1 NEAL R. GROSS & CO., INC. 2 RPTS MILLER 3 HIF205030 4 5 6 DOE MODERNIZATION: LEGISLATION TO AUTHORIZE 7 A PILOT PROJECT TO COMMERCIALIZE THE 8 STRATEGIC PETROLEUM RESERVE 9 TUESDAY, JULY 24, 2018 10 House of Representatives 11 Subcommittee on Energy 12 Committee on Energy and Commerce 13 Washington, D.C. 14 15 16 17 The subcommittee met, pursuant to call, at 10:15 a.m., 18 in Room 2322 Rayburn House Office Building, Hon. Fred Upton 19 [chairman of the subcommittee] presiding. 20 Members present: Representatives Upton, Olson, Barton, Shimkus, Latta, McKinley, Kinzinger, Johnson, Bucshon, 21 Flores, Hudson, Walberg, Duncan, Walden (ex officio), Rush, 22 23 McNerney, Peters, Green, Doyle, Welch, Tonko, Loebsack, **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

24 Kennedy, and Pallone (ex officio).

25 Staff present: Samantha Bopp, Staff Assistant; Kelly Collins, Legislative Clerk, Energy/Environment; Jerry Couri, 26 Chief Environmental Advisor; Wyatt Ellertson, Professional 27 28 Staff, Energy/Environment; Margaret Tucker Fogarty, Staff Assistant; Jordan Haverly, Policy Coordinator, Environment; 29 Mary Martin, Chief Counsel, Energy/Environment; Sarah 30 Matthews, Press Secretary, Energy & Environment; Drew 31 32 McDowell, Executive Assistant; Brandon Mooney, Deputy Chief 33 Counsel, Energy; Brannon Rains, Staff Assistant; Mark Ratner, 34 Policy Coordinator; Peter Spencer, Professional Staff Member, 35 Energy; Austin Stonebraker, Press Assistant; Madeline Vey, 36 Policy Coordinator, Digital Commerce and Consumer Protection; 37 Hamlin Wade, Special Advisor, External Affairs; Everett Winnick, Director of Information Technology; Andy Zach, 38 39 Senior Professional Staff Member, Environment; Tiffany 40 Guarascio, Minority Deputy Staff Director and Chief Health 41 Advisor; Rick Kessler, Minority Senior Advisor and Staff 42 Director, Energy and Environment; John Marshall, Minority 43 Policy Coordinator; Alexander Ratner, Minority Policy 44 Analyst; Tuley Wright, Minority Energy and Environment Policy Advisor; and C.J. Young, Minority Press Secretary. 45

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46 Mr. Upton. I know there is a couple different subcommittee meetings today, but good morning. 47 48 Good morning. Welcome to the Energy Subcommittee for a 49 legislative hearing on a discussion draft that authorizes DOE 50 to conduct a pilot program to lease spare capacity in the 51 Strategic Petroleum Reserve. 52 I want to thank Vice Chairman Barton and Ranking Member 53 Rush for partnering on this draft as we continue our work to 54 modernize the Department of Energy. 55 The SPRO is the world's largest emergency stockpile of 56 crude in the world. More than 40 years ago, Congress 57 authorized the creation of the SPRO in response to the Arab 58 oil embargo to mitigate the threat of an energy supply 59 disruption. Back then, our domestic production was in the decline, 60 61 energy costs were rising, and we were becoming increasingly 62 reliant on imports. 63 The oil embargo exposed our vulnerabilities and panic 64 quickly spread. Some of us will remember those long lines at 65 the gas pump for sure. 66 So let's go to today. The U.S. is, arguably, more 67 energy secure now than ever before. We are the number one 68 world producer of oil and gas and our imports have declined **NEAL R. GROSS**

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69 by about 70 percent since peaking in 2005. 70 With the surge of domestic production, our private stocks of crude oil are at record levels, our pipelines are 71 72 full, and our refineries are operating at near peak capacity. 73 So I want to thank our witnesses on both panels for appearing before us today to provide their views on this 74 75 legislation. I want to thank Vice Chair Barton and Ranking Member Rush for their work on this important piece of 76 77 legislation. 78 I look forward to working with both of them and all members of the subcommittee as we move this bill, hopefully, 79 80 to the House floor in the coming months. And I now yield to the ranking member of the 81 82 subcommittee, Mr. Rush, for an opening statement. 83 [The prepared statement of Mr. Upton follows:] 84 85

86 Mr. Rush. I want to thank you, Mr. Chairman, for holding this important hearing this morning examining 87 88 legislation to authorize a pilot project to commercialize SPRO. 89 90 As you know, Mr. Chairman, subcommittee staff from the 91 minority and the majority side worked together on this 92 bipartisan bill and I am pleased to co-sponsor this legislation with my good friend and colleague, Mr. Barton of 93 94 Texas. 95 Mr. Chairman, since the inception of the SPRO, this was, 96 as you indicated, established as a result of the oil 97 shortages of the 1970. The energy portfolio of the United 98 States has changed dramatically. 99 In fact, the U.S. is expected to go from a heavy 100 importer of foreign oil to become the global leader in oil exports by as early as next year, according to the IEA. 101 102 As a result of these shifting dynamics, Mr. Chairman, it 103 is important for policy makers including members of this 104 subcommittee to examine important questions including if 105 there is still a need for the SPRO. If so, how large should 106 it be and how should it be continued. 107 It is my hope, Mr. Chairman, that the pilot program 108 outlined in this bill will help inform our decision regarding **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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109 the SPRO -- regarding the feasibility of leasing all or part 110 of the SPRO to the private sector or to foreign governments 111 even -- those that do not pose a national security risk. 112 As we will discuss today, congressionally-mandated sales of SPRO oil has provided an opportunity to potentially lease 113 114 the subsequent unused space to private companies and/or 115 foreign governments as a way to maximize taxpayers' return on 116 investment. 117 Mr. Chairman, I am also pleased that we have with us 118 today representatives from both the Department of Energy and 119 the GAO, among other witnesses, as both agencies have issued 120 reports to help guide our decision making on matters 121 regarding the SPRO. 122 Unfortunately, Mr. Chairman, there appears to be some 123 discretion between the two agencies over the final 124 recommendations that GAO made in its May report entitled 125 "Strategic Petroleum Reserve: DOE Needs to Strengthen Its 126 Approach to Planning the Future of the Emergency Stockpile." 127 First, Mr. Chairman, DOE appears to concur with the 128 GAO's recommendation to supplement its 2016 review by conducting additional analysis regarding the objective and 129 130 purpose of the SPRO, taking into account additional factors such as market projections and private sector response. 131 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701 (202) 234-4433 www.nealrgross.com

132	DOE also agreed with the GAO's recommendation to
133	periodically reexamine the size of the SPRO with analysis
134	looking at the cost and benefits of the SPRO for a variety of
135	different sizes.
136	DOE also appears to concur with the GAO's findings as
137	the agency considers options for the long-term continuation
138	of the SPRO after the impact of congressionally-mandated
139	sales of SPRO oil are taken into account.
140	Mr. Upton. That's not my wife either.
141	[Laughter.]
142	Mr. Rush. Maybe it's my newly my new wife.
143	Mr. Upton. Your new wife. Yes, sir.
144	[Laughter.]
145	Mr. Upton. Better answer it.
146	Mr. Rush. Yes.
147	Mr. Upton. You want to keep being married another 60
148	years.
149	Mr. Rush. All right, Mr. Chairman.
150	Hold on, dear.
151	[Laughter.]
152	Based on the testimony, it appears that some of these
153	recommendations will be included as a part of GAO's small
154	post-sale configuration study expected to be completed in
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155 October of this year.

156 Mr. Chairman, the largest area of disagreement appears 157 to be over GAO's recommendation that DOE -- Department of 158 Energy -- conduct a cost benefit analysis of establishing 159 regional product reserves around the country -- around the 160 country at areas that have been identified as vulnerable to 161 fuel supply disruption. 162 Mr. Chairman, I hope that we can get to the bottom of 163 this and I look forward to the testimony provided by our 164 witnesses today. 165 And finally, I want to tell our witnesses that we 166 appreciate them appearing before us today.

167 Thank you, Mr. Chairman. I yield back.

168 Mr. Upton. The gentleman yields back.

169 The chair will recognize the chairman of the full

170 committee from the good state of Oregon, Mr. Walden, for an

171 opening statement.

172 The Chairman. Thank you, Mr. Chairman.

173 You know, over the course of the past year, the Energy

and Commerce Committee has been hard at work identifying

175 what's necessary to modernize the Department of Energy's

176 national and energy security functions.

177 The urgency of our focus has been driven by domestic and **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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international challenges that will be confronting the nation in the decades ahead. These challenges, which range from maintaining our nuclear security to protecting the reliable supply and delivery of energy, require a Department of Energy that has appropriate organization, management focus, and authorities to succeed in its missions.

184 In recent months, the committee has moved legislation 185 that will establish enduring leadership within the DOE for 186 addressing all energy emergencies, including cybersecurity 187 threats.

188 It has moved legislation that will ensure there is 189 sufficient coordination for secure and reliable delivery of 190 fuels we rely upon for our energy needs, including bulk 191 electric power.

And just over the past few weeks, we moved legislation that will strengthen DOE's support for next-generation nuclear energy.

 We've also moved reforms that streamline DOE's
 cumbersome regulatory approval process for foreign nuclear
 commerce, which has inhibited American businesses from
 competing effectively in global nuclear energy markets.
 So with today's draft legislation that Vice Chairman
 Barton and Ranking Member Rush have put together offers a
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similar forward-looking path -- this one, toward ensuring the nation's Strategic Petroleum Reserve, managed by DOE, will be more capable of responding to oil supply emergencies for decades to come.

205 Congress, under this committee's leadership, established 206 the SPRO in the wake of the 1973-1974 Arab oil embargo. That 207 incident and the gasoline shortages and price spikes of 208 ensuing years really underscored the growing vulnerability of 209 the United States to international oil supply shocks, 210 especially as reliance on imported oil was rapidly

211 increasing.

212 Well, times have changed, of course, and dramatically. 213 The resurgence in American oil and gas production over the 214 past decade has placed the United States into a dominant role 215 when it comes to global oil and gas supplies and has begun to 216 shift how we should view our SPRO assets.

217 While the role of the SPRO may be shifting, it remains 218 important for energy security. It will continue to help us 219 meet our treaty-level obligations to international partners 220 in the event of major supply disruptions.

221 It will also help maintain our international energy 222 diplomacy, inhibiting adversaries from attempting to use oil 223 as an economic weapon, which ultimately benefits our own and **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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224 our allies' energy security.

Yet, we know that SPRO facilities require considerable upgrades to be responsive when called upon, and as Congress has mandated sales of some 290 million barrels, there is risk that without serious reforms much of the reserves' capacity to serve as a strategic stockpile will degrade further as those stocks decline.

231 So against this backdrop arrives the draft legislation, 232 which offers an innovative way to accelerate reforms to the 233 SPRO by leasing underutilized space created as the reserve is 234 drawn down over the next decade.

A successful leasing program would attract investment into improving facilities' operations that would be responsive to commercial needs.

This, in turn, would enable more responsive use of federal oil stocks during those emergencies and by preserving the existing capacity of the reserve's caverns, the pilot program also ensures this asset will remain available for DOE's security missions well into the future.

243 So I appreciate the testimony of those who are 244 testifying today and we will continue to work on this 245 legislation. I don't know if anybody else wants the balance

246 of my time.

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247	But if not, I will yield back.
248	[The prepared statement of Chairman Walden follows:]
249	
250	**************************************

251 Mr. Upton. The gentleman yields back. 2.52 The chair would recognize the ranking member of the full 253 committee, Mr. Pallone, for an opening statement. 254 Mr. Pallone. Thank you, Mr. Chairman. 255 Today, we will be discussing bipartisan draft 256 legislation on the future of the Strategic Petroleum Reserve. 257 In December 2016, then Chairman Upton and I wrote the 258 Government Accountability Office requesting that GAO review 259 the Strategic Petroleum Reserve as it is currently 260 configured. 261 We asked whether there might be more cost-effective 262 options for protecting against supply shocks and for meeting 263 our international obligations. 264 Most other countries have used contracts with private 265 companies to address these matters. So it's fair to ask 266 whether there might be more efficient and effective ways for 267 us to address our energy security needs in this area. 268 There were a number of reasons why I thought this 269 request of GAO was particularly important in 2016. First, 270 former Energy Secretary Moniz had laid out one vision for 271 modernization of the SPR in the Quadrennial Energy Review that the Obama administration released in 2015. 272 273 As part of that vision, Secretary Moniz suggested the

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establishment of more regional refined product reserves, like
the Northeast home heating oil and gasoline supply reserves.
Second, at the end of 2015, Congress lifted the 40-yearold ban on crude oil exports and this was done at a time when
we were seeing a radical alteration of the transportation
fuels landscape.

280 Supply was increasing, demand was decreasing, and we 281 were seeing a rise in electric vehicles.

Third, beginning in 2015, Congress had turned to the SPR repeatedly as an offset for deficits, highways, and other items. In fact, it has been used far more in recent years for those purposes than for energy security.

And recently, the Trump administration has even been sending signals that it's seriously considering releasing oil from the reserve for the express purpose of lowering gas prices, in my opinion to help Republicans heading into the midterm elections.

291 When you get to the point where an administration is 292 publicly discussing using the SPR for blatantly political 293 purposes, then it is certainly a good time to discuss the 294 future of the reserve.

295 And this discussion is also timely now since we are 296 already requiring the sale of so much oil for nonenergy **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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297 reasons, which will free up a great deal of physical space in 298 the reserve.

We need to consider ways to ensure taxpayers continue to receive value for the salt dome storage caverns and associated facilities that comprise the crude reserve if they are not being used to store oil.

The draft legislation that Vice Chairman Barton and Ranking Member Rush are championing is an important first step in realizing that goal. The draft bill would facilitate the leasing of unused storage space in the reserve while attempting to ensure that government and taxpayers benefit from those leases, and that's important no matter what the future has in store.

310 If we elect to keep the SPR in its current form, the 311 Energy Department will need to repair and upgrade facilities 312 to keep them useful and if we elect to create regional 313 reserves either in addition to or in place of the SPR, we 314 will still need to fund those regional reserves, and this 315 bill will help bring in the revenue we need to do that. 316 There are still questions that need to be answered about 317 this proposal. I want to make sure that the taxpayers see 318 meaningful return on the investment that we made in the SPR 319 and I want to ensure that the government isn't left holding **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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320 the bag for environmental liability costs while private 321 industry gets all the benefits of the leasing arrangement. 322 So as long as we can get assurances on these two key points, I think moving forward with this pilot project makes 323 324 a lot of sense. 325 And unless someone else wants the time, I'll yield back, 326 Mr. Chairman. The gentleman yields back. Thank you. 327 Mr. Upton. 328 We are joined, again, by two panels. We will start with 329 Steven Winberg, assistant secretary of fossil energy from the 330 Department of Energy. We welcome you here. 331 We appreciate you submitting your testimony in advance and if you wouldn't mind taking no more than five minutes to 332 333 summarize that, at which point we will go into questions, that would be terrific. 334 335 The time is yours. Thank you.

336 STATEMENT OF STEVEN WINBERG, ASSISTANT SECRETARY OF FOSSIL 337 ENERGY, U.S. DEPARTMENT OF ENERGY 338 339 Thank you, Chairman Upton, Ranking Member Mr. Winberg. 340 Rush, and distinguished members of this committee. It's my 341 pleasure to appear before you to discuss the Department of 342 Energy's Strategic Petroleum Reserve and the related use of 343 underutilized SPRO facilities resulting from congressionally-344 legislated crude oil sales.

The mission of the SPRO, as has been discussed, is to protect the United States' economy from severe petroleum supply interruptions and to carry out U.S. obligations under the international energy program.

As a member of the International Energy Agency, the United States has two primary objectives. First, as a net importer, the United States must maintain crude oil and/or refined product inventories whether held by industry or government equal to at least 90 days of net petroleum imports. As of June 30th of this year, the United States held about twice that amount.

356 Second, the United States must be able to contribute a 357 proportionate share of an IEA collective action response 358 based on its share of IEA oil consumption, which is currently **NEAL R. GROSS**

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359 at 41.4 percent.

The U.S. government relies on use of SPRO to meet this requirement, although commercial stocks may also contribute, albeit voluntarily.

In the event of an international oil supply disruption large enough for the president to authorize the release of the SPRO, U.S. crude oil production alone would not be able to ramp up quickly enough to make up for the lost barrels in a crisis.

368 The SPRO can be ready to deliver crude oil within 13 369 days of a presidential finding while domestic production 370 would take months to substantially expand.

371 Turning to the proposed legislation, it is expected that 372 the SPRO will have approximately 300 million barrels of 373 unused storage capacity by the end of fiscal year 2027 or,

374 roughly, 45 percent of the current design capacity.

375 To that end, DOE is currently conducting the SPRO post-376 sale configuration study that will recommend the

377 configuration of the SPRO post-2027.

378 This study should be completed within the next six 379 months and understanding the best configuration for the SPRO

380 will guide us as we continue to sell barrels over the next

381 several years.

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382 It will also guide us in identifying the SPRO storage 383 caverns or related facilities likely to become underutilized 384 or operationally inefficient, therefore, informing possible 385 decisions concerning site decommissioning.

Further, determining the optimum configuration for the SPRO to meet domestic needs will be critical in developing and executing this proposed pilot program.

389 The department is supportive of maximizing the value of 390 this taxpayer-funded asset and there are a number of issues 391 that need to be considered related to the configuration of 392 the SPRO post-2027.

393 Therefore, we believe it is premature to comment on the 394 operational feasibility of commercially leasing underutilized 395 storage. But I can discuss with you some of the challenges.

396 Further, it is important for both Congress and the 397 department to consider the impact of using government 398 facilities to compete with commercially available petroleum

399 storage capacity.

Finally, we need to review the logistical and
 infrastructure challenges associated with the likely
 commercial requirement for increased inflow and outflow

403 activities.

404 Accommodating this requirement may require large up-NEAL R. GROSS

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405 front capital expenditures to enable commercial leasing.
406 I would also like to take this opportunity to discuss
407 the recently released GAO report titled "Strategic Petroleum
408 Reserve." I would like to focus on the one recommendation
409 the department did not concur with. Specifically, we did not
410 concur with the recommendation to conduct or complete studies
411 on regional refined product reserves.

It's important to understand that while hurricanes and other natural disasters may create severe short-term logistical constraints for gasoline supplies that therefore impact gasoline prices, these constraints and price increases are quickly overcome when a hurricane passes.

This was evidenced by Hurricane Irma in 2017. Even if more gasoline was available in Florida during Hurricane Irma, there would not have been enough trucks or other transportation infrastructure to get the supplies to the

421 retail gasoline stations where they were needed due to, 422 first, increased evacuation traffic and then, later, flooded 423 roads.

So given the cost of above-ground gasoline storage, it would be inappropriate to use taxpayer funds to conduct any additional studies on the use of federally-owned storage of

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427 refined petroleum products.

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428	While there is certainly more information about the SPRO
429	that I could discuss, I will refer the committee to my
430	written testimony submitted to the record.
431	Mr. Chairman and members of the committee, this
432	completes my prepared statement and I am happy to answer any
433	questions.
434	Thank you.
435	[The prepared statement of Mr. Winberg follows:]

436 ********INSERT 3********

437 Mr. Upton. Well, thank you very much for coming up this 438 morning. I have a couple of guestions.

439 My first couple relate to the GAO study that I know that 440 you're familiar with. It was published in May, two months 441 ago.

On Page 27, it talks about the DOE could close at least one SPRO site based on the analysis by CBO of projected excess storage capacity.

For example, if DOE were to close the smallest SPRO site -- Bayou Choctaw -- the agency could also explore selling the connected pipeline and marine terminal, which is currently being leased to a private company.

The DOE could consider leasing excess storage capacity to other countries so that they could store oil at SPRO. DOE has not entered into any such leases with other countries. It has not considered such leases because, according to DOE, the SPRO has historically lacked capacity to store additional oil.

DOE has not proposed any of these options or explored the revenue the agency could generate by selling or leasing these assets. According to DOE officials, the agency would examine the feasibility of such options in the ongoing SPRO

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459 pool sale configuration study.

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Does that sound like a potential that DOE would support? Mr. Winberg. Yes. Yes, we would. The first requirement we have under SPRO is to make sure that we are meeting our domestic requirements as well as our IEA requirements.

And so, based on the math and reducing the SPRO by some 300 million barrels, I think it's quite possible that we may end up deciding we need to -- we can close one of the sites. Which site?

We don't know yet, and that's the purpose of the SPRO post-sale configuration study. Completing that study they then will inform us on which caverns we need to keep open, which facilities we need to keep open, so that we can meet those requirements.

Not all caverns are alike, and so various of our caverns can discharge oil at faster rates. And so we need to do that study so that we clearly understand what our options are and then also, sir, our options with respect to using these

478 facilities in a commercial nature.

479 Mr. Upton. Now, as you know, we have the father of --480 the author of the EPCA bill -- Mr. Barton -- down at the end 481 of the dais here.

482 Officials said that under EPCA -- the Energy Policy and **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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483 Conservation Act -- it gave DOE authority to lease underutilized storage to other countries but not to the 484 485 private sector. 486 DOE doesn't currently have the authority to pursue that, 487 according to the agency officials. What is your -- what is 488 the department's view on opening that up -- on making that change to allow the DOE the authority to sell to the private 489 490 sector as well? Are they supportive of that? Would they --491 Mr. Winberg. Yes. Yes, we are supportive. But if I 492 might, there are some technical challenges with doing that. 493 So let me start off with other IEA member companies that also 494 have a reserve requirement.

That would be generally for long-term storage. We wouldn't expect to be moving that product in and out of the caverns.

In a commercial situation, that may not be the case and the commercial suppliers of oil use the storage and then discharge and then want to inject and discharge.

501 So there is a cycling mechanism, and the challenge with 502 this particular geography or geology is that these were soft 503 caverns and the way we discharge oil out of these caverns is 504 we inject fresh water and that starts to erode the walls of

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505 the cavern in the lower part of the cavern.

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506 And so if you do that numerous times, you may affect the 507 integrity of the salt cavern.

508 So what we would need to do to go to a commercial

509 operation where they -- we are going to inject and discharge 510 on a very regular basis we would have to go with what we call

511 a brine drive system, meaning we would use saturated brine 512 water and we'd have to store that and then inject that down 513 into the caverns so that we weren't dissolving the walls of 514 the cavern, and we have not yet come up with a cost for doing 515 that.

516 But we know that it is not going to be inexpensive and 517 that's part of the post-sale configuration studies to begin 518 to look at those costs.

519 Mr. Upton. Great. Thank you. My time has expired. 520 Mr. Rush.

521 Mr. Rush. Assistant Secretary Winberg, will the DOE's 522 SPRO post-sale configuration study, which will be out in --523 released in October, examine issues that would help to

524 determine a future optimal size of the SPRO?

525 Will that study make recommendations regarding 526 opportunity to release SPRO storage space to the private 527 sector or to other countries that are now a part of the IEA's

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528 collective action? And if not, when can we expect

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information from DOE on those specific topics of interest?
Mr. Winberg. The post-sale configuration study, sir,
will indeed address the optimal size for the SPRO to meet -again, to meet U.S. needs and also our IEA requirements.
It will help inform us on what caverns we might be able
to use for leasing purposes. As I mentioned earlier, if we
are going to lease those caverns to other IEA member

536 countries, it's considerably easier in terms of the mechanics 537 of utilizing that storage.

538 The post-configuration study will not be able to give us 539 complete guidance on what we might be able to do in terms of 540 leasing to the commercial sector. That's going to take some 541 more work beyond the configuration study.

542 And what I would propose we could and should do for the 543 commercial market is to send out a request for information --544 an RFI -- and we'd be looking for two, maybe three, basic 545 bits of information: number one, does the commercial 546 marketplace value this asset; number two, in what manner 547 would they like to use the asset, meaning would they want to 548 inject oil and then extract oil on a very frequent basis because then that will help inform us on what upgrades we 549 550 need to make; and then number three, how does the private 551 sector view the federal government stepping into oil storage **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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552 leasing business, which has been the domain of the private 553 sector for many, many years.

554 And so those are the three pieces of information that we 555 would want to glean from this RFI. With that information, I 556 think that would help inform us on what type of a leasing 557 program we would want to develop, whether we would want to 558 have the entity leasing the facility to make the investment 559 necessary so that they can inject and extract or whether we 560 make that investment, which would take appropriations, and then factor that into the cost of the lease. 561

562 So a lot of moving parts there.

563 Mr. Rush. All right. I am going to move on to another 564 area.

565 Can you briefly discuss the disagreement between GAO and 566 DOE regarding the recommendation that the department conduct 567 a cost-benefit analysis for establishing regional product 568 reserves in areas around the country that may be vulnerable

569 to fuel supply disruptions?

570 Why does DOE disagree with this recommendation and is 571 this disagreement only due to funding issues?

572 Mr. Winberg. It's in part due to the cost but it's in

573 part due to the viability of petroleum -- refined petroleum

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575 So let me start with the logistics, and I talked about 576 this in my testimony a little bit. Having regional or even 577 state gasoline storage reserves above ground doesn't 578 necessarily solve the problem because you need to get that 579 stored gasoline to the retail outlets -- the gasoline 580 stations.

The problem is when you're in an evacuation situation along the coast - Florida, I think, is probably a good example of what happened during the Hurricane Irma -- you couldn't get the gasoline from the storage to the retail outlets because the roads were being used for evacuation.

586Right afterthe hurricane passed through then the roads587were flooded and so having that storage wouldn't have done588Florida much good at all -- perhaps none at all.

And so we'd be incurring quite a cost in order to maintain regional or state gas reserves around the country. We spend about somewhere between \$10 and \$30 million per year on the Northeast gasoline supply reserve.

593 It currently has about a million barrels of gasoline. 594 And so multiply that by whatever number a regional refined 595 petroleum facilities we might contemplate.

596 The costs get pretty expensive pretty quickly and we may 597 not be able to use it because of the logistics of getting it 598 to the retail stations.

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599Mr. Upton.Thank you.The gentleman yields back.600Mr. Barton.

601 Mr. Barton. Thank you, Mr. Chairman and Ranking Member 602 Rush for scheduling this hearing. I'd like to make a few 603 comments and them I have a few questions.

First, I want to thank Congressman Rush for working with me as one of the two lead bipartisan sponsors. Legislation, I think, always is better if it is bipartisan and certainly we, on the majority side, want to make every effort to make this bipartisan.

I was very heartened by the opening comments of Mr. Rush and Mr. Pallone. I think -- I think we have got a chance to help the country if this draft becomes, in fact, a bill and is passed.

613 It doesn't change the basic mission statement. It
614 doesn't change the authorized level of the Strategic
615 Petroleum Reserve. Doesn't change the presidential
616 authority.

What it does do is add to the mission statement. It gives the secretary of energy the authority so long as it doesn't impact the basic existing mission statement the ability to lease and utilize underutilized capacity of the existing SPR to the private sector for storage and, hopefully, utilization of crude oil.

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	30
623	I think that's an important point that we are not
624	we are not trying to change the basic statement that was
625	became law in the 1970s. We are just trying to adopt the SPR
626	to the modern situation.
627	A couple of questions for our friend from DOE what is
628	the authorized capacity currently of the SPR in terms of
629	millions of barrels?
630	Mr. Winberg. The design capacity is 712 million
631	barrels. In 2018 right now we have 660 million barrels and
632	in 2027 we will be down to 405.
633	Mr. Barton. What did Congress authorize the capacity to
634	go up to? I thought we were about 900 million barrels. Is
635	that not true?
636	Well, I can find out. I just thought you might know.
637	Mr. Winberg. I'll get back to you on that.
638	Mr. Barton. Okay. Whatever the authorized capacity is,
639	if I understand you correctly, the existing physical capacity
640	is a little over 700 million barrels. Is that correct?
641	Mr. Winberg. Yes, sir.
642	Mr. Barton. And of that, how much oil is actually
643	stored right now?
644	Mr. Winberg. We have 660 million barrels stored right
645	now.
646	Mr. Barton. Okay. So not we are not quite at 100
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647 percent of existing physical capacity?

Mr. Winberg. 648 That's correct.

649 Mr. Barton. Okav.

650 If this draft legislation becomes law, whatever the 651 authorized capacity is -- and let's assume that it is 900 652 million because 1 think that's right -- under this pilot program would it authorize the secretary of energy if it 653 654 meets all the other requirements under the draft legislation 655 to actually add capacity to the SPR so long as it doesn't go 656 above the authorized level?

In order to add capacity above the 712, it 657 Mr. Winberg. 658 would take some additional capital investment in the facility 659 to get --

660 Mr. Barton. But there is nothing in the law that would prevent going above what's physically available today. 661 Is 662 that not correct

663 I believe that's correct. Mr. Winberg.

664 I have one more question. I think -Mr. Barton. Okay. 665 - I think I'll yield back.

666 One final comment -- we don't claim -- Mr. Rush and I -that this draft is perfect. If we go through the hearing and 667 668 there are things that we need to change, I think I speak for everybody on the majority side that we are very open. 669 670

But I also think I speak for the majority and the

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671 minority that we hope that this is something that can move 672 reasonably expeditiously and that means actually end up in a 673 bill the president signs and this Congress. 674 And with that, Mr. Chairman, thank you for your 675 leadership and Mr. Rush's and Mr. Pallone's, and I yield 676 back. 677 The chair would just say that I am delighted Mr. Upton. 678 that the two of you are working on this. It's something that 679 needs to be done and we look forward to getting this to the 680 president's desk before the year is out, if we can. 681 Mr. Pallone is recognized for an opening statement. 682 Thank you, Mr. Chairman. Mr. Pallone. 683 Mr. Secretary, the idea of establishing regional refined 684 product reserves came out of the first Quadrennial Energy Review and was strongly supported by former Secretary Moniz. 685 686 And now GAO is also saying we need to look at regional 687 reserves, particularly in the Southeast and the West and I, 688 too, think that degional refined product reserves needs to be 689 a part of any SPR modernization effort. 690 Now, you can correct me if I am wrong. But you mentioned, I believe, that the Trump administration seems 691 692 hostile to the concept. In fact, President Trump had 693 proposed doing away with the Northeast gasoline supply 694 reserve, which had been created administratively by President

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695 Obama in response to the dangerous shortages that occurred in 696 the wake of Superstorm Sandy, including in my area of New 697 Jersey.

And, frankly, I think this administration's attempt to 698 699 undue the Northeast reserve is reckless and that's why I 700 introduced legis ation to establish that reserve in statute. But it seems like everybody but the Trump administration 701 702 sees the benefit establish regional reserves and particularly 703 one in the Southeast, where states like Florida, Georgia, 704 South and North Carolina are extremely supply constrained, 705 and those states are really vulnerable in the face of an 706 extreme weather event. Yet, this administration and you, I 707 think, said don't want to take any action on that.

So can I just ask you, Mr. Assistant Secretary, you said that the price of gasoline I think -- you can correct me -- I think you said that the price of gasoline goes back to normal soon after a storm like Sandy or Irma.

712 What is that based on? I mean, that wasn't true in New 713 Jersey after Sandy. Did I misunderstand you? I thought 714 that's what you said, as one of the reasons why it wasn't 715 necessary to have these regional reserves.

716 Mr. Winberg. The -- the first point, I wouldn't 717 characterize the administration's position as hostile against 718 the gas reserves.

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719 What I talked about before -- what I talked about in my 720 testimony is, A, the cost of these gasoline reserves, and I 721 used --

Mr. Pallone. Yes. You said they would cost the government too much and -- I mean, my understanding is I just -- we only have two and a half minutes -- my understanding you said that you were not supportive of it or the administration wasn't because the price of gasoline goes back quickly after a storm like -- you know, like Sandy -- I think you said Irma.

729 And then you also said that the regional reserves would 730 cost the government too much. So that -- I am just asking 731 you what those two things are based upon because I am 732 wondering -- wouldn't the same argument be used against the 733 Why are you saying -- I don't believe it's existing SPR? 734 true that the price goes up quickly right after and I don't 735 believe that this is going to cost the government too much --736 certainly, less than it costs to maintain the SPR.

737 I am just challenging those two statements. That's all.
738 Mr. Winberg. I can address the pricing issue with
739 respect to Hurricane Irma. The prices came back down to
740 relatively normal levels.

741 I can't speak to every gasoline station around Florida.
742 But as the product moved back into the state and retail

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743 stations were opening back up again, there was competition 744 and prices reflected that.

745 I think that the bigger issue is that if we set up 746 reserves and we have these fairly sizeable storage areas and 747 we can't get the gasoline to the retail outlets because of 748 congested roads due to evacuation and then flooded roads, 749 then it is an expense that's not really serving the public 750 good.

751 Mr. Pallone But what I was arguing -- see, look, I 752 understand what you're saying in all these cases. But I just 753 would like to know, you know, what that's based on.

In other words, my experience in Sandy which, admittedly, is only one hurricane, is that the price -- it does take a while before the price goes back to normal and that I don't know why it would cost more to have these regional reserves, you know, significantly more than it does to maintain the SPR.

I mean, I guess you argue maybe that you -- I am not saying we shouldn't have an SPR but I think the costs of the regional ones would actually be less. And it seems like everybody's suggesting that this is a good idea.

There is going to be some cost to the government, but I'd just like to know -- you know, if you get back to me, tell me, you know, what's the evidence that the price goes

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767 back quickly?

768 Why are you saying it's going to cost so much and now 769 you're saying that they can't bring it to the -- to the gas 770 stations. That's not my experience.

50 I just want you to get back to us and -- either now 772 or get back to us and explain what these -- you know, what 773 this is based on because it seems to be contrary to

774 everything I've heard.

775 Mr. Winberg. We will be happy to get back to you with 776 some specific cost numbers an utilization.

777 Mr. Pallone, All right. I'd appreciate it.

778 Thank you, Mr. Chairman.

779 Mr. Upton. Mr. Olson.

780 Mr. Olson. I thank the chair and welcome, Mr. Winberg, 781 and please give your boss, Secretary Rick Perry, my best.

782 It's not very good, but it's my best.

783 Mr. Winberg I will do so.

784 Mr. Olson. He will know where that comes from.

785 The SPR is important back home in Texas-22 in southeast

786 Texas. You mentioned the status of your modernization

787 program. Could you please talk about the most important

788 steps DOE can take in this next year to continue to improve

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789 the readiness of the SPR?

790 Mr. Winberg Yes, sir, I can. Thank you.

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791 One of the steps that I mentioned already is the post-792 sale configuration study and then the second one is we have -793 - we are developing the Life Extension program.

We are in the process of pulling that together and the Life Extension program is going to allow us to continue to meet our needs under IEA, number one.

And then, number two, the Life Extension program will focus on those assets that we are going to continue to need post-2027. That is the primary role of the Life Extension program.

801 Mr. Olson. The second question, sir -- as you know, 802 Texas oil production is booming. The Permian Basin itself is 803 projected in a few years to produce more oil than every 804 country in the world except for Saudi Arabia.

805 One oil plain in Texas takes over all the world except 806 for one country H- Saudi Arabia. A lot of that crude has to 807 go to export -- go to the Gulf Coast ports -- goes to either 808 Corpus Christi, Houston, Port Arthur, Beaumont -- all those 809 ports -- Brownsville -- goes there for refining and export. 810 If we pass this discussion draft before us, do you think the oil industry will view the SPR sites on the Texas Gulf 811 812 Coast as a good holding site for their oil and are their needs looking more shorter term than what the SPR is designed 813

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815	Mr. Winberg. The answer to your first question, we are
816	not yet sure how the commercial market is going to view this
817	government asset the SPRO and our ability to potentially
818	store oil for the commercial sector.
819	That's part of the RFI the request for information
820	that we are going to send out so that we can better
821	understand what the commercial industry needs and wants and
822	whether the SPRO will fulfill that requirement.
823	So when as we get that information I'll be happy to
824	meet with the committee or meet with you individually
825	Mr. Olson. Thank you.
826	Mr. Winberg and give you the results of the study.
827	Mr. Olson. Thank you.
828	My final question as we had these SPR drawdowns over
829	and over and over June of 2011, 30 million barrels of oil;
830	August of 2012, 1 million barrels of oil; November of 2015,
831	58 million barres; December 2015, 66 million barrels;
832	January 2017, 8 million barrels over and over.
833	I am curious to hear how about the state of the SPR is
834	with all these draw downs. Specifically, how much we have
835	a lot of light crude here at home.
836	Are you happy about the balance between light crude and
837	heavy crude in the SPR and the balance between sweet and sour
838	oil? I know there is lots of people concerned especially

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about heavier crude with a supply disruption because of this wave of sweet crude and light crude. Any concerns about the SPR's makeup with those issues, sir?

Mr. Winberg. Well, we are going to -- I don't have any particular concerns about them. But that is part of the post-sale configuration study to evaluate sweet crude versus sour crude and what percentage we should have of both of those, given the changing dynamics in the -- of oil production here in the United States. But I don't have any particular concerns about them right now.

849 Mr. Olson. My time is about to expire. I yield back. 850 Thank you.

851 Mr. Upton. Mr. McNerney.

Mr. McNerney. Well, I thank the chairman for holding the hearing and I thank Mr. Barton for your work on it. I thank the witnesses for your thoughtful answers so far.

Similar to the Northeastern gasoline supply reserve, what do you think about establishing a reserve in the West for hurricane preparedness and other sorts of emergencies that we have out there, as opposed to hurricanes, which we won't have? Earthquakes.

860 Mr. Winberg I think the same issues that we have --861 our concerns about our ability to develop a surface reserve 862 and then get that product in that surface reserve to the

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market where it's needed or --863 864 Mr. McNerney. Well, I mean, you don't have a lot of 865 warning for earthquakes so you don't have an evacuation 866 problem. Mr. Winberg 867 Well --868 You have some roads disrupted but, I Mr. McNernev. mean, I think it s a better case to be made in the West where 869 870 we could have those difference sorts of emergencies. 871 Mr. Winberg. That's true. But if we have an immediate 872 earthquake situation, there is some road damage --873 Mr. McNerney. Right. 874 Mr. Winberg. -- that means that the gasoline can still 875 move in through the normal infrastructure and transportation mechanisms that it would. There may be some that would be 876 877 cut off, depending on where the earthquake --878 Mr. McNerney. Right. 879 -- happened and the effect of it and how Mr. Winberg. 880 many roads or rails might be damaged. But, generally, there 881 are multiple routes into an urban area or a suburban area 882 where there is --Mr. McNerney. So we have a pretty good case to be made 883 884 for establishing those reserves -- the product reserves in 885 the West? 886 Mr. Winberg. I am sorry. Say that again. NEAL R. GROSS

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Mr. McNerney. 887 We have a pretty good case to be made 888 then for establishing those reserves in the West? 889 Well, I think if you had limited damage to Mr. Winberg. road or railroad infrastructure then you'd have to look at 890 891 the cost of establishing that reserve and maintaining it and whether it would provide a lot of value in the case of -- in 892 this example of an earthquake situation. 893

894 Mr. McNerney. Okay. Changing the subject a little bit, 895 what about the challenges with respect to the infrastructure 896 of the existing \$PRO facilities?

My understanding is that the extraction network infrastructure was aging and not in very good shape. We have the degradation of the caverns when you recycle -- when you put in that water to push out the oil and so on.

901 Can you talk a little bit more about that existing 902 infrastructure?

903 Mr. Winberg. Sure, and I think there is two parts to 904 the infrastructure. One is the subsurface and then the other 905 is the surface.

And on our Life Extension program, that we are involved in right now, mostly that is surface infrastructure. So we are talking about pipes, pumps, and motors and that type of infrastructure.

And so we have got a program in place to upgrade that

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911 because, as was mentioned earlier, the SPRO has celebrated 912 it's 40-year anniversary last year.

913 The subsurface infrastructure, while we have had a 914 number of withdrawals, the caverns are generally good for 915 about five withdrawals and then refills before you start to 916 see a lot of degradation.

917 And so part of the assessment that we are looking at in 918 the configuration study is the stability of the caverns, how 919 much erosion -- well, it's not erosion. It's really --920 Mr. McNerney. Well, I mean, five cycles doesn't sound

921 like a lot if we are going to be leasing out space.

922 Mr. Winberg. Well, those are the cycles given -- that's 923 how the -- what the caverns were designed for. If we leased 924 it out under commercial operation, we might see considerably 925 more than that because people store oil and they use it as a 926 hedge.

927 The price goes up, they are going to want to withdraw, 928 and then they are going to want to reinfect. So it could 929 happen many, many times, not -- which is our concern about 930 the integrity of the caverns.

931 Mr. McNerney. What happens to the water when you inject 932 water to pressurize release? What happens to that excess 933 water? Does it just get absorbed into the landscape? 934 Mr. Winberg. The water stays down into the -- in the

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935	cavern and if we re	fill it then we would extract the water.
936	Mr. McNerney.	So it's
937	Mr. Winberg.	Then we have to we have to treat the
938	water.	
939	Mr. McNerney.	Is it better to be at 100 percent
940	capacity or is it b	etter to be 90 percent capacity or some
941	lower value?	
942	Mr. Winberg.	Operationally, it's probably always better
943	to be somewhere in	the 90 to 100 percent. But there is a
944	cost associated wit	h being at that capacity level. You're
945	storing oil in a lo	ot of facilities.
946	Mr. McNerney.	All right. I thank the chairman. I
947	yield back.	
948	Mr. Upton. Th	e gentleman yields back.
949	And before we	move to Mr. Shimkus, Mr. Barton will have
950	a brief announcemen	t here.
951	Mr. Barton. I	have a point of personal privilege. In
952	the back of the roc	om, my grandchildren two of my
953	granddaughters and	my two daughters and their significant
954	others are watching	the hearing and, in typical millennial
955	fashion, they are s	itting on the minority side of the room.
956	[Laughter.]	
957	If they would	stand up and let us acknowledge their
958	presence.	

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959	[Applause.]	
960	Mr. Upton. M	Maybe we will let Mrs. Rush give them a call
961	as well.	
962	[Laughter.]	
963	Mr. Shimkus.	
964	Mr. Shimkus.	Thank you, Mr. Chairman.
965	Mr. McNerney'	's just leaving but I wanted to follow up on
966	some of his commer	nts because they had raised maintenance as
967	an issue and this	was going to be my third question. But I
968	am going to bring	it up just in the timely manner that he
969	addressed it.	
970	The GAO repor	rted that the SPRO had experienced at least
971	five major equipme	ent failures since 2013 including a major
972	pipeline failure t	that shut down the Big Hill site for five
973	years.	
974	Could leasing	g underlie SPRO capacity help offset the
975	cost of operations	s and maintenance?
976	Mr. Winberg.	Yes, and under two different scenarios.
977	One, we might make	e the upgrades and then roll that in to the
978	price of the lease	e or but that would require
979	appropriations.	
980	Another optic	on, of course, is to have the entity leasing
981	the space to make	those upgrades.
982	Mr. Shimkus.	Yes. Based on my experience with the
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983 appropriation committees, I wouldn't encourage the first 984 course of action. I would think that maybe in the leasing 985 agreement of upgrades that would be a more straightforward 986 process. But that's me.

987 We also -- it was also talked about a little bit earlier 988 in the question and answers about spare caverns and I think 989 you -- being able to, in essence, lease those out and there 990 was some interest to that.

991 Did I understand that question and answer process?
992 Another member mentioned about excess space in other caverns
993 and the ability to, you know, lease that out to private
994 entities.

995 Mr. Winberg. Yes. Congressman, we have not yet tested 996 the market, if you will, on commercial interest in leasing 997 the space. That would be the subject of the request for 998 information that we will be sending out.

999 Mr. Shimkus. Let me -- let me also talk about there has 1000 been some debate about the refined product reserves that are 1001 established and think there is a cost to doing this, right? 1002 A financial cost of setting these things up.

1003 Mr. Winberg. Yes.

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1004 Mr. Shimkus. Do you know what it is for the East coast

1005 refined product?

1006 Mr. Winberg

Yes. It's -- we spend between \$10 and \$30

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1007 million a year for, roughly, a million barrels of gasoline. 1008 Mr. Shimkus. That's per year?

1009 Mr. Winberg Yes, sir.

1010 Mr. Shimkus. So I think it's credible for us to have 1011 the debate of a cost benefit analysis. If we are spending 1012 that much millions -- \$25 million a year for 1 million of 1013 refined product versus the timeliness of transportation and 1014 the access, I think that's where the debate is. Everybody 1015 would like to have a refined reserve available next door for 1016 disruption.

1017 In the Midwest, we have tornadoes and things go down and But the question is, is \$25 million for 1 1018 power goes off. 1019 million -- I don t think that makes financial sense. 1020 So let me $q\phi$ to -- I wanted to raise that. The last 1021 thing I want to address is U.S. will become a net energy 1022 exporter by 2022. That's the expectation. Do you agree with 1023 that?

1024 Mr. Winberg, Yes, sir. I do.

1025 Mr. Shimkus. Do you think there is a need for a 1026 strategic petroleum reserve. I mean, I was a big supporter 1027 of this years ago when we were worried about the -- our 1028 enemies around the world shutting off the sea lanes because 1029 we were importing our crude oil.

1030 But if we are a net exporter does that even lend to the

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question of whether we need a SPRO? 1031 1032 Mr. Winberg. I think it's difficult to forecast what 1033 kind of geopolitical challenges we might have --1034 Mr. Shimkus. Well, if we listen to Olson, Texas is 1035 going to supply the whole world. So I --1036 But there is also the hurricanes and other Mr. Winberg. 1037 ___ 1038 Mr. Shimkus. And I would think that more speaks to 1039 pipelines and diversification of a refinery basis and I think 1040 that's occurring as we speak right now, too, with, you know, 1041 North Dakota and some other places where we are having that 1042 occurring. 1043 So those are just questions I pose. It's great to have 1044 you here. We live in, you know, some exciting times. 1045 Whoever thought that we'd be exporting crude oil and 1046 exporting liquefied natural gas, and we all know the benefits 1047 for that just for our balance and our income or the trade 1048 balance but also for our allies who, in some places around 1049 the world, are being held hostage by foreign powers who 1050 really don't like us that much. 1051 So I appreciate it. Send my regards to the department 1052 and with that, Mr. Chairman, I yield back. 1053 Mr. Upton. Mr. Green. 1054 Mr. Green. Thank you, Mr. Chairman. Thank you for

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1055 being here.

1056	You have a couple Texans on the committee, both
1057	Republican and one Democrat. But I have a district in east
1058	Harris County and so the salt domes that are created are
1059	there in Chambers County all the way through southeast Texas.
1060	This Congress and previous Congresses have chosen to
1061	sell oil from the SPRO since 2015. The cumulative sale of
1062	these barrels 250 billion barrels could occur about
1063	2027. Is that correct?
1064	Mr. Winberg. Yes, sir.
1065	Mr. Green. Okay. And leave us with the expected
1066	inventory of 410 million barrels?
1067	Mr. Winberg. 405.
1068	Mr. Green. 405. Okay. I know we talked about it one
1069	time. Over the years the SPRO had as much as 500 I mean,
1070	725 million barrels. Is that correct?
1071	Mr. Winberg. Yes. Well, I think the capacity is 712
1072	million barrels.
1073	Mr. Green. Okay. The although the authorization or
1074	the intent was to have a billion barrels?
1075	Mr. Winberg. Yes, I believe that's correct.
1076	Mr. Green. Back when it was created. You know, with
1077	what's happening today in the energy market I can't imagine
1078	us are we buying crude oil into the SPRO now?

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1079	Mr. Winberg. No, we are not.
1080	Mr. Green. Okay. And because as a Texan, you want to
1081	buy it at 30 and sell it for 70 and so I would hope we would
1082	not be buying \$70 a barrel oil.
1083	One of the concerns I have is that during the Hurricane
1084	Harvey that was last year, Hurricane Ike that was 2008, even
1085	Katrina, because part of the SPRO goes into southwest
1086	Louisiana, has the storage facilities been damaged because of
1087	these hurricanes?
1088	Mr. Winberg. I think there was some surface damage but
1089	that damage has been repaired and the SPRO is fully capable
1090	of meeting its withdrawal requirements.
1091	Mr. Green. Okay.
1092	When the this crude oil is selling from SPRO on the
1093	open market, do you have any idea who's buying it? Is it
1094	you know, because I have five refineries in east Harris
1095	County that typically uses the heavier crude still, although
1096	they are retooling now because of the lighter sweet coming.
1097	Is it typically local refineries that are buying that or
1098	are they other countries or anything else that you know of
1099	anyone who sells oil from the SPRO?
1100	Mr. Winberg. We do know who's buying the crude and I
1101	don't have the specifics here with me but I am happy to get
1102	that information to your office with respect to whether it

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1103 was domestic or international purchases.

1104 Mr. Green. You know, at one time, I think people would 1105 be concerned about someone from another country that's not an 1106 ally buying our crude oil.

But since we are exporting crude oil now from everywhere I can imagine on the Gulf Coast in Texas and Louisiana, that's probably not a big issue.

1110 Is the -- does U.S. or the DOE SPRO post-sale 1111 configuration study -- has it been completed?

1112 Mr. Winberg No, sir. It's underway right now. We 1113 expect we will complete it this autumn.

1114 Mr. Green. Okay. The SPRO is a lot of different sites 1115 in the salt dome because some of that salt dome underneath 1116 southeast Texas and Louisiana may have to be qualified or, 1117 you know, for -- how would we expand to get -- if we wanted 1118 to get to a billion barrels, how could we do that? Is it 1119 engineeringly possible?

1120 Mr. Winberg. Yes, we could develop more storage Yes. 1121 capacity. If we ended up selling into the commercial market 1122 and we needed to develop the brine drive system so that we 1123 could plug the caverns and then reinject oil, we would need 1124 some additional daverns for the brine storage system. 1125 Mr. Green. We are currently required to maintain a 90day supply of crude oil and, currently, we have a supply of 1126

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	51
1127	about 170 days. Is that correct?
1128	Mr. Winberg. Yes, sir. I think that's correct.
1129	Mr. Green. In DOE's opinion, are the current level of
1130	reserves adequate for future potential disruptions?
1131	Mr. Winberg. Yes, sir.
1132	Mr. Green. Okay. And, again, the market has changed so
1133	much because, literally, just down the road we are seeing a
1134	lot of crude oil produced. Although, again, it's typically
1135	lighter sweet than compared to the heavier crude.
1136	Mr. Chairman, I appreciate you having this hearing on
1137	the oversight. This is kind of in the neighborhood for those
1138	of us in southeast Texas. So we have a big interest in it.
1139	Thank you for being here.
1140	Mr. Winberg. Thank you.
1141	Mr. Upton. Mr. McKinley.
1142	Mr. McKinley. Thank you, Mr. Chairman, and thank you
1143	for the sponsors of this legislation to consider that.
1144	Mr. Winberg, you've some of your testimony has just
1145	raised more questions for me as a result. The one was your
1146	testimony you talked about the annual cost for this the
1147	gasoline reserve we have in the Northeast at about \$25 to \$30
1148	million a year.
1149	But I remember a few years ago we were having that
1150	discussion about this because it was done not by legislation

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1151 but by -- through the administration, that as one of the 1152 discussions we have to replenish that -- that you can't --1153 gasoline does not have a shelf life very long.

So do you -- is it physically empty and restored? How do you -- how is the mixture so that we know the age of that gasoline there?

1157 Mr. Winberg. We do roll the gasoline, Congressman. I 1158 don't know specifically how many turns we do. But I can find 1159 out for you.

1160 Mr. McKinley. I am just curious because if crude is 1161 selling for \$70 a barrel but you're selling refined product 1162 at only \$30 a barrel, something's wrong with the math here. 1163 You must not be emptying it entirely and using it.

1164 So we can have more of a conversation. I am just 1165 curious to see how that's functioning there. Also, you 1166 talked about the five -- perhaps you can cycle about five 1167 uses or draw down about five times out of the salt dome.

But if we go to this process -- this is what I am having a little concern with -- by leasing it out to other entities and then you indicated that perhaps they might want to draw down more often than five.

Do you see a possibility that you will have them posting bonds or some kind of verifications that they pay for the repairs to the salt dome if that -- other security so that

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1175 someone with an outside interest could cause us to lose the 1176 integrity of our salt storage?

1177 Mr. Winberg We believe we have a technical solution 1178 for the problem and that technical solution would be what we 1179 are calling the brine drive system.

1180 So rather than injecting fresh water into the salt 1181 cavern to lift the oil, we would inject a saturated brine 1182 solution.

1183 Mr. McKinley. I heard you -- I'd like to know a little 1184 bit more about that. I heard you talk about some additional 1185 brine that you had put back into that. That was interesting. 1186 How do you verify -- because we got the problem with the 1187 ethane storage hub up in the Appalachian area -- how do you 1188 verify the thickness of the walls of the salt dome in an 1189 existing while it's in operation?

How are you doing that so that you could make a determination maybe five years it could reach its life? How do you verify that?

1193 Mr. Winberg That's a great --

1194Mr. McKinley.The extent of their degradation.1195Mr. Winberg.That's a great question and, Congressman,1196I don't know the answer.But I will get back to you and let1197you know specifically what testing mechanisms we use to

1198 determine --

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1199 Mr. McKinley. Just one engineer to another engineer. I 1200 am just curious how you're going to do that.

And the last is more about security. I've never really actually seen a map that showed where our salt domes are located until today. I didn't want to know where they were. But if I know now, hostile actors can know where those salt domes are, and if they are that important to our national security why would we ever put it on a map where those things are?

Mr. Winberg. Well, these are pretty large facilities and so people know where they are. They are very secure --Mr. McKinley. My point, again -- how secure are they? If someone got -- we had that -- we lost -- at the Greenbriar we used to have a bunker there for congressmen to go hide until someone revealed where it was and then that -- we had to do away with that.

1215 Now we are revealing all -- where all these are -- our 1216 strategic reserve is -- 600 million barrels of gas or crude 1217 oil. The bad actors know exactly where that is. So if we 1218 had to abandon the Greenbriar what are we doing here?

1219 Mr. Winberg, Well --

1220 Mr. McKinley. How secure is it?

1221 Mr. Winberg. Yes. We have an ongoing security program 1222 and so we are updating it, both physical security as well as

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1223 cybersecurity. You know, we are opening up a new office in 1224 DOE, the CESER, which is going to address the cyber issues. 1225 The physical security issues that --

Mr. McKinley. It's not the cyber. I am talking about something a bad actor -- I don't -- I don't know that we have an Iron Dome outside these things. So I am just curious how we are going to protect them.

1230 Mr. Winberg. Well, they are fenced in. We have guards, 1231 guns, and gates.

1232 Mr. McKinley. I yield back. Thank you.

1233 Mr. Olson. [Presiding.] The gentleman yields back. 1234 The chair notes for the record that the Greenbriar is 1235 doing just fine because this week the Houston Texans started

1236 their practice $f\phi r$ the football season at the Greenbriar.

1237 The chair now calls upon Dr. Bucshon for five minutes.

1238 Mr. Bucshon Thank you, Mr. Chairman.

Mr. Winberg, we spend more than \$200 million per year on SPRO management and operations, yet most of the equipment is beyond its serviceable life and there is a growing backlog of deferred maintenance.

For example, GAO reported that this -- that the SPRO has experienced at least five major equipment failures since 2013, including a major pipeline failure that shut down the Big Hill site for five weeks.

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1247 You're talking about changing to a brine-related way to 1248 extract oil. I mean, it seems like we need to catch up on 1249 this maintenance first.

1250 What's been the reason why we are -- there is a backlog 1251 of deferred maintenance and all the equipment is beyond its 1252 serviceable life and is there -- what can we do about it? 1253 Mr. Winberg. I think the backlog is because we didn't 1254 have appropriations sufficient to keep the facility in 1255 optimal operating condition. We now have our --1256 Okay. I am just going to interrupt you Mr. Bucshon 1257 there for a second because that's the -- that's the -- I 1258 think that's the answer we get from every federal agency no 1259 matter anytime we ask this question. 1260 But the appropriations -- what specifically -- were there requested appropriations that didn't get appropriated? 1261 1262 Were there no appropriations or, I mean, there is more --1263 there is more to it than that, I would imagine. 1264 Would the gentleman yield? Mr. Barton. Mr. Bucshon. 1265 I will yield.

Mr. Barton. I don't want to speak for the Department of Energy, but the draft legislation allows, without going through the appropriation process, funds generated by using this facility for private purposes to be used for maintenance of the facility. So we have tried to solve that problem in

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1271 the legislation before us.

1272 Mr. Bucshon Thank you, Mr. Barton, because that -- I 1273 am getting to -- that's going to be my next -- one of my next 1274 questions.

1275 So it sounds like we have -- probably had an 1276 appropriations issue over the years. I get that, and it 1277 seems like we need to address that.

So the question, and is a follow-up to what Mr. Barton just said, could leasing underutilized space, capacity, help offset the cost of operations and maintenance?

1281 Mr. Winberg Yes, I think it could. Again, we need to 1282 test the -- we need to query the market and find out what 1283 value they place on this storage and what they are willing to 1284 pay for it.

Mr. Bucshon. Yes. So potentially this draft legislation could help us solve what appears to be a long -probably a long-standing issue with our maintenance and serviceable life of our equipment being at the end of its serviceable life if we find more money and put that into operation and maintenance.

Also, most of the time it sits idle, could some of the spare caverns -- and I think you went over this and the answer is yes -- be commercialized in such a way to improve its overall operational readiness?

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1295 Mr. Winberg Absolutely. Yes, sir.

1296 Mr. Bucshon And you described some of that -- I was 1297 interested in the fact that on a commercial basis you'd have 1298 to have more going in and out all the time, right? Couldn't 1299 you -- could you isolate that to the commercial space versus 1300 the noncommercial space?

So you're not talking about the entire -- the entire reserve being accessed all the time. Were you talking about a way to cordon off, so to speak, what we would -- what we could utilize and in that way the caverns wouldn't -- of the whole reserve wouldn't be at risk.

1306 Mr. Winberg. That's correct. We would -- we would 1307 utilize the brine drive system in those caverns where we were 1308 discharging and refilling on a frequent basis for commercial 1309 purposes.

Also, I spoke earlier about leasing this -- some of the space to other countries that are members of the IEA activity and in that case then those countries would not be withdrawing and injecting on a routine basis, and by having that capacity our overall costs likely would go down because we would have more oil stored so you'd spread the cost out over --

1317 Mr. Bucshon Right. So we would do that on a build-out 1318 basis or they would pay for it or we'd build out what they

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1319 need or they'd pay for that?

1320	Mr. Winberg. Well, I think we would utilize the excess
1321	capacity we have and if there was a big enough market I think
1322	we could look at building out additional. But we are going
1323	to have 300 million barrels of capacity when we finish the
1324	draw down in 2027.
1325	Mr. Bucshon. Understood.
1326	Thank you, Mr. Chairman. I yield back.
1327	Mr. Olson. Thank you.
1328	Mr. Duncan, five minutes for questions, sir.
1329	Mr. Duncan. Thank you, Mr. Chairman.
1330	You know, there is no doubt that demand for oil is much
1331	greater now than when the SPR was originally developed, and I
1332	wonder is the SPR big enough to have an impact in the case of
1333	a real crisis in the 21st century. Is it big enough?
1334	Mr. Winberg. I think it probably is big enough.
1335	Mr. Duncan. Is it storing enough?
1336	Mr. Winberg. I think it is storing enough right now.
1337	As we move into 2027, we are going to be very close to
1338	meeting our IEA requirements. In fact, we
1339	Mr. Duncan. Have you all looked at the demand as it
1340	as it applies in the 21st century here and 2018, right, or
1341	Mr. Winberg. Yes, we have. But a balancing factor for
1342	that, of course, is that we have much more domestic

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1343 production and that domestic production, while it takes 1344 several months to come online, it's much quicker than it was 1345 before the unconventional oil plays became commercial in the 1346 United States. 1347 So we are down to four or five or six months to get 1348 wells online as opposed to --1349 Mr. Duncan. Well, let me -- just let me ask you this. 1350 In your opinion, has SPR been used effectively over the past 1351 four decades to respond to oil price volatility? 1352 I believe it has, yes. Mr. Winberg. 1353 Has been used effectively? Okay. Mr. Duncan. 1354 Has it been appropriately used as a tool to balance 1355 supply and demand? 1356 I don't think it's -- that's not its Mr. Winberg. 1357 purpose to balance 1358 Mr. Duncan. I remember the oil shortage in the 1970s 1359 and since then we really haven't had a true oil shortage. We 1360 have had price volatility, right? 1361 So given the change in landscape, the fact that the 1362 United States is now a net exporter, do you see the SPR being 1363 able to balance the supply and demand or even necessary to balance the supply and demand when we have an abundant 1364 1365 supply? 1366 Mr. Winberg. Well, the purpose of the SPRO was never to

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balance supply and demand but, rather, its purpose was to be there in the event that there was a -- more of a crisis situation rather than short-term supply and demand imbalances.

And so that was its purpose. That still is its purpose, and I think where we are right now, even with the draw downs, given the fact that we have much more domestic production and that production can come on much quicker, I think that we have sufficient reserves and sufficient capacity with the SPRO.

However, getting to an earlier question, we do need to upgrade it and maintain mostly the surface facilities but also subsurface facilities to make sure that we can meet the --

Mr. Duncan. Let me ask your opinion about -- Congress has sold off some of the SPR in order to cover deficits and when we have had some of these crisis since I've been in Congress -- eight years -- it also seems like we always sell it for a lot less than we paid for it, and that's kind of opposite of buy low sell high, right?

1387 That's the first thing. Who manages what price point we 1388 purchase or replenish? If you've got a high-value asset that 1389 you paid less for, do you all play the market in that regard 1390 and sell it at a higher price and buy it again at a lower

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1391 price to help the American taxpayer?

1392 Mr. Winberg. When we have a release we do it under an 1393 auction mechanism. So we get the highest price that the 1394 market's willing to pay.

1395 Under some teleases, we -- where we have a test sale, 1396 for example, then whoever buys that oil has to replenish that 1397 oil plus an additional amount of oil.

1398 So in that manner, we are paying for the cost of 1399 extracting oil from the facility. But the SPRO and the 1400 operation of the SPRO does not play the market, per se. We do it through an auction mechanism. 1401

1402 Mr. Duncan. Mr. Chairman, 30 seconds I've got left. 1403 Since I've been in Congress, we have used the SPR as an 1404 opportunity to offset spending with cut-go or whatever, and 1405 This is a strategic petroleum reserve to help that's wrong. 1406 us in the time of a crisis and oil shortage or restriction of 1407 the flow of oil $\frac{1}{2}$ OPEC like we saw in the late 1970s.

1408 And I am always going to argue that this Congress and 1409 this government should not use this as a pay for. It should 1410 be used as it's designed.

1411 But we also bught to manage it -- if you've got a bulk 1412 asset that you've got a high basis on sell it -- buy it low 1413 and help the American taxpayer.

1414 With that, I yield back.

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1415 Mr. Olson. Thank you.

1416 Mr. Tonko, are you ready, sir? Are you ready? Five 1417 minutes for questions.

1418 Mr. Tonko. Thank you, Mr. Chair.

1419 Mr. Winberg, can you provide us with an update of DOE's 1420 current modernization plan and how great is the need to 1421 invest in the infrastructure in order to keep it operating 1422 effectively?

1423 Mr. Winberg Yes. We -- to answer the second part of 1424 your question, I think the need is pretty great. This 1425 facility, as we have talked about, is over 40 years old.

1426 The last major upgrade was about 25 years ago. So we 1427 have piping, pumps, and valves that need to be replaced on 1428 the surface.

So the need is pretty great. We have got a Life Extension program and we are developing that program so that, A, we can best handle the legislatively mandated sales, and then, B, the Life Extension program is being designed so that we can upgrade our systems to allow the SPRO to operate post-2027 for an additional 25 years.

Having said that, the Life Extension program on the way it's been designed has enough flexibility so that if we decide we are going to lease space to other countries or commercial leases, we have got enough flexibility in the

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1439 program so that we can adjust it so that we are not using 1440 taxpayer dollars to upgrade systems that perhaps someone 1441 leasing would pay for.

1442 Mr. Tonko. Thank you.

1443And do you believe there is private sector demand for1444SPRO capacity?

Mr. Winberg. That's a great guestion, and we don't know 1445 the answer to that yet. 1446 What we are planning to do is send 1447 out a request for information on RFI out into the marketplace 1448 and what we want to find out is, A, is there a need for 1449 government-owned storage in the commercial market; B, how would they utilize that storage space if we leased it to 1450 1451 them; and then, (are), are there concerns or issues with the 1452 government leasing space in a market that has mostly been 1453 done by commercial entities.

1454 Mr. Tonko. So and how would it compare to existing 1455 storage options +- for example, a tank storage or --1456 We don't yet know the answer to Mr. Winberg. Right. 1457 that question either. That will be informed by the RFI. 1458 Once we know how private industry might want to utilize this 1459 storage, then we can put a cost, because there will be some 1460 capital needed in order to facilitate commercial activities. 1461 Mr. Tonko. And do you believe there is an opportunity to use the revenues raised by commercial leases to invest in 1462

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	65
1463	modernization to benefit the public's use of SPRO?
1464	Mr. Winberg. I think there might be. But, again, we
1465	will we are a little bit early in the process to know that
1466	right now.
1467	But that's, certainly, the hope, and I think if there
1468	wasn't value to the taxpayer I would I'd question whether
1469	or not we want to enter into this type of arrangement.
1470	Mr. Tonko. Okay. And SPRO is able to draw down and
1471	deliver crude oil within 13 days?
1472	Mr. Winberg. Yes, sir.
1473	Mr. Tonko. Are you confident that space can be leased
1474	without slowing down the federal government's ability to
1475	utilize SPRO?
1476	Mr. Winberg. That would be one of the key issues or key
1477	elements of any leasing program that we entered into with
1478	commercial clients but also with other countries, if we chose
1479	to go that route.
1480	The American taxpayers bought and paid for this thing.
1481	They have maintained it for the last 40 years. So our
1482	responsibility is to the U.S. taxpayers to make sure that, A,
1483	we are meeting our domestic oil requirements and, B, that we
1484	are meeting our international requirements as well.
1485	Mr. Tonko. And I appreciate that.
1486	In the Northeast, we are particularly vulnerable to

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1487 supply disruptions, which can be caused by natural disasters 1488 such as a hurricane like Superstorm Sandy. 1489 The Northeast gasoline supply reserve was created to mitigate those risks and, thankfully, it hasn't been needed 1490 1491 vet. But that doesn't mean it won't be needed in the future. 1492 So I would really caution the administration against 1493 trying to dissol ψ e this reserve. I think, again, for our 1494 region of the country it's of great concern. 1495 And with that, I thank the chair and yield back. 1496 Mr. Olson. Thank you. 1497 And seeing no more further witnesses, members seeking to ask questions, I d like to thank you, Mr. Winberg, for coming 1498 1499 today. 1500 All members should know they have five days to submit 1501 questions for the -10 days - another panel. Okay. I'll 1502 back off. 1503 Thank you, Mr. Winberg. Before you leave, as Vice Chairman Barton will confirm with your boss, you have to say 1504 1505 gig 'em over and over. Thumbs up. Gig 'em, Aggies. 1506 Mr. Winberg. Thank you. 1507 Mr. Olson. Uh-oh. Is your mic? You sure? One more 1508 time. 1509 Thank you, Mr. Winberg. 1510 Mr. Winberg. Thank you.

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1511 Mr. Olson. Second panel, please come up.

1512 It looks like we are ready so let's kick off the second 1513 panel.

Our witnesses for the second panel today include Mr. Frank Rusco, director of natural resources and environment at the GAO; Mr. Daniel Evans, project manager for Fluor Federal Petroleum Operations; and Mr. Kevin Book, managing director for ClearView Energy.

We are so thankful for you all being here today. We will begin this panel with Mr. Frank Rusco. You are recognized for five minutes to give an opening statement. 1522 STATEMENTS OF FRANK RUSCO, DIRECTOR, NATIONAL RESOURCES AND
1523 ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE; DANIEL M.
1524 EVANS, PROJECT MANAGER, FLUOR FEDERAL PETROLEUM OPERATIONS;
1525 KEVIN BOOK, MANAGING DIRECTOR, CLEARVIEW ENERGY PARTNERS, LLC
1526

1527 STATEMENT OF FRANK RUSCO

1528 Mr. Rusco. Thank you, Mr. Chairman, Ranking Member, and 1529 members of the subcommittee.

I am pleased to be here today to discuss our recent report on DOE's management of the SPR. The SPR is an important energy security asset capable of mitigating negative effects of global oil supply disruptions in concert with other IEA member countries.

1535 In several collective actions of IEA members, the SPR 1536 has been effective at adding oil supply during actual or 1537 expected supply disruptions.

To date, however, the SPR has most often been used in response to domestic supply disruptions caused by extreme weather. In such events, the SPR has been less effective because SPR infrastructure has not been able to deliver reserves when, where, and in the form they are needed.

1543 In particular, when severe weather has battered Gulf 1544 Coast states, damaging refineries or electricity grids needed 1545 to run pipelines, SPR oil reserves in the Gulf Coast have not

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been effective in mitigating what have generally been shortages in finished petroleum products such as gas line and diesel fuel.

1549 Most IEA member countries hold significant parts of 1550 their strategic reserves as petroleum products. DOE has 1551 studied such product reserves and the conclusions of its 1552 studies point to net benefits in some regions.

1553 Yet, DOE has disagreed with our recommendation to 1554 complete these studies and advise Congress of its findings.

1555 In addition, we found that DOE's most recent strategic 1556 analysis of the SPR, which was mandated by Congress, was 1557 deficient in several key ways.

1558 These deficiencies denied Congress better information to 1559 make decisions about the size, disposition, and configuration 1560 of the SPR.

For example, DOE did not do adequate risk-based scenario analyses of when the SPR may be called upon to deliver oil or petroleum products and, as a result, DOE cannot advise Congress on even a credible range of sizes, composition, or disposition of reserves that would best enhance energy security across a range of potential future events.

1567 Further, in part, because of the way in which the SPR 1568 has been used over the years and in part just because needed 1569 maintenance has been deferred for many years, the SPR storage

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1570 and delivery infrastructure is in serious disrepair.

DOE's current plan is to rebuild the existing SPR infrastructure in its historical configuration and capacity. If this is done and, given planned future sales of SPR oil, the SPR will have excess storage capacity in the future. However, DOE made its plan to rebuild and repair SPR infrastructure without adequately studying alternatives,

1577 including selling or leasing such excess capacity.

1578 The discussion draft that is the focus of this hearing 1579 goes a long way toward requiring DOE to rectify some of the 1580 deficiencies in its strategic study and its SPR modernization 1581 plan.

1582 Specificall ψ , the discussion draft requires DOE to take 1583 actions to evaluate and test the market for leasing its 1584 excess capacity by, one, authorizing the leasing of storage 1585 and related facilities to private sector and foreign 1586 entities; two, directing revenue earned from such leases to 1587 the general fund and to cover costs associated with leasing; 1588 and three, requiring a pilot program to lease 200 million 1589 barrels of excess capacity.

To make fiscally prudent decisions about how to implement such a pilot, DOE will have to conduct additional analyses. For example, DOE's decision to use fresh water to displace oil during releases has caused the SPR's salt

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caverns to deteriorate over time with use.

1595 Fresh water absorbs salt, which increases the size and 1596 alters the shape of caverns and damages their integrity. 1597 Alternatively, there are salt cavern facilities operated by 1598 the private sector that use brine to displace that oil during 1599 release, which does not have these effects.

Brine ponds add operation and maintenance costs but increase the life of caverns. Ideally, GAO should evaluate this and many other factors we have identified before finalizing its modernization plans to ensure the SPR is run in an effective and fiscally prudent manner.

1605Thank you.This ends my oral remarks. I'll be happy to1606answer questions.

1607 [The prepared statement of Mr. Rusco follows:]

1608

1609 *******INSERT 4********

		72
1610	Mr. Olson.	Thank you, Mr. Rusco.
1611	Mr. Evans, 1	ive minutes for an opening statement, sir.
1612	Microphone,	please. Sounds like hit the right button
1613	here.	
1614		I am here. There we go. Start again.
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1615 STATEMENT OF DANIEL EVANS

1616

1617 Mr. Evans. Good morning, Vice Chairman Olson, Ranking 1618 Member Rush, and members of the Subcommittee on Energy. 1619 I am the project manager for Fluor Federal Petroleum 1620 Operations, Dan Evans. We are the maintenance and operation 1621 contractor for the Department of Energy at the Strategic 1622 Petroleum Reserve since 2004.

1623 Fluor's partnerships with DOE date back to the Manhattan 1624 Project. Today, in addition to the SPR, we are currently 1625 active in roles with DOE facilities that are part of the 1626 Environmental Management and National Nuclear Security 1627 Administration missions.

The congress ionally-mandated sales have changed the dayto-day operations of the SPR dramatically. The sites have gone from a 4.4 million barrel per day draw down and readiness posture to maintaining draw down readiness while at the same time conducting intermediate variable rate deliveries from the reserves.

Working with DOE, Fluor has met this challenge. One example is the response to the impacts to Hurricane Harvey. We were able to maintain mission draw down readiness throughout the event and deliver approximately 5 million barrels of crude oil to refineries in need.

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1639 I would like to note that to support this need, certain 1640 employees volunteered to leave their own homes at peril, 1641 their whole families, and endure the hurricane at the Texas 1642 sites.

1643 They provided day-to-day monitored conditions and real 1644 time updates on the readiness for us to fill the nation's 1645 mission. The dedication of SPR employees to the mission is 1646 American exceptionalism at its finest.

1647 The sales have and continue to put a significant level 1648 of stress on aging SPR infrastructure. In some cases, we 1649 have postponed planned maintenance and diverted funding to 1650 address emergency repairs.

As we continue the draw down over the next nine years, Congress should not lose sight of the importance of the SPR's annual maintenance funding to be able to address the needs of the sites and make necessary repairs to execute the current contemplated draw down schedule.

Next, I would like to address the ideas raised by the subcommittee's discussion draft. Fluor, of course, stands ready to support the leasing and operation of underutilized cavern capacity.

We anticipate in the particular draft legislation the committee has provided the authorization without further appropriation to use a portion of leased revenue cost related

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1663 to storage and removal incurred by the SPR as a result of 1664 releases.

1665 Commercially-leased petroleum storage currently 1666 presently operates under one of two models -- segregated or 1667 co-mingled.

In segregated storage, the product accepted for storage is the same product that is ultimately delivered. Under the co-mingled model, a limited range of products are accepted for storage.

When a withdrawal is made, a product of agreed to specification is then provided to the owner of the equivalent product that was accepted into storage.

1675Either modelpresents challenges for leasing at SPR1676facilities whilemaintaining government inventories.

1677 Presently, the government practices intensive inventory

1678 management -- segregating crude oil by two specifications and

1679 tracking the volumes down to the very barrel not only across

1680 caverns but also with piping, pipelines, and crude oil

1681 storage tanks.

1682 If the SPR designates specific caverns to be leased for 1683 storage under the segregated model, the cavern is nonetheless 1684 integrated into the site infrastructure.

1685 The operation of a storage cavern requires routine 1686 ability to convey crude oil, water, and salt brine in and out

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1687 of the cavern for purpose of preventative and corrective 1688 maintenance.

1689 The cycling of fluids in and out of leased caverns with 1690 equipment in common with the SPR storage caverns will, 1691 inevitably, lead to co-mingling of government and commercial 1692 assets which will, in our opinion, require additional capital 1693 investments.

1694 The co-mingled model shares the same challenges of the 1695 segregated model and also adds additional complexities in 1696 terms of product quality matters and tracking thereof.

1697 In conclusion, two policy issues require resolution 1698 prior to implementing a lease storage concept. The first, 1699 it's a target inventory of the SPR.

Congress should also carefully consider the overall leasing concept to be adopted. We strongly recommend that should Congress move forward with a leasing regime, it allows sufficient time to make this determination and to develop and physically implement the necessary SPR enhancements.

1705 Mr. Vice Chairman, thank you again for the opportunity 1706 to appear here today. I stand by to answer any questions 1707 that you might have.

1708 [The prepared statement of Mr. Evans follows:]

1709

1710 *******INSERT 5********

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1712 Mr. Book, five minutes for an opening statement, sir.

NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701 1713 STATEMENT OF KEVIN BOOK

1714

1715 Mr. Book. Thank you.

Good morning, Vice Chairman Olson, Ranking Member Rush,
Vice Chairman Barton, distinguished members of this
committee.

1719 My name is Kevin Book. I lead the research team at 1720 ClearView Energy Partners, an independent firm that analyses 1721 macro energy issues for institutional investors and corporate 1722 strategists.

Thank you for inviting me to contribute to your discussion regarding modernization of the SPR. I would like to begin by offering my admiration for the foresight the U.S. Congress showed in creating the SPR.

1727In my view it remains one of the greatest energy1728security achievements in modern history. It still matters,1729too. Even with U.S. crude production averaging 11 million1730barrels per day during the week ending July 13, that surge is1731good news. But those barrels already have customers.

As a government-controlled stockpile, the SPR can provide emergency supply that comes from outside the market. That said, ensuring against worldwide economic fallout and sheltering U.S. consumers may require a robust and wellfunctioning reserve capable of delivering its full design

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1737 capability.

Today's discussion reflects that Congress has passed six major laws in the last four years that mandate, roughly, 300 million barrels of oil sales from the SPR.

Those sales could leave the SPR with approximately 400 million barrels at the start of fiscal 2018. It, therefore, seems prudent to ask whether and how the resulting surplus storage capacity might be put to productive use.

Today's legislative draft would expand storage leasing currently available to foreign governments so that private commercial entities could lease SPR space too.

1748 In my opinion, a pilot leasing program of this sort 1749 could potentially benefit U.S. producers and refiners in need 1750 of additional storage.

1751 If that program also helped to preserve or expand SPR 1752 capabilities at the same time, it could enhance petroleum 1753 supply insurance for U.S. consumers, too.

1754 My testimony offers several additional considerations. 1755 From a feasibility perspective, DOE might wish to evaluate 1756 the costs of restoring, rehabilitating, or improving spare 1757 capacity to support the requirements of commercial lessees. 1758 Those requirements can differ in many cases from current 1759 long-term strategic storage requirements.

DOE might also wish to evaluate availability of takeaway

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1761 capacity from leased storage sites, especially in the absence 1762 of incremental SPR marine distribution capacity.

1763 Storage with faster deliverability can command a higher 1764 market price also.

From a competitiveness perspective, it may be useful for DOE to evaluate the market impact of introducing up to 2 million barrels of crude storage into the Gulf Coast, also known as PAD 3.

1769 In March 2018, the Energy Information Administration, or 1770 EIA, counted 341 2 million barrels of working storage 1771 capacity at refineries, tank farms, and underground 1772 facilities in PAD 3.

1773 The agency assessed that about 49 percent of that 1774 capacity was in use of that time. That was a big change from 1775 two years earlier.

1776 Storage volumes grew by 29.7 million barrels since the 1777 EIA's March 2016 report and did not report the agency-1778 assessed PAD's restorage capacity at a much higher 68 percent 1779 capacity utilization.

1780It could be undesirable if additional low-cost1781government-run SPR storage were to crowd out existing1782privately operated facilities.

1783 Likewise, salt cavern storage tends to be significantly 1784 cheaper than thank storage and so-called floating storage in

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1785 leased tankers. But draw down constraints and take-away 1786 bottlenecks could limit commercial demand compared to tank 1787 farms and ships.

Finally, from a strategic perspective, capacity leasing should probably also reflect the vision Congress and the department have for the reserve.

For example, today's draft would allocate net balances to the general fund. It might be worth considering whether proceeds could also pay for expanded modernization.

To this point, the U.S. has dramatically reduced its net petroleum imports. But U.S. refiners still import gross volumes of about 6.3 million barrels per day.

When they do, they pay global prices that reflect global supply demand balances. Today's oil prices remain high, relative to historical norms.

Partly, this is because global oil production is itself running at relatively high capacity utilization. Crude prices are also high because global inventories have thinned out.

Currently, OPEC producers are drawing on spare capacity to offset losses from collapsing Venezuelan production. They soon could lean even harder on spare production capacity to replace Iranian crude oil barrels.

1808 That, by the way, set off my Siri. I apologize. I am

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1809 not sure why.

1810 And what happens when the production system is stressed 1811 and inventories are lean and a big supply disruption occurs 1812 somewhere in the world?

1813 In that situation, without strategic reserves, the oil 1814 market must balance and painfully so on the backs of 1815 consumers. Preventing that result, in short, is the nature 1816 of the insurance the SPR provides.

1817 Mr. Chairman, this concludes my prepared testimony. I 1818 will be happy to answer any questions at the appropriate 1819 time.

1820 [The prepared statement of Mr. Book follows:]

1821

1822 ********INSERT 6********

1823Mr. Olson.Thank you, Mr. Book, and thank you, all our1824witnesses.

1825 I will now move into the Q and A portion of the hearing. 1826 I will begin the questioning. I recognize myself for five 1827 minutes.

1828 First of all, again, welcome to our three experts. Α 1829 special welcome to Mr. Evans. Fluor Enterprise -- big tall 1830 building, one street light up from my official office area --1831 Sugarland, Texas So welcome, welcome, welcome, dear friend. 1832 My first question is for you, Mr. Book. As a point on 1833 the first panel, Texas oil production is booming. I won't brag, but right now we are moving a lot of light crude to the 1834 1835 coast about as fast as we possibly can.

1836 If the SPR were open to lease by the industry, do you 1837 think, first of all, number one, there would be interest? 1838 Number two, would there be value as a holding location for 1839 more oil or would the benefits be in the uncertainties going 1840 forward with leasing this great asset we have, the SPR? 1841 Mr. Book. Congressman, I think bragging is appropriate

and you should be proud. That crude is going to keep going to coast, as you say, and exported to global markets that can use it for value.

1845 I think Secretary Winberg was wise to suggest that an 1846 inquiry of commercial interest would be a good place to

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1847 start. One of the issues that you have right now is that you 1848 do have storage building at export and transit sites in the 1849 Gulf Coast and its building guite rapidly.

The SPR could serve a different purpose for long-term storage today. But as the other witnesses have mentioned, it would require adaptation to be potentially useful for the kinds of commercial applications that different kinds of customers might use.

1855 But definitely there's going to need to be more storage 1856 if you in Texas keep producing more crude.

1857 Mr. Olson. Count on it, guaranteed.

Second question is for you, Mr. Rusco. AS you know, the DOE has taken some steps in modernizing the SPR. However, much work still remains and at the moment the SPR seems to lack a clear end goal.

1862Can you talk about the most important steps DOE has1863taken -- what you think the best forward pathway forward to1864them to get this thing up and running to modernize?

1865 Mr. Rusco. I am encouraged that the assistant secretary 1866 was talking about testing the market and going out and trying 1867 to figure out what the market is and also that is cognizant 1868 of the differences in a way that different entities might use

1869 excess capacity.

1870

So it's our cost of storing fuel -- oil in the ground is

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1871 much lower than most IEA members' costs and there are members 1872 that would like to store oil in our reserves. So that may be 1873 ultimately the best way. But you got to test the market to 1874 know. I am encouraged about that.

1875 What I am concerned about is DOE has not done a good job 1876 of periodically assessing how the market has changed, how 1877 energy security issues have changed, and doing complex risk-1878 based analysis involving scenarios of possible use. That's 1879 what they need to do.

1880Mr. Olson.Thank you. Mr. Winberg is right over your1881left shoulder.\$0 message accepted and sent. Thank you so1882much.

Final questions for you, Mr. Evans, of Fluor. The SPR sites are made for long-term storage. But we certainly have a lot of maintenance issues.

Fluor has been maintained as this asset for over almost two decades, as you said. Can you please tell me about the most common cause of maintenance issues and whether the DOE or the private sector can be better suited to fix these problems as quickly as possible?

1891 Mr. Evans. So the most common maintenance issues that 1892 we face today are with regards to the equipment that was not 1893 placed during Life Extension One. That was the '91 to '95

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1894 time frame.

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We have a lot of piping valves, actuators, and those kinds of pieces of equipment that are 40 years old. We did have a rupture in a low-pressure fresh water system at the Big Hill that was a dramatic one and that's our second significant rupture there.

We find more and more common leaks and we are able to deal with them very quickly. But Life Extension Two, and if it's smartly coupled with a concept to commercialize could replace and deal with, those highest level of common kinds of maintenance risks.

We also have a very old degasification plant that's on its last legs at the West Hackberry Louisiana site. Part of LE2 then is to recycle that and come in with a new much more modular modern design that will be more efficient to make sure that we can deliver crude oil even during difficult hot months -- the end of the pipeline system.

1911 Mr. Olson. Thank you, Mr. Evans.

1912 My time has expired.

1913 Now the chair calls on the ranking member of the

1914 subcommittee, Mr. Rush, for five minutes.

1915 Mr. Rush. \ddagger want to thank you, Mr. Chairman.

1916 I want to ask each witness if you would give me feedback 1917 on this draft legislation.

1918 Do you feel that there is a need for the draft or you --

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do you find it helpful or are you concerned about any of the unintentional consequences? And I would like to just ask each one of you if you would respond to the question, and beginning with you, Mr. Rusco.

Mr. Rusco. I think that the draft legislation addresses an important issue that DOE had not been thinking about when they planned their modernization and that is that there is going to be excess capacity.

And it makes good sense to try to use that capacity in a way that can help pay for the modernization and pay for the routine operations and maintenance so that we don't end up 10, 20 years later with a bunch of deferred maintenance and depreciated usefulness of the assets.

Mr. Evans. Mr. Rush, we at Fluor here to implement these at the pleasure of the Congress and the department. We certainly would be responsive in the near term to integrating immediate team needs to, as I mentioned earlier, to go the market to understand what market demands are, to perform engineering and operations analysis studies that would take a look at what we meeded to do to operate under market

1939 conditions.

1940 Number three, see how to fully integrate those with Life 1941 Extension Two so we can take advantage of the significant 1942 change in investment that Congress is making in the SPR, and

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1943 then do all the environmental studies necessary as well to 1944 make sure that that operates as integrate smart hole. 1945 I do think that, with the addition of things like brine 1946 caverns that were mentioned earlier by Secretary Winberg, 1947 those would be very beneficial for overall operation in the 1948 long run for the SPR for the government as well as for 1949 commercial customers.

1950 Mr. Rush. Mr. Book.

1951 Mr. Book. Congressman Rush, I think it's a good idea to 1952 make best use of what you have, particularly if you have a 1953 way of making money for the taxpayer using an asset owned by 1954 the taxpayer. That's always a good idea.

You asked about unintended consequences and I think that Secretary Winberg has already suggested that he wants to take a look at it -- the implications of this. Part of understanding the role of government is understanding the way in which government actions can impact private investment.

1960 It's always a bad idea to lean too heavy with the 1961 government on something that where private industries put 1962 capital to work.

And so if I had any concern it would be that -- that there would a risk potentially of commercially undercutting existing investments.

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1966 But until one looks at it, there's no reason to not

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1967 proceed with looking into it.

Mr. Rush. want to thank each and every one of you. Mr. Rusco, in your testimony you state that if DOE is authorized to lease unused small storage capacity to the private sector, as this bill would do, this leasing capacity could generate revenue that could help offset the costs of modernization.

1974 Are you confident that DOE will indeed look at this 1975 issue and, if not, what are some of the missing opportunities 1976 of not examining this particular topic or subject? Mr. Rusco. 1977 I am confident that DOE will pay attention 1978 to what you all do and my concerns are sort of where the bill 1979 doesn't specify what to do and DOE has not been very 1980 proactive in evaluating the strategic, you know, purpose and 1981 future on an $onq\phi$ ing basis of the strategic petroleum 1982 reserved and, hence, we got to a point where we, clearly, 1983 according to a lot of folks in Congress had more oil than we 1984 ought to have.

1985There's been a lot -- there's going to be a lot of1986drawdowns. But that was done without a really quality1987strategic look at the pros and cons of that from DOE.1988Mr. Rush. Well, thank you, Mr. Chairman. I yield back.1989Mr. Olson. Thank you.

1990 The chair now calls upon the one man who knows more

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1991 about this topic than any single human being in Congress, 1992 vice chairman of the full committee, Chairman Joe Barton. 1993 Five minutes, sir.

1994 Mr. Barton. Well, I am not sure that's true, Mr. 1995 Chairman. But $i\mathbf{f}$ it is true that still doesn't say much. 1996 So well, but it does point out a fact is that there 1997 really hasn't beth a strategic look at the SPR in a long time 1998 and the last three or four Congresses, as our oil production 1999 has ramped up in the United States, especially since the 2000 repeal of the crude oil export ban and our ability to lessen 2001 our imports, the Congress is using this as a piggy bank and it's not being evaluated. 2002

2003 It's we need money -- let's take oil out of the SPR. 2004 This own committee -- we did it the last Congress. 21st 2005 Century Cares -- we needed some money, we've got jurisdiction 2006 over the SPR so we just said we are going to use the -- we 2007 are going to sell some oil and use it. The Budget Committee 2008 omnibus is and the appropriation process is using it. The 2009 is.

Long story short, under current law, even though it says only the president can make a decision to use the reserve and he has to declare that it's a national emergency, Congress says not withstanding any other law we are going to sell oil for this or that or bacon fat.

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And so this draft bill before us says we don't want to change the basic mission statement but we want to add a mission statement. Under current law, you can't use the SPR for storage for private purposes. It's illegal.

And so we decided let's see if maybe the private sector wants to use it. Now, Mr. Book's concerns -- we don't want the private -- we don't want the private sector to be crowded out on storage capacity. I think that's valid.

But it's not mandatory. We are going to -- if we don't -- if we don't sell another barrel of oil other than what we've already authorized, we are going to have over a 100 million barrels of existing capacity that could be utilized -- maybe two -- we were authorized up to a billion barrels. But we don't have the capacity -- current physical capacity but about a little over 700 million.

Let's see if the private sector might want to use that, and this problem of being able to maintain the reserve because it has to be appropriated -- we've got to ask the appropriators to appropriate it -- and some years they do, some years they don't.

2035 We changed that. We give the specific authority to the 2036 secretary. All the money goes into the general fund. But we 2037 allow money from rentals fees, so to be used to maintain and 2038 improve the reserve without appropriate -- and go through the

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2039 appropriation process. That puts control in this committee 2040 in the Energy and Commerce.

2041 So we are trying to fix that problem. I guess I will 2042 ask Mr. Book, given the existing market dynamic, would the 2043 private sector decide to utilize the reserve to store their 2044 own crude oil? What's your bet on that?

2045 Mr. Book. Well, if you ask an analyst to take a bet 2046 you're probably going to get an analyst answer. It could be 2047 right or wrong and I will come up with a new one for you when 2048 it's wrong.

But the private sector breaks down into different sets of customers. So you do have folks who are trading oil, and when the future price of oil is higher than the current price of oil, there's an incentive to store.

They're going to want to move oil out of their storage pretty quickly when the market turns around, as it sometimes does. And then you have the government customers that we mentioned and other potential long-term storage customers or longer-term storage customers and we have different needs.

And I think until you ask and see what's on offer out there, it's hard to know. Right now, what you have are midstream companies that are building out storage as their developing transit capabilities, leasing that storage, and coming up with imnovative new ways.

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2063 Mr. Barton. But they're having to pay capital costs to 2064 build and operate it.

Mr. Book. Well, that's right. They do have --Mr. Barton. And under this case, you have existing capacity that it's a lease or a rental -- I am not sure how they would -- how we would do it. But there's no upfront cost, except a commitment -- probably a time certain commitment.

2071 Mr. Book. Yes. I mean, the costs of salt cavern 2072 storage are generally cheaper than tank storage and certainly 2073 cheaper than leasing a ship to store it and then floating 2074 storage when things get tight.

2075 So it could be very competitive.

2076 Mr. Barton. Well, what we're -- what we are trying to 2077 do -- Mr. Rush and I -- we are trying to -- we have an asset 2078 that's underutilized. We are going to have excess capacity. 2079 Why not have a new mission statement that complements 2080 the private sector -- allows the private sector but doesn't 2081 mandate the private sector? Maybe it'll work. Maybe it 2082 won't.

But we are not going to be worse off than we are and we will probably be better off if the private sector makes a decision to utilize it because it's going to give some funding that's at the discretion of the secretary of energy

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2087 to improve the facility and I think it's worth a shot.
2088 But there may be other ideas. Anyway, my time has
2089 expired.

2090 Mr. Olson. Thank you. The chair now calls upon the 2091 gentleman from California, Mr. McNerney, for five minutes, 2092 sir.

2093 Mr. McNerney. Well, thank you, Mr. Chairman. 2094 I appreciate Mr. Barton's remarks about this. But I 2095 have a question. Is -- sort of a philosophical question --2096 is leasing capacity to foreign governments or private 2097 entities is that going to degrade the capacity -- the long-2098 term capacity of the caverns?

2099 Mr. Evans.

2100 I am not an expert in the interests of Mr. Evans. I think that if appropriately handled 2101 foreign governments. 2102 that the caverns themselves can remain integral, if we use 2103 brine drive to be able to handle those issues and do multiple 2104 small drawdowns that we could continue to operate those in 2105 the interests of the government, should we wish to terminate 2106 agreements with either commercial or foreign countries.

2107 Mr. McNerney. Well, Mr. Rusco, do you believe that the 2108 current proposed legislation will give us enough information 2109 to provide that guidance to the operating SPRO effectively 2110 and not degrading its capability?

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2111 I think it's -- I think that the Mr. Rusco. 2112 implementation of this legislation by DOE would have to --2113 they would have to implement this in a way matters a lot. 2114 where there are controls. 2115 So, for example, if they were to lease this to other IEA 2116 members, lease the access capacity to store long-term oil, 2117 which I want to say we have the cheapest -- the cheapest 2118 storage of anybody in the world and we know of at least two 2119 countries that have actually contacted DOE about leasing 2120 space like this. 2121 If you did that, then you're really enhancing global 2122 energy security because you have longer -- you have larger 2123 storage of crude bil in exactly the same place that it would 2124 be if we owned it all. 2125 Now, if the private sector owns it, then we have smaller 2126 capacity here. Other countries have to have their storage 2127 capacity somewhere else. 2128 So my question is does the proposed Mr. McNerney. 2129 legislation give us and you and the operators the capability 2130 to operate it in a way that would be beneficial rather than 2131 detrimental to the long-term capacity? Or does it need to be 2132 enhanced or improved? I think that what I have read, which is just 2133 Mr. Rusco. 2134 the discussion $d_{\mathbf{r}}$ aft, that there -- you could implement this

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2135 in a way that would give you flexibility to say okay, we want 2136 more -- if we want more of that capacity for our own storage, 2137 then when a contract is terminated you could take it back and 2138 use it as U.S. storage. So I believe it would have that 2139 flexibility.

2140 Mr. McNerney. Okay. Thank you.

2141Again, Mr. Rusco, do you think there's a good enough2142case for productreserve capacity in the western part of the2143country -- on theWest coast where we have earthquakes?2144Mr. Rusco.We looked at studies that were done by DOE2145and those studiescame to the conclusion that in the case of2146the Southeast andthe West Coast there were net positive2147benefits to these things.

DOE chose not to release those reports. They say they're not complete. They've chosen not to complete those reports. But everything that is in those reports indicates that there are net positive benefits to that.

2152 Mr. McNerney. Thank you.

2153 Mr. Evans, you talked a little bit about co-mingling and 2154 the inevitability of co-mingling, and refineries are 2155 specialized in terms of the kind of oil they take.

How is the co-mingling going to impact the refineries' ability to produce product -- gasoline and other products? Mr. Evans. I think the -- it's a great question. Each

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2159 particular demand would be somewhat different, Congressman.

But, however, if we were to lease to a, say, a shell or a commercial entity, the crude oil that would be stored there in their own cavern, if you would, you would think that it would make sense for them to store the material that they would utilize most effectively in terms of a turnaround of a refinery without product.

So I think the market handles that piece. We'd have to be very careful about co-mingling the crude oil with the government oil, and those are practices that are commonly done -- this is not an impossibility.

2170 But we are, for example, very sensitive to a high gas 2171 content oil in our reserves. We believe that's very 2172 detrimental to the overall safety and quality of the 2173 reserves.

So we have to manage that extremely carefully. We think our current regime is a good one in terms of being able to respond to refinery needs on an instant basis and if we were able to add, similarly, that -- to that mix within the right

2178 blend level, that that ought to be utilized well as well.

2179 Mr. McNerney. Thank you.

2180 Mr. Chairman, I yield back.

2181 Mr. Olson. Thank you.

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2182 Mr. Doyle, **f**ive minutes for questions, sir.

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2183 Mr. Doyle. And I thank you to the witnesses today. 2184 Let me just ask all the witnesses -- it's been noted I 2185 think in Mr. Rusco's testimony that the U.S. will become a 2186 net exporter in the late 2020s but then become a net importer 2187 again in 2040, 2050s.

2188 So in your opinion, how should the U.S. be prepared for 2189 this long-term outlook for the SPRO?

2190 Mr. Rusco. Our most recent report is not the first time 2191 we've recommended to DOE that they do periodic strategic 2192 studies of conditions and report to Congress about what they 2193 see coming down the pike.

2194 So if we see a situation where our net imports are going 2195 to be increasing over the next few decades at some point, DOE 2196 should be up here talking to you all and saying we need to 2197 rethink our capacity.

2198 Similarly, if they think that they're -- that risks have 2199 either reduced or increased of global supply disruptions or 2200 if there's big changes to demand or supply in any other way, 2201 all of that stuff needs to be modelled on a regular basis so 2202 that they can give you really quality information so you can 2203 make good decisions.

2204 Mr. Doyle. Do you agree with that, Mr. Evans? 2205 Mr. Evans. I do. I think the market volatility is very 2206 significant right now. I am not an expert in global markets.

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2207 But reading the newspaper leads me to believe that there are 2208 a number of scenarios that could be invoked over time and, 2209 certainly, a value in having reserves.

2210 Mr. Doyle. Mr. Book.

2211 Mr. Book. think it would take -- humility would be 2212 the minimum requirement for anyone looking at the global oil 2213 market, given how much things have changed over the last 10 2214 years.

2215 Mr. Doyle. Yes. Thank you.

2216 Mr. Rusco, you mentioned that \$2 billion from the sale 2217 of crude oil from the SPRO is authorized for the 2218 modernization program.

Has this been implemented, in your opinion, effectively so far and do you have a status update on the use of these funds?

2222 Mr. Rusco. I don't. I don't have an up to date status. 2223 I know that there have been some sales. I think it's \$700 2224 million. But I don't think most of that money or much of 2225 that money has actually been spent.

I think that DOE is further -- doing some further analysis before they actually spend that money. But I can't give you much more of an answer. I could give you something

for the record.

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2230 Mr. Doyle.

Okay. Thank you.

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2231 Mr. Evans, how safe is the current infrastructure and 2232 how is your company prioritizing and planning for long-term 2233 safety?

2234 Mr. Evans. So we are very safety conscious. You will 2235 note our last three years on the SPR are the safest years 2236 that we have seen in the 40-year operation. It's one of 2237 Fluor's core values.

We are very sensitive to the infrastructure and the quality of the infrastructure. We run routine programs and investigations that will allow us to take a look at the quality, for example, of the piping and those kinds of things.

In the short term, it's manageable with, for example, the degasification unit it's on its last legs. We are not going to extend that unit. It simply is infeasible and impossible to do that.

2247 When we invest in Life Extension Two, we'll specifically 2248 look at those old and perhaps more risky components that need 2249 to be removed and to see how we can possibly configure those 2250 to be in a more safe and operating environment in the future. 2251 For example, old pipelines that are 40 years old that 2252 are underground that are not possible to send a "smart" pig 2253 through perhaps we want to reroute those and have a different method to be able to track the quality of what we've done. 2254

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2255 So those are all a part of our -- the department's plans 2256 in moving forward.

2257 Mr. Doyle. So tell me, what type of financial 2258 investment does Congress as well as the DOE need to make to 2259 update and secure the SPRO's infrastructure?

2260 Mr. Evans. Well, I think the current, roughly, \$1.4 2261 billion is a terrific start in getting the infrastructure 2262 where it needs to go. It certainly attacks the high-profile 2263 things that we've got in our infrastructure.

However, it will not replace all of the issues. We'll need to have a continual authorization and appropriation for major maintenance projects as they come around because by no means are we able to use the current funding to replace everything that we know that will be coming along in the next five to 10 years.

2270 Mr. Doyle. Do you have any idea what that number looks 2271 like, down the road?

2272 Mr. Evans. I am sorry. I do not, sir. We can take a 2273 look at that and get back to you.

2274 Mr. Doyle. Okay.

2275 Thank you, Mr. Chairman. Thank you.

2276 Mr. Olson. Thank you, Mr. Doyle.

2277 Mr. Tonko, five minutes for questions, sir.

2278 Mr. Tonko. Thank you, Mr. Chair, and welcome,

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2279 gentlemen.

2280 Mr. Rusco, as we have heard this morning, there have 2281 been a number of legislative requirements to sell SPRO oil in 2282 recent years.

2283 Do you believe that the frequent changes to SPRO's long-2284 term size target have impacted DOE's ability to develop and 2285 maintain a modernization plan?

2286 Mr. Rusco. Well, I think that DOE's modernization plan 2287 was made largely without consideration for those sales and 2288 now they're adjusting to those sales and doing further 2289 analyses.

2290 So I think the modernization plan will also be affected 2291 by any legislation that comes out of this Congress about 2292 leasing excess capacity.

But even if Congress does not mandate that they look into leasing excess capacity, DOE should do something with its excess capacity. They should either tell you that they need to shrink capacity or they -- or sell some, for example. But they need to do something because just leaving that

2298 excess capacity there is just throwing money away.

2299 Mr. Tonko. Thank you.

And Mr. Evans, depending on how the leases are structured, might they result in additional stress on aging SPRO infrastructure, requiring greater investments in

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2303 modernization and improvements that then might otherwise be 2304 required?

2305 Mr. Evans. It is certainly hopeful that we'll -- with 2306 decisions made on a timely basis to go forward from Congress 2307 that we'll be able to integrate many of the needs for 2308 commercialization within the current LE2 environment since 2309 there are significant upgrades to pipelines and those kinds 2310 of things.

2311 Certainly, we are not currently intending to build brine 2312 That's an additional cost that we would drive caverns. 2313 There may be other costs associated as well with incur. piping interlinking and valving and control room 2314 2315 modifications. Right now, we are not aware of those. 2316 However, I would venture that in the long term those 2317 would also benefit the longevity and utilization of the 2318 reserve.

2319 Mr. Tonko. Thank you very much.

And this question, I guess, could go to any of the three of you. It's my understanding that the proposed pilot program would allow DOE to recover additional costs from the leases.

How much of the proposed pilot program's revenue should be dedicated to investing in the SPRO modernization? Mr. Evans. I don't have a number figure. That's

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probably better answered to you when we have some more 2327 2328 detailed engineering studies and can get back to you on that 2329 topic. 2330 Mr. Tonko. Anyone else? Mr. Book, anything? 2331 Mr. Book. 🛿 am just an analyst, sir. 2332 [Laughter.] 2333 Mr. Tonko. Mr. Rusco, currently, is DOE able to enter 2334 into an agreement with a foreign nation to store oil at the SPRO without a change to the statute? 2335 2336 We believe that's correct, yes. Mr. Rusco. 2337 Thank you. Mr. Tonko. And Mr. Book, I noticed in your testimony that there are 2338 2339 other nations that meet their IEA requirements by holding oil 2340 abroad. Are there any reasons why entering into a contract 2341 with a foreign $q\phi$ vernment may be preferable? 2342 Mr. Book. Well, the long-term nature of government 2343 strategic reserves comports with the existing infrastructure 2344 capabilities of the SPRO today. 2345 So the customer of first resort would be the customer 2346 that requires the least incremental maintenance. For that 2347 reason, it might make sense. 2348 Mm-hmm. And do you believe that there would Mr. Tonko. 2349 be demand from the private sector to lease this space? 2350 Mr. Book. Well, it depends an awful lot on what a

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market test shows -- that there is going to be demand for 2351 more storage for crude oil in PAD 3 because there's going to 2352 2353 be more crude oil production that will need to be stored. 2354 Mr. Tonko. Okay. Anyone else have ideas on that? I am sure there's going to be private 2355 Mr. Rusco. 2356 interest in this capacity. It's the cheapest way to store 2357 oil. 2358 Now, you have to make changes in the way that you take 2359 it -- put it in, take it out. You have to use the brine 2360 But it's still going to be cheaper. drive to do that. 2361 Mr. Tonko. Right. 2362 Mr. Evans, ϕ id you want to comment on that? 2363 We would also agree that -- with Mr. Book Mr. Evans. 2364 that it would be simplest, most efficacious and, perhaps, 2365 quickest to be able to lease whole caverns to foreign 2366 governments as an instantaneous benefit to them and to the 2367 U.S. government as well. 2368 Mr. Tonko. Thank you. Thank you, gentlemen, and thank 2369 you, Mr. Chair. 2370 I yield back 2371 Mr. Olson. Thank you, and the chair now calls upon the 2372 ranking member, Mr. Rush, for one additional question. 2373 Mr. Rush. I really -- Mr. Tonko opened up some thoughts 2374 and I just want to ask -- we've been talking a lot this

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2375 morning about private interests and I don't think we've been 2376 hearing enough thought and consideration to foreign 2377 governments.

Are any of you aware of any interests by foreign governments in leasing the underutilized storage space here in the U.S. and if you want to -- what's the potential for --Mr. Rusco. We spoke with representatives from Australia and New Zealand, both of whom have an interest in leasing oil and space in the SPRO, and they have actually spoken with DOE about this in the past.

2385 Mr. Rush. Is there any -- just those two nations? 2386 Mr. Rusco. Yes, but I --

2387 Mr. Rush. Do you see any potential for other similarly 2388 situated foreign governments?

2389 Mr. Rusco. I would be surprised if there are no other 2390 governments that are interested because of the differential 2391 cost. A lot of countries are storing oil and product in 2392 tanks and if you can store oil in a salt dome it's much 2393 cheaper, and so would assume that there would be additional 2394 interest.

2395 Mr. Rush. Thank you, Mr. Chairman. I yield back. 2396 Mr. Olson. Thank you, and seeing no further members 2397 wishing to ask questions, I would like to thank our witnesses 2398 for coming today, and before you leave, Mr. Evans, one

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2399 special tie we have together, we have the Fluor tie but I 2400 just found out my dad was a Fighting Siwash. Knox College 2401 played football there '56 through '60.

2402 Mr. Evans. Are you kidding me? That is absolutely 2403 amazing, Mr. Olson.

2404Mr. Olson.No prairie fire.Siwash, Siwash, Siwash, Siwash.2405Mr. Evans.Siwash is -- when I was at Knox, which is a2406terrific institution, we were the Fighting Siwash and I've2407never, fortunate Y, given that up.2408Mr. Olson.Mr. Rush knows that's in Galesburg, Illinois

2409 -- Knox College.

2410 Mr. Evans. Galesburg. Grew up in Illinois and went to 2411 school there and my family has lived there since the 1850s. 2412 So Knox is a terrific institution. Thank you for that.

2413 Mr. Olson. Yes, sir. Yes, sir.

And before we conclude, I ask unanimous consent to submit the following documents to the record: a report by GAO and a report from the Center on Global Energy Policy.

2417 [The information follows:]

2418

2419 ********COMMITTEE INSERT 7*********

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		108
2420	And pursuant	to committee rules, I remind members that
2421	they have 10 busi	ness days to submit additional questions for
2422	the record and I	ask that the witnesses submit their
2423	responses within	10 business days upon receipt.
2424	Without obje	ction, this subcommittee is adjourned.
2425	Go Siwash.	
2426	[Whereupon,	at 12:35 p.m., the committee was adjourned.]
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