better.

2795 Dr. {Burgess.} Whoa, super. And you know, I was making

2796 the point--and not just an academic one--in Congress, we get

2797 criticized for passing mandates and then not living under

2798 them ourselves. I referenced how in my own personal life I

2799 have made energy efficiency decisions that were based upon

2800 what I would consider would be the correct market signals.

2801 And yet, we have a great big glorious federal building here,

2802 the Rayburn Building. I am fortunate enough to have an

2803 office here. Yes, indeed, they did change all the lighting

2804 around back in 2007 or 2008, but when I look at the biggest

2805 source of energy loss, it has got to those single pane

2806 windows that are in existence in the Rayburn Building, in the

2807 Cannon Building, in the Longworth Building. I don't get to

2808 go over on the Senate side, but I suspect you have got the

2809 same thing over there. So did you do an audit for the

2810 Department of Energy on, say, the Rayburn Building, like we

2811 have mandated that other industries do on their structures?

2812 Ms. {MacIntosh.} Yes, that is correct, and that was

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2813 done in the 2008-2009 timeframe. A comprehensive audit was
2814 performed for all of the House office buildings. The same
2815 was also done for the Senate office buildings.

2816 Dr. {Burgess.} Yes, we will ignore the Senate for right
2817 now, since they are ignoring us. Would it be fair to say
2818 that--I mean, lighting, yes, it is a significant expense. To
2819 me, it would have made more sense--I mean, had I been doing
2820 this in my private life and I wanted to change all my
2821 lighting, I would have waited until a bulb burned out and
2822 then replaced it with an LED or a CFL, if that was my
2823 inclination. To go in and change all the lights around--
2824 basically during a congressional recess, I mean, that was a
2825 pretty expensive undertaking. I have got no idea what
2826 happened to the old light bulbs. I hope they gave them to
2827 another country so that they could use them. But it almost
2828 seems like that was the obvious--the low-hanging fruit in
2829 this endeavor, but if you really want to look at where the
2830 energy efficiency exists in an older building like Rayburn or
2831 Cannon or Longworth, it is going to be in the window
2832 treatments, not in the lighting structures.

2833 Ms. {MacIntosh.} Mr. Terry, the beauty of the energy

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2834 saving performance contracts--excuse me, Mr. Burgess--it was
2835 the direct line of sight. The beauty of the energy savings
2836 performance contracting program is that you are supposed to
2837 look at things from a holistic standpoint. So energy savings
2838 were generated from lighting, certainly, but that was really
2839 only one of the many measures that were implemented. The
2840 real meat of an ESPC, typically, is in the places you don't
2841 see. It is in the chiller plant, it is in the boiler plant,
2842 it is in the direct digital control systems of a facility
2843 that measure and monitor and modulate temperature, for
2844 example. All of those systems, including water systems as
2845 well, were addressed in all of these buildings. You know,
2846 that audit that was performed at the time is also intended to
2847 be a very comprehensive menu of opportunities that we could
2848 implement to generate savings.

2849 Dr. {Burgess.} Yes, we are going to run out of time.
2850 You notice the chairman has a very quick gavel--

2851 Ms. {MacIntosh.} Certainly.

2852 Dr. {Burgess.} --when it comes to me, but could you
2853 perhaps supply my office with that audit and perhaps provide
2854 us a little direction as to what has been implemented and

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2855 what has been--what is waiting? Because again, I would like
2856 to give people some reassurance that we are living under the
2857 same rules that we are making for other people--

2858 Ms. {MacIntosh.} Agreed.

2859 Dr. {Burgess.} --and that the smart thing to do is to
2860 respond to appropriate market signals and not the
2861 congressional mandates.

2862 Thank you, Mr. Chairman, for your indulgence. I am
2863 going to yield back the final 2 seconds.

2864 Mr. {Whitfield.} You are welcome, Dr. Burgess. I gave
2865 you an extra 50 seconds the last time, so--at this time, I
2866 recognize the gentleman from California, Mr. McNerney, for 5
2867 minutes.

2868 Mr. {McNerney.} Thank you, Mr. Chairman. I want to
2869 welcome you to Washington, Ms. Burt, for your testimony here
2870 this morning. I had the privilege of visiting a PG&E
2871 training facility in Stockton, and with Chris Foster--it was
2872 about a year ago, and it is certainly state-of-the-art. It
2873 is very impressive. Do you think that that facility and
2874 facilities like that are producing enough trained workers, or
2875 is there an additional need for additional facilities to meet

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2876 the market demand right now?

2877 Ms. {Burt.} Thank you. Thank you very much, and it is
2878 a delight to be here, Congressman. We are certainly happy to
2879 be here from California.

2880 That facility in particular and the other two, the
2881 sister facilities that we have, the facility in San Ramon,
2882 which really trains and really does a lot of research and
2883 work around the food industry and emerging technology, and
2884 then the one in San Francisco, which is really focused on
2885 architects and building and really design. I will tell you,
2886 they are kept consistently busy. And as you mentioned, the
2887 one in Stockton has actually been in existence since 1978,
2888 and we have produced 91,000 trained workers. Our own
2889 workforce, we have about 700 people directly working for--on
2890 my team that do energy efficiency, and then we hire in our
2891 communities another 2,000 practitioners within
2892 weatherization, and these are contractors and we train them.
2893 We also trained a number of contractors in the most recent
2894 funding, the ARA funding that was available. So I must say
2895 that we don't find lack of need for training. There always
2896 seems to be--I looked at the Pacific Energy Center just the

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2897 other day, and I think there were 950 separate classes that
2898 were being offered. And I know last year in that facility
2899 alone, we trained--and that, I think, is the smallest of our
2900 facilities--we trained about 8,000 workers.

2901 So it is certainly an area as energy efficiency becomes
2902 more a part of the solution nationally that we should look
2903 at, you know, and I think if we can get to the point where
2904 energy efficiency is considered in other places as it is in
2905 California as a part of the generation mix, just as a
2906 generation plant would be, then I think we may need to look
2907 at more training facilities.

2908 Mr. {McNerney.} Thank you. How do you see the EV
2909 market affecting PG&E's business plan over the next decade?

2910 Ms. {Burt.} Well, thank you again. We are very excited
2911 about the electric vehicle market. It does have challenges
2912 with it because again, the distribution grid traditionally
2913 built across our service territory as well as others is in
2914 need of upgrading. We are in the midst of making our grid
2915 much smarter to really integrate electric vehicles and other
2916 renewable resources, but we are very excited about electric
2917 vehicles and what they offer, particularly for the

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2918 environmental benefits and for our customers' benefits. We
2919 know that in our service territory--I will tell you, my
2920 customers and your constituents are very excited about using
2921 electric vehicles. So I think you can expect to see us do
2922 more on that.

2923 Mr. {McNerney.} Thank you.

2924 Mr. Gayer, would you say that big improvements in energy
2925 efficiency would have a stimulative impact on the national
2926 economy?

2927 Mr. {Gayer.} I think that market-driven improvements in
2928 energy efficiency are good for the well-being of the economy
2929 for sure. When you get to certain programs to stimulate, I
2930 think it is a little bit dicier as far as whether or not it
2931 is worth the cost. You would have to really see what is the
2932 labor being employed and what would they have been doing
2933 otherwise. In a time of great unemployment, I think there is
2934 much more evidence that there is such a case, but if you are
2935 talking about the long sweep of history, I think the evidence
2936 is weaker. But certainly, energy innovation and energy
2937 efficiency innovation is good for the economy.

2938 Mr. {McNerney.} Thank you.

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2939 Mr. Elliott, is there anything that you would--that
2940 would give us a better return on investment than energy
2941 efficiency in terms of energy investments?

2942 Mr. {Elliott.} Congressman, at this point I think
2943 energy efficiency represents one of the best investments that
2944 is available in the marketplace. We are in an environment
2945 right now, in spite of the current low natural gas prices,
2946 where many of the other energy sources are increasing in
2947 cost, as has already been noted in the case of gasoline
2948 pricing right now, and investment in energy efficiency
2949 represents an opportunity to improve the U.S. GDP by reducing
2950 outflow of funds to foreign countries. There is also the
2951 issue that investment in energy efficiency makes other
2952 technologies equally accessible. For example, investments in
2953 energy efficiency can enhance the cost effectiveness of
2954 renewable energy by reducing the amount of energy that is
2955 required.

2956 Mr. {McNerney.} Thank you, Mr. Chairman.

2957 Mr. {Whitfield.} Thank you.

2958 At this time, I recognize the gentleman from Ohio, Mr.
2959 Latta, for 5 minutes.

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2960 Mr. {Latta.} Thank you, Mr. Chairman, and thank you
2961 very much to our panel for being with us today.

2962 If I could, Mr. Gayer, if I could start with you. I
2963 apologize for my voice. It is allergy season. But I found
2964 your testimony interesting, because you kind of hit home to
2965 my district. I represent 60,000 manufacturing jobs in
2966 northwest, west central Ohio that we--some of our companies
2967 are very large, some are very small. We have a great need
2968 for base load capacity out there, and I go through factories,
2969 I mean, literally all the time. And probably in the last, I
2970 am going to say 5 months, I have been through about 150
2971 facilities in my district. And I find it interesting in your
2972 testimony what you are talking about, because I hear this
2973 from my folks back home all the time, you know. They see
2974 these mandates coming down from Washington, and again, they
2975 are in a global--most of these people are on a global
2976 marketplace and they are out there very concerned about
2977 making sure that they can produce a product that is
2978 competitive, that--not only in this country, but around the
2979 world.

2980 But in your testimony, I found it interesting. You were

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2981 talking about that--you said there were a number of reasons
2982 why the market warranted an approach of setting a price of
2983 pollution as cost effective, and then regulations such as
2984 energy efficiency mandates, and you say that the one-size-
2985 fits-all energy efficiency mandates ignore the substantial
2986 diversity of preferences, financial resources, and personal
2987 situations. And I tell you, that hits home to my district.
2988 If I can just ask you, then, you know, when you talk about
2989 that, you said that--you testified that the energy efficiency
2990 standards could actually reverse some of the energy savings
2991 resulting in negligible environmental benefits. Could you
2992 expand on that?

2993 Mr. {Gayer.} Yes, sure. First, I think it is important
2994 in all these questions to distinguish between--a lot of
2995 people are talking about innovation and energy efficiency,
2996 and I think that is a good thing, and when it is driven by
2997 the market, it is accounting for their preferences and the
2998 diversity of taste and financial circumstances. The problem
2999 comes when you have an agency that essentially uses certain--
3000 imposes mandates and essentially is asserting that certain
3001 preferences are in some sense invalid.

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3002 Mr. {Latta.} Could you give me a couple of examples of-

3003 -

3004 Mr. {Gayer.} Well, I mean, it is a very simple thing.

3005 The way you do it is these net present value calculations.

3006 You look at--the agency will say well, we think for this

3007 appliance fuel costs are going to be this in the future. We

3008 think the appliance will last this long. We think you are

3009 going to use it this many times, and we kind of figure out is

3010 the higher cost today worth it for you to get the savings

3011 later, but it is not accounting for other characteristics of

3012 convenience and feature and your particular circumstance.

3013 And this happens, I think, most egregiously when it comes to

3014 commercial products. I mean, you have companies that--as I

3015 think you are alluding to, that are very narrow profit

3016 margins, they are in very competitive industries. Fuel costs

3017 might be a huge part of their operating costs, and

3018 essentially they are being told you are not doing a good job,

3019 considering the tradeoffs here, and I think my response to

3020 the presumption is they probably are doing a pretty good job

3021 of considering the tradeoffs, because they have circumstances

3022 that can't be measured from the regulator's perspective. And

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3023 so the presumption should be that they actually know what
3024 they are talking about. Again, there are plenty of
3025 incentives for energy efficiency for that firm, and I think
3026 that is good, but we don't want--I don't think we should just
3027 mandate that--ignore their other preferences, and I think
3028 that is what the market is good at accommodating.

3029 My bigger point is a lot of the tech supporting these
3030 rules are written from the angle that they are helping the
3031 environment, but what I have just described is really
3032 consumer protection. It is not environmental protection, it
3033 is saying that you are making a mistake by buying an
3034 uneconomic product. We, the regulator, are going to correct
3035 that. I don't think there is evidence that there is a need
3036 for consumer protection, but my point is that is a very
3037 different thing than designing a regulation to say hey, we
3038 have got to worry about pollution. You have your
3039 circumstances, but you are not considering that you are
3040 emitting pollution. Let us address the pollution, and you
3041 wind up with very different regulations.

3042 Mr. {Latta.} Let me follow up for just a second where
3043 you were talking about consumers. You know, what is best for

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3044 the consumers out there, then, the energy efficiency
3045 improvements for market forces, or energy efficiency from the
3046 regulators?

3047 Mr. {Gayer.} Oh, well certainly the former, because the
3048 former actually considers they get to consider the other
3049 tradeoffs and the other characteristics that either drive
3050 their consumer preferences, or in the case of businesses,
3051 buying these products, their bottom line. Essentially that
3052 is the premise, is I get--I am better at spending money that
3053 affects my bottom line than somebody else is, and the
3054 presumption should be that. Again, if you are trying to
3055 adjust environmental externalities, which I alluded to, I
3056 won't consider that in my consumption decision, and that is,
3057 I think, a strong role for the regulator there. But there
3058 needs to be a distinction between are we trying to protect
3059 the environment or are we really just consumer protection?

3060 Mr. {Latta.} All right. I think that, you know, again
3061 when I am going through my facilities back home that the
3062 folks back there, you know, they are worried about that
3063 bottom line, and you know, they all want to make sure that
3064 there is clean air and clean water. And at the same time,

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3065 they want to make sure they are providing the jobs out there
3066 for the people in the communities, because that is absolutely
3067 central.

3068 Mr. Chairman, with that, I thank you for your indulgence
3069 and I yield back.

3070 Mr. {Whitfield.} Thank you.

3071 At this time, I recognize the gentleman from California,
3072 Mr. Waxman, for 5 minutes.

3073 Mr. {Waxman.} Thank you, Mr. Chairman.

3074 Energy efficiency standards set a minimum floor for the
3075 efficiency of appliances and other products. Over the last
3076 25 years, these standards have played a key role in improving
3077 the efficiency of appliances we all have in our homes. They
3078 save consumers billions of dollars every year by lowering
3079 utility bills, but some economists argue that energy
3080 efficiency standards are a bad idea. They say that the costs
3081 of the standards outweigh the benefits, and that they reduce
3082 consumer choices. They also argue that any cost effective
3083 efficiency measures would be taken anyway, even without the
3084 standards, and Mr. Gayer made these arguments today.

3085 Dr. Elliott, what do you think? Do the costs of these

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3086 standards outweigh the benefits, or do consumers come out
3087 ahead?

3088 Mr. {Elliott.} Congressman, I want to say that I am--in
3089 our view and based on our research, consumers do come out
3090 ahead, and I think we can get some very good examples on
3091 this. Perhaps one of the longest regulated products in the
3092 marketplace is the refrigerator today. My wife and I had the
3093 opportunity to replace one recently, and the number of
3094 choices that we had in buying this one compared to the one we
3095 bought 25 years ago, the amenity values, the cost, the--were
3096 all substantial.

3097 Mr. {Waxman.} Let me ask you this. Do the standards
3098 reduce or increase consumer choice?

3099 Mr. {Elliott.} I think our experience, at least looking
3100 at things like lighting products, looking at things like
3101 automobiles, looking at things like refrigerators, washing
3102 machines, they have increased our consumer choice. We have
3103 more options, we have more amenities. Part of this is a
3104 simple fact that we have stimulated the manufacturers to
3105 redesign products which they have no motivation otherwise to
3106 redesign.

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3107 Mr. {Waxman.} You, in your testimony, talked about huge
3108 savings for major efficiency improvements. Would we have
3109 seen benefits in the absence of efficiency standards, or are
3110 there market barriers that have--would have prevented cost
3111 effective efficiency improvements from being made? You
3112 talked about an incentive for manufacturers. Are there
3113 barriers to them or they just don't think about it because
3114 they don't have to?

3115 Mr. {Elliott.} I mean, I think it is a complex issue,
3116 and as with most things, you know, these are not simple
3117 decisions. A lot of this comes down to information and we
3118 talk about in an economic environment where we have perfect
3119 information. Consumers don't have perfect information. They
3120 have lack of information. They are not given or don't have
3121 access or the time--we call that transaction cost--to be able
3122 to make the choices that may--

3123 Mr. {Waxman.} Well how about the choices that
3124 manufacturers make? Are there barriers to them making
3125 efficiency choices?

3126 Mr. {Elliott.} Absolutely. Part of it is there is no
3127 change in the marketplace. In the case of a manufacturer, if

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3128 we have a static situation in the marketplace and there is no
3129 dynamic there, they are not going to necessarily innovate.
3130 And so the opportunity, I think, is standards allow them to
3131 innovate and we have seen over the last 25 years in the
3132 manufacturer's products that are regulated by standards
3133 coming to understand, and in many cases, they have been
3134 beneficial to the marketplace.

3135 Mr. {Waxman.} All right, thank you.

3136 Ms. Burt, PG&E has a lot of on-the-ground experience
3137 implementing programs to incentivize energy efficiency. Do
3138 consumers take every cost effective energy efficiency measure
3139 on their own, or are supporting policies necessary?

3140 Ms. {Burt.} Thank you, Congressman. We would agree
3141 that supporting policies are necessary and, in fact, we do
3142 make many, many, many of our programs available directly to
3143 the consumer. We also give them a lot of information. But
3144 that simply alone doesn't do the trick. We also have
3145 incentives to manufacturers, so for example, the manufacturer
3146 that is manufacturing a refrigerator, you know, our goal in
3147 California, as you probably know, is to work collaboratively
3148 with manufacturers across the country--

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3149 Mr. {Waxman.} And you have done that very well. I am
3150 sort of moving forward because I only have a limited time,
3151 but I wanted to ask you, first of all, you testified PG&E
3152 efficiency programs result in energy savings that saved your
3153 customers \$20 billion and avoided the need to build 25 large
3154 power plants. These efficiency initiatives are cheaper than
3155 building new power plants, aren't they?

3156 Ms. {Burt.} Yes, sir, they are, and--

3157 Mr. {Waxman.} And what is PG&E's experience with
3158 appliance efficiency standards and State building codes? Are
3159 they--are these onerous government mandates or are they cost
3160 effective ways to drive energy efficiency improvements?

3161 Ms. {Burt.} Well, thank you. Our view of codes and
3162 standards is they are part of the portfolio of energy
3163 efficiency. We work on codes and standards. We work
3164 upstream with manufacturers. We work with cities. We work
3165 with governments to create incentives before the standards
3166 are set. So it is not as though the standard is set first,
3167 you know. Our view of the world is let us incent the more
3168 energy efficient refrigerator, more energy efficient
3169 televisions, and then let the standard evolve as the market

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3170 pulls. And that has really been very effective in
3171 California, as you know.

3172 Mr. {Waxman.} Well, I commend you for what you have
3173 done in California. Thank you very much.

3174 Mr. {Whitfield.} Gentleman's time is expired.

3175 I recognize the gentleman from Texas, Mr. Olson, for 5
3176 minutes.

3177 Mr. {Olson.} I thank the chairman and welcome the
3178 witnesses. You start here in the morning, now it is the
3179 afternoon. So thank you for your time, your expertise, and
3180 most importantly, your persistence.

3181 Mr. Kosisko, I would like to thank you for helping me to
3182 tour ABB's facility in Houston last year. In your testimony,
3183 you mentioned barriers to investment in industrial
3184 efficiency, lack of a clear business case, inadequate funds
3185 for financing, and a general lack of information. Could you
3186 expand on what NEMA and IEEC are doing? Is there a
3187 particular success story that stands out to you?

3188 Mr. {Kosisko.} Thank you, Congressman, for the
3189 question.

3190 NEMA, IEEC, and ABB are all working within the industry

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3191 to increase awareness, which I think is one of the key
3192 impediments to adopting energy efficiency technologies into
3193 the industrial space. Let me give you an example. If you
3194 look at a typical industrial motor, for instance, that
3195 industrial motor, over its life cycle, 2 percent of its total
3196 cost to operate is the initial purchase price of that motor.
3197 Ninety-seven percent of the cost is the energy utilized over
3198 its lifetime, but yet, there are decisions made on a daily
3199 basis by various industrial customers on the initial
3200 procurement price of that motor, and I think it is widely
3201 made because of the lack of understanding and general
3202 information available. NEMA and IEEC within ABB, we do a lot
3203 to promote awareness and improve visibility of the types of
3204 products and systems and services that will help in
3205 industrial energy efficiency.

3206 Another example, we have a show each year, Automation
3207 and Power World, that we sponsor at ABB where we bring in
3208 over 2,000 industrial users into a conference. We have over
3209 400 seminars. A good portion of those seminars are focused
3210 on energy efficiency and the types of products, systems, and
3211 services and other methods that could be used within the

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3212 industrial environment to reduce energy consumption and make
3213 industry more competitive here in the United States.

3214 Mr. {Olson.} Now I am questioning--being from Texas,
3215 one thing I worry about is our grid reliability. Our State,
3216 our margin for excess capacity is very slim now, and that is
3217 largely because of overregulation by the Obama
3218 Administration, our vast growing population, and conflicting
3219 federal agency laws that force a power provider to choose
3220 between one agency and another in direct conflict. I used
3221 the last Congress to this Congress to adjust that factor, but
3222 I am intrigued by the Volt/VAr grid optimization technology
3223 you have. Can you tell me how that would work to improve the
3224 efficiency of the electric grid and improve grid reliability?

3225 Mr. {Kosisko.} We have several technologies that help
3226 actually improve the efficiency of transmission and
3227 distribution of power and grid reliability. One of the most
3228 predominant is our high voltage direct current technology and
3229 the transmission of energy. This allows for much lower
3230 losses in the transmission of high voltage across longer
3231 distances, and helps us to better connect the grid, whether
3232 it is with traditional power sources or whether it is with

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3233 alternative power sources and renewable power sources. So
3234 that is just one example. It typically reduces losses by
3235 about 10 percent, which certainly is a terrific improvement
3236 when you look at the amount of energy that gets transmitted
3237 across those lines.

3238 We also provide software that helps manufacturers and
3239 grid and utilities to better manage the grid, improve its
3240 reliability, improve demand response so at peak seasons or at
3241 peak times during the day, we could better produce energy in
3242 a more effective way with lower cost fuels and better fuels.
3243 Just a few examples. So we have several technologies in that
3244 space.

3245 Mr. {Olson.} Thank you.

3246 My final question is to you, Mr. Crouse. In your oral
3247 testimony, you mentioned the Federal Government picking
3248 winners and losers in the energy sector, largely through the
3249 RFS, renewable fuel standards, as a challenge to combined
3250 heat and power. I am also aware of a company back home
3251 called TAS, which faces similar challenges. They are trying
3252 to do a waste heat to power model of operations. Can you
3253 briefly describe the differences between combined heat to

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3254 power, waste heat to power, and microturbines?

3255 Mr. {Crouse.} Certainly, I will try. Thank you for the
3256 question, Congressman.

3257 You know, waste heat to power is typically taking an
3258 existing thermal energy store--source and using it in a
3259 device to generate additional electricity or make useful, you
3260 know, products or energy out of it. Microturbines and other
3261 CHP generation technologies are very similar in how our
3262 products are applied. We install the generator, and then the
3263 thermal energy is used typically with inside the facility of
3264 the host client to increase the overall efficiency of the
3265 plant. So we are able to use the electrical energy and the
3266 thermal energy to make hot water steam, chilled water. You
3267 know, one of the challenges we faced is the evaluation is far
3268 more complex for CHP than it is for changing light bulbs or
3269 putting in high efficiency motors or VFDs, so the challenge
3270 is customers tend to shy away from more complex transactions
3271 and/or payback scenarios than the simpler ones. That is one
3272 of the uphill battles that we have.

3273 Mr. {Olson.} Thanks. I am out of time. I yield back.

3274 Mr. {Whitfield.} Gentleman's time is expired.

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3275 At this time, I recognize the gentleman from New York,
3276 Mr. Tonko, for 5 minutes.

3277 Mr. {Tonko.} Thank you, Mr. Chair.

3278 First, an observation. You know, I had heard so many
3279 comments here today about--from the panel about what the
3280 market rule, what the private sector--the agents have changed
3281 and that things will happen, and I find it interesting.
3282 There was a great call for policies, for standards, for
3283 regulation, for incentives, for codes, for implementation of
3284 those items above, and calling for investments and R&D
3285 appeal. So I think it is a very telling statement here
3286 today.

3287 I would first go to Ms. MacIntosh, please. You state in
3288 your testimony that the barriers to increase usage of an ESPC
3289 are difficult to quantify. I would ask, what role do energy
3290 prices play in a decision to use an energy savings
3291 performance contract?

3292 Ms. {MacIntosh.} That is a very good question. Energy
3293 prices obviously dictate the breadth with which we can apply
3294 an energy savings performance contract to a facility, because
3295 all of the project implementation costs and care and feeding

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3296 of an ESPC are covered by the energy savings and the energy
3297 cost savings that are generated by those improvements. The
3298 areas where you have high energy rates are obviously going to
3299 have an easier time of doing a performance contract than
3300 areas where energy rates are more competitive.

3301 Mr. {Tonko.} And then how are the changes in energy
3302 prices so the term of a contract addressed? How do those
3303 changes get incorporated into the contract?

3304 Ms. {MacIntosh.} What we do in the course of developing
3305 an energy savings performance contract is a lot of historical
3306 analysis of how energy rates have changed for that particular
3307 customer over time, and then we utilize a lot of sources
3308 through Department of Energy, through NIS, and other areas on
3309 what forward projections are supposed to be, and then we look
3310 to put together a conservative value on what we believe the
3311 energy prices are going to be, a floor, if you will, to
3312 utilize throughout the term of the contract.

3313 Mr. {Tonko.} Back in my New York State days working
3314 with energy policy and implementation, we held a hearing with
3315 data centers. Do you see the application with data centers
3316 being a real thing?

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3317 Ms. {MacIntosh.} We are just starting to see that as a
3318 real possibility in energy savings performance contracting
3319 because of their high energy draw, and there is an awful lot
3320 of technology advancement that is happening in the IT and
3321 data center arena. So it certainly is an opportunity for us
3322 to incorporate ESPC in that market.

3323 Mr. {Tonko.} Thank you.

3324 Mr. Crouse, the barriers to expanded deployment of CHP
3325 may be many, but finding the upfront capital, I have to
3326 believe, is a big thing, the capital investment. Have the
3327 energy savings performance contracts been used much by the
3328 private sector to install CHP?

3329 Mr. {Crouse.} Certainly. We have customers that use
3330 the energy savings model in the private sector as well as in
3331 the government sector to deploy our technology and other CHP
3332 technologies.

3333 Mr. {Tonko.} And where in our industrial applications
3334 do you see some of the best opportunities?

3335 Mr. {Crouse.} You know, I think you need a customer
3336 that is using thermal energy--hot water, steam are the
3337 easiest sort of customers. Food processing, cheese, you

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3338 know, customers in the plastics business are natural targets
3339 for us. So those are on the industrial side some of the low-
3340 hanging fruit, if you will.

3341 Mr. {Tonko.} And Mr. Elliott, I assume some of the
3342 resistance to new product efficiency standards is the cost to
3343 manufacturers of altering their product design and
3344 manufacturing process. What is the experience that you have
3345 with the product vendors, in terms of perhaps incorporating
3346 the message for efficiency of--efficiency standards?

3347 Mr. {Elliott.} There absolutely is a significant
3348 transaction cost for a manufacturer when they do reengineer
3349 their products or reengineer their products to incorporate
3350 energy efficiency. That said, that also gives them the
3351 opportunity to revise their manufacturing processes. For
3352 example, in the electric motor industry when we saw motor
3353 standards come in, we saw a consolidation of motor designs by
3354 the manufacturers and implementation of flexible
3355 manufacturing. So this actually allowed them to produce a
3356 higher quality product that was accepted by the marketplace
3357 as a--on the basis of its performance. So yes, there was
3358 cost occurred--incurred by the manufacturers, but what it did

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3359 was really allow them, in the case of the motors, not only
3360 produce a product that met the customers' needs better, but
3361 also allowed them to compete globally against many of the
3362 low-cost producers who were not being able to produce a
3363 product of similar performance.

3364 Mr. {Tonko.} Thank you.

3365 Ms. Burt, just a comment to your earlier statement.
3366 Consumers don't pay rates, they pay bills, so I appreciated
3367 the statement that was being given.

3368 With that, Mr. Chair, I will yield back.

3369 Mr. {Whitfield.} Gentleman's time is expired.

3370 At this time, I recognize the gentleman from Virginia,
3371 Mr. Griffith, for 5 minutes.

3372 Mr. {Griffith.} Thank you, Mr. Chairman. I will follow
3373 up on some comments that were made earlier, and maybe in the
3374 previous panel for some of it. I would like to say--I am
3375 going to ask you a question in a minute about that
3376 Christiansburg facility, but I do look forward to going up
3377 there and seeing it in action at some point in time, but I am
3378 going to get you to do a little science on it for me, Mr.
3379 Crouse.

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3380 Before that, I would like to say to you, Mr. Kosisko,
3381 thank you so much for having a facility in the Ninth District
3382 of Virginia. It is doing great work there, and our biggest
3383 problem is is that because it abuts a mountain, we have got
3384 to find space to expand, and I hope that it will still be in
3385 the Ninth District of Virginia, but we don't have that many
3386 flat places. But anything I can do to help you all find
3387 facilities for the current facility or anything else you
3388 would like to move to my district, I am more than happy to
3389 do, and I appreciate all the work that you are doing.

3390 Ms. MacIntosh, I would like to get a copy of the
3391 inventory or survey of the buildings on at least the House
3392 side as well. I love the windows, but I agree with Dr.
3393 Burgess, there has got to be something we can do a little
3394 more efficient than the current windows that we have. I will
3395 confess that I like to open those windows from time to time,
3396 particularly when the weather is nice, and I would hate to
3397 lose that, but also, I understand that we have got to have
3398 some energy efficiency.

3399 That being said, going back to a previous panel, I would
3400 comment that I do worry a bit about not having buildings that

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3401 breathe a little bit, because then the indoor air pollution
3402 does go up, as Mr. McKinley pointed out, and so that is
3403 something we do have to put in the overall equation.

3404 Mr. Crouse, coming back to you, I would ask so that you
3405 can explain it to me, because I am not an engineer. I was a
3406 lawyer before I came to Congress. You have got a 65 kilowatt
3407 microturbine installation in the town Christiansburg waste
3408 water treatment plant, and you indicated in answers to
3409 questioned earlier that a lot of those facilities where these
3410 are located, they use it onsite. I am trying to figure out--
3411 and they may not, but does Christiansburg use that energy
3412 onsite, or does it--do they wheel it off somewhere else?

3413 Mr. {Crouse.} Thank you for the question, Congressman.
3414 They certainly use it onsite. Waste water treatment plants
3415 are unique in that they do a lot of water pumping. They also
3416 use the thermal energy to heat the digesters, so especially
3417 in the winter months, you know, to keep the chemical
3418 composition, the temperature correct in the digester, they
3419 use the thermal energy from their CHP system, and then the
3420 electricity is just--reduces the amount of purchase power
3421 that they have from the utility, because typically they do

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3422 not generate enough digester gas to supply all of their
3423 electrical requirements at a waste water treatment plant.

3424 Mr. {Griffith.} All right. Thank you very much.

3425 I should mention that ABB does a lot. When I toured
3426 their facility there in Bland, I did note that they pointed
3427 out a lot of things that they were doing to keep their energy
3428 costs under control and to be very efficient at that
3429 facility. I would also have to note that I went back for, I
3430 don't know, a second or third tour to the large Volvo
3431 facility in my district, and they are doing all kinds of
3432 things. They have got a couple of windmills, they have got
3433 solar panels. They have installed passive solar in a number
3434 of places where there--because they are skilled at doing a
3435 lot of these things, they have actually done a lot of it
3436 themselves. But the one that I found the most interesting
3437 that I think folks maybe want to pay attention to is that
3438 somebody on their team--they have suggestion boxes and give
3439 out rewards. Somebody on their team figured out that because
3440 they have 2,000-plus people who are captive in the factory,
3441 they all know where the drink machines are and where the
3442 snack machines are, and so they took the light bulbs out of

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3443 them and they were really surprised at how much electricity
3444 they saved. So when we are talking about efficiencies,
3445 sometimes simple things work very well in that regard.

3446 Mr. Gayer, I have only got a minute left, but I was
3447 wondering if you could comment on refrigerators since that
3448 came up earlier, because one of the things I have noticed is,
3449 well, I think we all ought to have the most efficient
3450 equipment that we can have. If you have got a refrigerator
3451 that is struggling on, you might stay there if the cost is
3452 high to do something else, and a lot of the innovations I
3453 have seen have been technologically driven as opposed to
3454 energy efficiency, because I can't imagine that water and ice
3455 in the door as opposed to having to reach inside is a whole
3456 lot more efficient. Maybe it is. Can you expand on that and
3457 help me out?

3458 Mr. {Gayer.} Yes, a few things. One is I agree with
3459 Mr. Elliott, the choice has expanded over the last few
3460 decades in all appliances, but I think that is market driven
3461 and certainly not due to mandates, which by their nature,
3462 restrict choice. And you are exactly right, one of the
3463 reasons these don't work that effectively or cost effectively

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3464 to reduce energy is because people sometimes hang on to their
3465 older products longer, especially if it is a big ticket item,
3466 and it is going to cost more money due to a different--a new
3467 regulation.

3468 Mr. {Griffith.} And do you have any data that would
3469 indicate how much the price of a--percentage-wise or
3470 otherwise that--how much the price of a refrigerator has been
3471 impacted by--

3472 Mr. {Gayer.} I don't have it with me. There is a--
3473 primarily in the vehicles, when one deals with vehicles too.
3474 There is always an impact whenever you raise CAFÉ standards,
3475 you have to worry about you get a slower turnover of the
3476 fleet and new vehicles tend to be more fuel efficient. I
3477 don't have the numbers offhand, though.

3478 Mr. {Griffith.} All right, thank you, sir.

3479 Mr. {Whitfield.} Gentleman's time is expired.

3480 At this time, I recognize the gentlelady from
3481 California, Ms. Capps, for 5 minutes.

3482 Mrs. {Capps.} I want to thank the chairman for calling
3483 today's hearing. Thank you to all of our witnesses for a
3484 long day of testimony.

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3485 I think it is a great topic. Increasing energy
3486 efficiency is critical to our Nation's energy future, and as
3487 clear from today's testimony, the private sector is doing a
3488 great job of innovating and bring new energy efficient
3489 technologies to customers. But the federal policy, I
3490 believe, also plays a critical role in this process. Neither
3491 the Federal Government nor the private sector on its own does
3492 as good a job as we want to have done when they all work
3493 together. But working together, these public-private
3494 partnerships can lead to great advancements that create jobs
3495 and can save consumers money, but also spur innovation and
3496 benefit the environment. I see it every day back home in my
3497 district on the central coast of California. I represent two
3498 world-class research universities, Cal-Poly San Luis Obispo
3499 and the University of California at Santa Barbara. Research
3500 conducted at these public universities is frequently spun off
3501 into very successful local companies which I have visited,
3502 like Sora and Trans, or many others. These companies
3503 continue to innovate and develop new technologies, and they
3504 are creating jobs at the same time, spurring economic growth.
3505 So my first question is to you, Mr. Crouse. Your

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3506 company is similarly innovating and staying at the forefront
3507 of your industry. In your testimony, you mentioned federal
3508 R&D funding as an important contributor to your company's
3509 growth. Could you elaborate on that just for a minute,
3510 because I want to do other questions, too, but how has
3511 Capstone benefitted from federal R&D funding?

3512 Mr. {Crouse.} Thank you. I will be as quick as I can.

3513 The--we have several programs currently that we are
3514 working towards efficiency and reliability, so through the
3515 DOE, we have a 250 and a 370 kilo microturbine that we are
3516 developing that will improve the electrical efficiency of our
3517 product and broaden the number of applications it can go into
3518 to get higher overall efficiencies. And then we are working
3519 on other fuel types, syn gas and other things. Some of our
3520 original technology was developed in cooperation with the
3521 public sector as well.

3522 Mrs. {Capps.} So you are a good example for the rest of
3523 us.

3524 My second question goes to you, Ms. Burt. Of course,
3525 these energy efficient technologies not only create jobs and
3526 support small businesses, but they also benefit consumers. I

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3527 want to focus on this intersection between technology and
3528 energy and how it really makes a difference in the lives of
3529 the people, and that is actually the bottom line. Ms. Burt,
3530 we all know how these technologies can reduce energy use in
3531 our homes and businesses, and lower cost for consumers, but I
3532 am curious about the efficiency improvements being made to
3533 our energy infrastructure. For example, could you discuss
3534 what efficiency and technologies PG&E is deploying on the
3535 infrastructure side and how this is going to benefit
3536 consumers in the long run?

3537 Ms. {Burt.} Thank you. That is a very good point. We
3538 are--again, this is the intersection between technology and
3539 energy, and it is very evident in the smart grid that is
3540 being deployed. Within California and our distribution
3541 network, we are deploying a device called a fliker, and that
3542 is not a very catchy name, but it stands for fault location
3543 isolation, and service restoration, and it literally takes
3544 any kind of interruption along the circuits that have the
3545 device from being a typical 1 to 2 hour outage to being less
3546 than 5 minutes. And as we deploy those, we have deployed--
3547 about 135 circuits are completely deployed to date. By the

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3548 end of this year, we will have 400 circuits deployed, and I
3549 am really happy to say that in 2012, we had the highest
3550 reliability we have experienced in the history of our
3551 company. So we are quite pleased with how intelligence and
3552 energy efficiency works within the grid as well.

3553 Mrs. {Capps.} And when that disruption in service
3554 happens, you know, there is a ripple effect on how it impacts
3555 your customers.

3556 Finally, Ms. Burt, I want to touch on a key point that
3557 you made in your testimony about energy efficiency training.
3558 PG&E--and I am thinking about the facilities I have in my
3559 district--your Pacific Energy Center has been training
3560 students in energy efficiency for many years. I am curious
3561 about the demand for this kind of training. Have you seen
3562 enrollment in your training courses increasing in recent
3563 years? If so, why do you think that is? In other words, is
3564 this catching on?

3565 Ms. {Burt.} Thank you, Congresswoman. I do believe
3566 that we have seen enrollment increasing, particular with the
3567 ARA funding and the weatherization and the cities and
3568 counties and the jobs that were created within the State of

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3569 California. Our role in that--we weren't a part of the
3570 funding, but our role in that was to train and properly
3571 train--

3572 Mrs. {Capps.} Right.

3573 Ms. {Burt.} --the workforce. So we have seen a
3574 consistent increasing interest in these sorts of jobs,
3575 because they are very relevant.

3576 Mrs. {Capps.} And I saw this firsthand during the
3577 recession. The weatherization of older homes--what is it,
3578 any structure that is over 10 years old, maybe it is even
3579 less than that?

3580 Ms. {Burt.} Yes.

3581 Mr. {Capps.} Can benefit cost-wise, bottom line-wise,
3582 and then you can put--you can train unemployed people, give
3583 them a job. It is not very sophisticated in many ways,
3584 coming around on just older homes, putting in more efficient
3585 windows, window sills, and the energy--the win-win with more
3586 people working and then more--the lower energy cost for maybe
3587 a couple living on a fixed income. It just--it does really--
3588 over the long haul really impact.

3589 Thank you very much for your time.

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3590 Mr. {Whitfield.} The gentlelady's time is expired. At
3591 this time, I recognize the gentleman from Illinois, Mr.
3592 Kinzinger, for 5 minutes.

3593 Mr. {Kinzinger.} Thank you, Mr. Chairman, and thank you
3594 all for coming. I really appreciate it.

3595 As has been discussed today by our first few panels,
3596 improving energy efficiency in America will play a pivotal
3597 role in increasing U.S. energy productivity and making
3598 America more energy secure. The benefits from implementing
3599 energy saving techniques and technologies are felt by nearly
3600 every part of society through higher productivity, reduced
3601 energy costs, lessened environmental impacts, and a return of
3602 billions of dollars to our economy that was previously going
3603 to waste. As we move forward to promote adoption of energy
3604 saving technologies and improve awareness of their benefits,
3605 promoting the facts outside of the light of partisan politics
3606 will be crucial.

3607 Recently it was my honor to be nominated to serve as an
3608 honorary vice chair to the Alliance to Save Energy, a
3609 bipartisan group of members of Congress, corporate CEOs, and
3610 organizational leaders focused on promoting the benefits of

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3611 energy saving technologies and encouraging their adoption. I
3612 am excited to be working with this diverse group, and believe
3613 it can serve as a model for problem solving across the
3614 partisan divides, which we kind of need nowadays.

3615 At this time, I ask unanimous consent that the Alliance
3616 Commission on National Energy Efficiency Policy Energy 2030
3617 Report be included for the record.

3618 Mr. {Whitfield.} Without objection.

3619 [The information follows:]

3620 ***** COMMITTEE INSERT *****

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|
3621 Mr. {Kinzinger.} The benefits of adopting energy
3622 efficient technologies are undeniable. Congress must work to
3623 educate consumers and businesses to these benefits, allowing
3624 for the private sector to move forward, upgrading our energy
3625 infrastructure.

3626 I want to commend private industry for taking the steps
3627 to ensure energy efficiency. I particularly want to thank
3628 the pay TV industry, which includes cable operators, Bell
3629 companies, satellite providers, and consumer electronics
3630 manufacturers for their agreement announced last year to make
3631 sure that consumers' set top boxes are even more energy
3632 efficient. This is a great precedent for the private sector,
3633 stepping up to the plate and doing the right thing without
3634 government mandates.

3635 Mr. Kosisko, in your testimony you mentioned a 2011
3636 study by the Economist Business Intelligence Unit in which
3637 businesses were asked to identify the main barriers to
3638 investment and industrial energy efficiency. By far, the
3639 most popular response was a lack of clear cut financial case
3640 for the energy efficiency investments. How can government

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3641 work with organizations and companies like yours to get out
3642 the facts and make the clear cut case for companies to make
3643 energy efficient upgrades?

3644 Mr. {Kosisko.} Thank you, Congressman. You know, as I
3645 mentioned before, I think that education, I think that
3646 promotion and creating visibility in the marketplace is going
3647 to be crucial to us moving forward. Certainly, you know,
3648 there is a competition for capital. When you look at private
3649 investment in industrial companies, they are going to make
3650 decisions based on how they can most effectively use the
3651 capital over the next 2 to 3 to 4 years. Some of these
3652 technologies have longer payback periods, so I think it is
3653 important that we provide the level of education so that they
3654 can make targeted decisions in certain technologies that will
3655 have shorter payback periods, produce results for them in a
3656 shorter timeframe, but also, I think that we need to look at
3657 what we can do in a smart way to promote them in using these
3658 technologies that may have longer payback periods, but will
3659 be crucial for us in maintaining our competitiveness from an
3660 industrial perspective in this global economy.

3661 Mr. {Kinzinger.} Well thank you, and I think even

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3662 having these hearings is a good start.

3663 Ms. Burt, in your written testimony you commend the work
3664 and recommendations of the Alliance to Save Energy's
3665 Commission on National Energy Efficiency Policy, which issued
3666 a report, Energy 2030, highlighting several policies
3667 concerning existing technologies for policy makers to include
3668 to consider are those recommendations to increase energy
3669 productivity is for the government to lead by example. You
3670 also mentioned that Pacific Gas and Electric Company is
3671 currently completing a project for NASA Ames Research Center
3672 near Mountain View, California. This project encompasses
3673 more than 100 buildings and covers in excess of 2.5 million
3674 square feet, and allowed NASA to save 9 gigawatt hours of
3675 electricity, 1.3 million therms of natural gas, and more than
3676 15 million gallons of water annually. With results this
3677 substantial, could programs with similar amounts of savings
3678 be duplicated at other federal agencies? If so, what are the
3679 main challenges that we face in doing that?

3680 Ms. {Burt.} Yes, thank you, Congressman. They
3681 absolutely can be duplicated. In fact, we have three
3682 currently underway and 11 that we are hoping to move forward

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3683 with within our service territory. What are the main area of
3684 improvement is really in the contracting. What we have found
3685 is that as we work with NASA Ames, the VA, the IRS in Fresno,
3686 the FAA in another part of our service territory, it is a
3687 complete recontracting process. So if we could find some
3688 sort of simple standardization for these sorts of contracts
3689 for the utility services contracts, I think that would
3690 benefit both sides.

3691 Mr. {Kinzinger.} That sounds great, perfect time, too.
3692 I yield back.

3693 Mr. {Whitfield.} Thank you, Mr. Kinzinger.

3694 At this time, I recognize the gentleman from Illinois
3695 for an additional question.

3696 Mr. {Rush.} Ms. Burt, I do have one quick question. I
3697 am very impressed with what PG&E is doing in California, and
3698 are there similar programs that you are aware of in Illinois
3699 or Chicago, in terms of your training programs?

3700 Ms. {Burt.} Thank you, Congressman. I am just not that
3701 well-versed in Illinois. I am very, very well-versed in
3702 California, but not in Illinois.

3703 Mr. {Whitfield.} Thank you all very much, and before we

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3704 conclude, I am just asking unanimous consent that the
3705 following materials and statements be entered into the record
3706 from Archema Corporation, the American Chemistry Council, the
3707 Alliance for Industrial Efficiency, Heatist Power
3708 Association, and Pugh Charitable Trust.

3709 Without objection, I would enter these into the record.

3710 [The information follows:]

3711 ***** COMMITTEE INSERT *****

This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee's website as soon as it is available.

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3712 Mr. {Whitfield.} Thank you all once again for your time
3713 and traveling to come to Washington. We appreciate your
3714 testimony and we look forward to working with all of you, and
3715 hope the next time we have a hearing on efficiency, which we
3716 will soon, that we will have just as many people stay
3717 throughout the entire hearing.

3718 So thank you all very much, and with that, the hearing
3719 is adjourned and the record will be open for 10 days.

3720 [Whereupon, at 1:36 p.m., the Subcommittee was
3721 adjourned.]