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6 CHANGING TIMES: REVISITING SPRING FORWARD, FALL BACK

7 WEDNESDAY, MARCH 9, 2022

8 House of Representatives,

9 Subcommittee on Consumer Protection and Commerce,

10 Committee on Energy and Commerce,

11 Washington, D.C.

12

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14 The subcommittee met, pursuant to call, at 9:35 a.m., in
15 the John D. Dingell Room, 2123 Rayburn House Office Building,
16 Hon. Jan Schakowsky, [chairwoman of the subcommittee]
17 presiding.

18 Present: Representatives Schakowsky, Rush, Trahan,
19 McNerney, Cardenas, Dingell, Kelly, Soto, Rice, Craig,
20 Fletcher, Pallone (ex officio); Bilirakis, Upton, Latta,
21 Guthrie, Dunn, Pence, Lesko, and Rodgers (ex officio).

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25 Staff Present: Katherine Durkin, Policy Coordinator;
26 Waverly Gordon, Deputy Staff Director and General Counsel;
27 Tiffany Guarascio, Staff Director; Ed Kaczmariski, Policy

28 Analyst; Zach Kahan, Deputy Director Outreach and Member
29 Service; Jerry Leverich, Chief Counsel, Communications and
30 Technology; Chloe Rodriguez, Clerk; Kylea Rogers, Staff
31 Assistant; Andrew Souvall, Director of Communications,
32 Outreach, and Member Services; Caroline Wood, Staff
33 Assistant; Michael Cameron, Minority Policy Analyst, CPC,
34 Energy, Environment; Olivia Hnat, Minority Communications
35 Director; Peter Kielty, Minority General Counsel; Emily King,
36 Minority Member Services Director; Bijan Koohmaraie, Minority
37 Chief Counsel; Tim Kurth, Minority Chief Counsel, CPC; and
38 Brannon Rains, Minority Professional Staff Member, CPC.
39

40 *Ms. Schakowsky. The Subcommittee on Consumer
41 Protection and Commerce will now come to order.

42 Today we will be holding a hearing entitled, "Changing
43 Time: Revisiting Spring Forward, Fall Backward."

44 Due to COVID-19 public health emergency, members can
45 participate today in today's hearing either in person or
46 remotely, via online video conferencing.

47 In accordance with the updated guidelines issued by the
48 attending physician, members, staff, and members of the press
49 that are in the room are not required to wear masks.

50 For members participating remotely, your microphones
51 will be set on mute for the purpose of eliminating
52 inadvertent background noise. Members participating remotely
53 will need to mute yourself, your microphones, each time that
54 you wish to speak. Please note that, once you are unmuted,
55 the microphone -- your -- once you unmute your microphone,
56 anything that you say in Webex will be heard over
57 loudspeakers in the committee room, and subject to being
58 heard by the livestreaming and C-SPAN.

59 Since members are participating from different locations
60 at today's hearing, recording -- we will recognize members
61 for questions according to subcommittee seniority.

62 Documents for the record shall be sent to Ed Kaczmariski
63 at the email address that has been provided to staff, and all
64 documents will be entered into the record at the conclusion

65 of the hearing.

66 The chairman now recognizes herself for five minutes.

67 Let me just note that we are expecting votes this
68 morning. It looks like between 9:45 and 10:00. Let's try
69 and get through opening statements, and maybe even our
70 witnesses' testimony.

71 So I will begin with myself for five minutes.

72 When I was a new Member of Congress, there was a vote to
73 change how we observe Daylight Savings Time, and I was pretty
74 surprised that we have the power to change time itself. So
75 today we exercise that power as we discuss Daylight Saving.
76 We -- some people say Daylight Savings; it is Daylight Saving
77 Time -- the period from spring to fall, when we all set our
78 clocks ahead one hour.

79 Standardizing time across the country has its roots in
80 the growth of railroads across America in the late 19th
81 century. When -- because -- when it became imperative to
82 regulate timekeeping to avoid confusion with trade and
83 travel.

84 In 1918 Congress established five time zones to provide
85 a standard time, and create -- and created Daylight Saving
86 Time for daylight -- okay. Oh, following its adoption by
87 Europe during World War II. After World War II, however,
88 Daylight Savings Time was actually abolished at the Federal
89 level, though localities have the option of continuing to

90 observe, and so this resulted in confusion. So the
91 Interstate Commerce Committee -- Commission recommended that
92 Congress re-examine the issue.

93 The Uniform Time Act of 1966 set up the basic system
94 that we are using as of today when we spring forward and fall
95 back to observe Daylight Saving Time, as we will this
96 upcoming Sunday. Don't forget. History shows that Daylight
97 Saving Time has benefits and costs.

98 The growing public interest in this topic and action on
99 the state level brings us here today. Some argue that when
100 we spring forward and lose an hour of sunshine in the
101 morning, that this impacts our health, school children
102 commuting to school, and potentially even traffic safety. On
103 the other hand, there are those who contend that the extra
104 hour of sunshine in the evening can be beneficial, a real
105 boon to restaurants and commercial -- commerce and tourism.

106 Supporters of Daylight Saving Time claim that it is an
107 energy saving and -- energy saver, and point to a 2008 report
108 by the Department of Energy, which found that Daylight Saving
109 Time saves 1.2 terawatts of energy per year, though other
110 studies have rather mixed results.

111 Studies all -- studies have found that the transition
112 itself from Standard Time to Daylight Savings and back again
113 has health impacts. These recent studies found that the
114 transition causes cumulative sleep loss, and may result in

115 more heart attacks and mood disorders.

116 So today we hear from experts who can illuminate these
117 issues. I look forward to our discussion as we learn more
118 about the benefits and costs of Daylight Saving Time. And I
119 want to thank you -- and I want to give my thanks to the
120 witnesses for joining us today.

121 [The prepared statement of Ms. Schakowsky follows:]

122

123 *****COMMITTEE INSERT*****

124

125 *Ms. Schakowsky. And the chair now yields to my
126 distinguished ranking member of the subcommittee, Dr. -- Mr.
127 Bilirakis. Doctor.

128 *Mr. Bilirakis. Thanks.

129 *Ms. Schakowsky. I just promoted him to Dr. Bilirakis,
130 member of the subcommittee.

131 I yield to you.

132 *Mr. Bilirakis. Thank you very much. I appreciate it.
133 Good morning, Madam Chair. Good morning to everyone. Thank
134 you, Madam Chair, for holding this hearing, and examining the
135 issue of Daylight Saving Time and our spring forward coming
136 on Sunday, this upcoming weekend. And thank you to our
137 witnesses for testifying and providing your expertise on this
138 matter. I look forward to hearing and, again, getting your
139 perspectives on this particular issue.

140 My constituents are -- I did a survey recently, and they
141 feel strongly about this issue. So I am glad we are having
142 the hearing. Of course, we have other issues we have to deal
143 with, as well.

144 Since 1918, when Daylight Saving Time was first enacted,
145 it has received many praises and criticisms, as well as many
146 attempted revisions from this body of Congress. I know that
147 almost 40 years ago this committee held a hearing on
148 legislation to extend Daylight Saving Time, a hearing which
149 my father, Congressman Mike Bilirakis, participated in when

150 he served on the subcommittee of -- on Energy Conservation.
151 So back then, the legislation would have extended this
152 practice with the aim to decrease energy consumption during
153 the spring and summer, a continuation of its original purpose
154 to reduce usage of oil during the First World War.

155 While I have heard the original desired outcome of this
156 practice may have diminished over the course of the last 100
157 years, a topic I hope to discuss today, I know that
158 Americans' opinions of Daylight Saving Time have not. This
159 is a topic that I continue to hear about back home from my
160 constituents. So hopefully, this hearing serves to educate
161 the members here today so we can make informed decisions
162 moving forward. And while there are certainly many topics
163 that deserve our attention in this subcommittee, today's
164 topic comes just a few days before we once again go through a
165 ritual many of us don't understand or care for.

166 This Sunday, as the chairman said, we will likely
167 experience an almost seamless change, as our phones now have
168 the ability to reset the time on their own. I say almost
169 seamlessly (sic), because, while this transition may be easy for
170 our devices, it is not so much for our bodies. Humans are
171 not as simple as winding a watch back or forward, or
172 resetting the time on our microwave. The toll the time
173 change has on your bodies -- on our bodies and our mind can
174 be severe, even when it may not be apparent, and can cause

175 health effects, as the chairwoman said, like increased
176 depression and greater risk of heart attack and strokes.

177 I am glad to have the perspective of Dr. Malow on this
178 panel, so we can further examine the impacts changing the
179 clocks have on our bodies and our mental state, our mental
180 health, especially during this pandemic.

181 We also need to examine the effects Daylight Saving Time
182 has on the economy. In my home state of Florida, the
183 Sunshine State, we take our daylight very seriously. In
184 fact, Florida's legislature passed a state bill that would
185 make Daylight Saving Time permanent, year round. But the
186 policy requires congressional approval to take effect. That
187 is another reason why I am glad that we are holding this
188 bipartisan hearing to learn more about the impacts of
189 Daylight Saving Time, and have -- and how Congress can
190 consider time changes nationwide. We have to be very careful
191 and deliberative on this issue.

192 A lot of our industries, like travel and tourism, rely
193 on daylight -- of course, daylight and, of course, in my
194 state of Florida -- later to provide Floridians and tourists
195 with good services all around the country. Simply put, the
196 longer the sun is out in the afternoon and evening, the more
197 consumers will be outside participating in local economies.

198 That is why I am pleased we will hear from Lyle
199 Beckwith, the senior vice president at the National

200 Association of Convenience Stores, so we can learn more about
201 how the change in time impacts businesses in our great
202 economy.

203 So again, thank you, Madam Chair, for holding this
204 hearing, and I look forward to engaging on this particular
205 discussion and this particular subject.

206 [The prepared statement of Mr. Bilirakis follows:]

207

208 *****COMMITTEE INSERT*****

209

210 *Mr. Bilirakis. And I yield back the balance of my
211 time. I appreciate it.

212 *Ms. Schakowsky. The gentleman yields back, and now I
213 recognize Mr. Pallone, the chairman of the full committee,
214 for five minutes for his opening statement.

215 *The Chairman. Thank you, Chairwoman Schakowsky. This
216 weekend we will once again spring forward, changing our
217 clocks forward one hour. It is a weekend that makes a lot of
218 us unhappy. The loss of that one hour of sleep seems to
219 impact us for days afterwards. It also can cause havoc on
220 the sleeping patterns of our kids and our pets. This is all
221 an inconvenience.

222 But unfortunately, the changing of our clocks has
223 impacts on our health and our economy, which begs the
224 question: Do we still need to spring forward or fall back in
225 the first place? And it is a question that many of us ask
226 every time we have to do it, and it is getting harder and
227 harder to justify, considering that, in a 2019 poll, 71
228 percent of Americans said they preferred to no longer switch
229 their clocks twice a year. Today we will examine the impacts
230 of this time change, and whether it still makes sense or is
231 obsolete.

232 Historians have long debated who first came up with the
233 idea of Daylight Savings Time, but it was first adopted
234 nationwide in Germany during World War I in an effort to save

235 energy. During World War II the United States adopted year-
236 round Daylight Savings Time, known as the War Time, in an
237 effort to save energy and increase productivity.

238 And over the years, numerous justifications were made
239 for changing our clocks twice a year -- most commonly and
240 notably, energy conservation. It was believed that extending
241 light into the evening hours would help consumers pay less
242 for electricity, because they would not have to turn on the
243 lights until later in the night. However, modern luxuries
244 such as heating, air conditioning, and other appliances have
245 changed that calculation.

246 Furthermore, advancements in LED lighting and other
247 energy-efficient appliances are not only saving consumers
248 money, but they are virtually making the energy conservation
249 justification moot and outdated.

250 And it becomes harder to justify when you consider the
251 health and economic impacts associated with changing our
252 clocks. Studies have shown an increase in the rate of heart
253 attacks and strokes in the two days immediately following the
254 time change. Disturbingly, these stroke rates are even
255 higher for some of our most vulnerable populations. Cancer
256 patients' stroke rates increased by 25 percent, and people
257 over the age of 65 are 20 percent more likely to have a
258 stroke in the days following the time change.

259 Our children also suffer. Study after study shows the

260 importance of a consistent full night's sleep for our kids.

261 The time change impacts our economy. Employers reported
262 an almost 6 percent increase in workplace injuries in the
263 days following the time change, and those injuries resulted
264 in 67 percent more workdays lost. So studies have also shown
265 that people simply are not as productive at work in the days
266 following the time change, spending more time on their
267 computer, on -- or on non-work related activities. And all
268 of these side effects hurt our economy.

269 So I have highlighted a couple of studies, but the
270 committee would like to know more. That is why Ranking
271 Member Rodgers and I intend to request an evaluation and
272 analysis from the Department of Transportation about the
273 effects of Daylight Savings Time. This review, as well as
274 this hearing, will help our committee as we examine this
275 important issue.

276 I have yet to decide whether I support, Madam Chair, a
277 permanent switch to Standard or Daylight Time, but I do think
278 it is time to stop changing the clocks. I believe that any
279 justification for springing forward and falling back are
280 either outdated or outweighed by the serious health and
281 economic impacts we now know are associated with the time
282 changes.

283 So I thank the witnesses, and I look forward to hearing
284 their perspectives on the issue.

285 [The prepared statement of The Chairman follows:]

286

287 *****COMMITTEE INSERT*****

288

289 *The Chairman. And I yield back, Madam Chair.

290 *Ms. Schakowsky. Thank you. The gentleman yields back,
291 and now the chair recognizes Mrs. Rodgers, our ranking member
292 of the full committee, for five minutes.

293 *Mrs. Rodgers. Good morning. Thank you, Madam Chair.
294 Good morning to our witnesses, especially Steve Calandrillo
295 from the University of Washington, my alma mater. I know
296 Steve has done a lot of work on Daylight Savings. I look
297 forward to hearing his insights.

298 I would also like to give a special shout out to state
299 senators Joe Schmidt and Jim Honeyford from back home. They
300 have both been leaders on this issue in Washington State.

301 On Sunday most of the country will once again go through
302 the ritual of moving our clocks ahead one hour. Statistics
303 show that Daylight Savings coincides with worse student test
304 scores, and spikes in the number of car accidents, and heart
305 attacks. As the chairman mentioned, together we are going to
306 refresh the record on this topic, with a renewed inquiry with
307 the Secretary of Transportation as to his Department and the
308 enforcement mechanism for the Uniform Time Act.

309 That said, there remains many issues that this committee
310 should be prioritizing before Daylight Savings, like
311 unleashing American energy to help Ukraine and counter
312 Russian aggression. My thoughts and prayers continue to be
313 with the people of Ukraine, who are fighting for their

314 freedom, their lives. We could do more, and we must do more.
315 This committee needs to lead to ensure economic and national
316 security.

317 I am pleased we have witnesses here today representing
318 the convenience stores. I know my friends back home, Tammy
319 Hedrick and Dan Alsaker, work closely with Mr. Beckwith.

320 [The prepared statement of Mrs. Rodgers follows:]

321

322 *****COMMITTEE INSERT*****

323

324 *Mrs. Rodgers. And with that I am going to yield to the
325 Republican leader on the Energy Subcommittee, Fred Upton, for
326 his comments.

327 *Mr. Upton. Well, I thank my leader, and I just want to
328 say, as I look at the picture, a portrait of John Dingell, he
329 said this committee was really -- our jurisdiction was really
330 two words. You can do it in charades. The first word is
331 little, "the.'" The second word, "world,'" "the world.'"
332 That is what we have jurisdiction over, including time.

333 So back in 2005, it was this committee that actually
334 changed the times, the periods when Daylight Savings would be
335 in effect. And we did a lot of research. I was the
336 Republican lead back there, Ed Markey was my counterpart. We
337 actually sought advice from the Naval Observatory to find out
338 when was the best time to change time, knowing that we had
339 done that for some 50 years.

340 The Naval Observatory made a couple of suggestions which
341 we took up, so we started it a little bit earlier, in
342 October, and we went a little bit -- or we went a little
343 later, actually, the first Sunday in November, and we went a
344 little bit earlier, which is the second weekend in March.
345 One of the reasons why we did November was because Halloween.
346 Sometimes it changed on Halloween. And you take that extra
347 hour away of trick-or-treaters, that is the number-one death
348 day for kids running between parked cars. You take that hour

349 of sunlight away, and that tragically is a bad day, which is
350 why we moved it to November, instead of October.

351 Now there is a lot of myths about Daylight Savings Time.
352 I can't dispel them all. I am not even going to go after the
353 Arkansas Gazette, which ran a story blaming a tree disease
354 spread by beetles on Daylight Savings Time because they had
355 that extra hour -- a little bit off the wall. I won't touch
356 that one.

357 But Richard Burr, then on the committee, demanded a
358 study by the Department of Energy to make sure that, in fact,
359 we did save energy. In fact, a year or two later the
360 Department of Energy confirmed that we actually do save
361 energy, something important in today's world.

362 We talked to law enforcement. It does actually reduce
363 crime. Why is that? Because most crime happens at dusk.
364 And so if you extend that hour, folks are able to get home.
365 And I can remember -- well, we know those stories.

366 It saves lives, not only at Halloween, but I believe it
367 was AAA that said it actually saved a number of lives because
368 most accidents occur with people tired coming home from work,
369 kids, they drive more than ever before now, coming home from
370 school. It used to be you took the bus. Now it seems like a
371 lot of kids take the car. So again, those after-school
372 activities, you have that extra hour, so it extends dusk, so
373 you don't have as many accidents, and you actually save

374 lives.

375 We are going to hear today about benefiting the economy.
376 I mean, just think about the barbecues, think about outdoor
377 recreation. Maybe you can play 18 holes of golf instead of
378 9. I am not a golfer, but maybe someday. Think about garden
379 work, coming home and working in your garden, all those
380 different things. You have that extra hour that is nice.
381 Usually, of course, spring starts with this.

382 A couple of things. I support states' rights. So one
383 of the things that we did -- now, Arizona and Hawaii, they
384 both don't acknowledge Daylight Saving Time, which is fine.
385 Indiana, we worked very closely with Mitch Daniels. That was
386 a divided state, and we actually had a provision to save
387 that. I support states having the rights to decide whether
388 they want to be in or out. I know that has been an issue in
389 the Sunshine State. So I think that would be worthy of
390 changing.

391 I also, if I had to do it all over again, I might have
392 said, you know, it ought to start Saturday morning instead of
393 Sunday, so you have that extra day to get ready for the
394 beginning of the week. Whether you lose an hour or not, it
395 might help some of the outdoor recreation folks, as well. So
396 I think that might be important.

397 But at the end of the day, we changed the world. The
398 rest of the world changed their time to comply with us. So

399 this is a big thing. If you change it, it is a big thing.

400 The airlines, the cruise industry, the tourists -- and
401 often you got confusion. Our state was next to Michigan. We
402 always had, you know, which time zone. You know, as one that
403 flies out of South Bend, which time are you on?

404 So there is a lot of questions. I appreciate the
405 hearing.

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

407

408 *****COMMITTEE INSERT*****

409

410 *Mr. Upton. And with that I yield back.

411 *Ms. Schakowsky. The gentleman who remembers the
412 earlier debate is an expert on this.

413 And I would now like to introduce our witnesses. I
414 assume all of them are somewhere remotely.

415 I wanted to first introduce Steve Calandrillo -- or is a
416 Calandrillo? Calandrillo, I have been told, who is Jeffrey
417 and Susan -- what is it, Brothman?

418 *Voice. Brotman.

419 *Ms. Schakowsky. Brotman professor of law at the
420 University of Washington School of Law.

421 Then we have Lyle -- oh, yes, Lyle Beckwith, who is the
422 senior vice president of government relations at the National
423 Association for Convenience Stores.

424 Dr. Beth Malow, the professor of neurology and
425 pediatrics, and director of the Vanderbilt Sleep Division at
426 the Vanderbilt University Medical Center.

427 So at this time the chairman will recognize each witness
428 for five minutes to provide opening statements.

429 Before we begin, I would like to explain -- well, we
430 don't have anyone here in person, so the issue of the lights
431 -- there is a timer, however, on the screen that will count
432 down your remaining time. As the timer reaches the one-
433 minute mark, please begin to wrap up your testimony.

434 So Professor Calandrillo, you are now recognized for

435 five minutes.

436

437 STATEMENT OF STEVE CALANDRILLO, JEFFREY AND SUSAN BROTMAN
438 PROFESSOR OF LAW, UNIVERSITY OF WASHINGTON SCHOOL OF LAW;
439 LYLE BECKWITH, SENIOR VICE PRESIDENT, GOVERNMENT RELATIONS,
440 NATIONAL ASSOCIATION OF CONVENIENCE STORES; AND BETH MALOW,
441 M.D., PROFESSOR OF NEUROLOGY AND PEDIATRICS, DIRECTOR,
442 VANDERBILT SLEEP DIVISION, VANDERBILT UNIVERSITY MEDICAL
443 CENTER

444

445 STATEMENT OF STEVE CALANDRILLO

446

447 *Mr. Calandrillo. Thank you, Chairwoman Schakowsky,
448 Ranking Member Bilirakis, and Chair Pallone, and Ranking
449 Member Rodgers, as well as distinguished members of the
450 Subcommittee on Consumer Protection and Commerce. My name is
451 Steve Calandrillo.

452 I am a professor at the University of Washington School
453 of Law, all the way out on the west edge of our country, in
454 Seattle. And I teach contract law, advanced tort law, law in
455 medicine, as well as law in economics. And in that latter
456 course we study the cost benefit analysis of various laws and
457 public policies, including Daylight Saving Time.

458 I started researching this issue 15 or 20 years ago, and
459 published a paper in a law review, and since then I have
460 actually started publishing in mainstream publications that
461 get read by more than just my parents and my best friends, so

462 avenues like the New York Times and CNN and Businessweek and
463 Fox News and ABC and CBS, as well as NPR.

464 And I am here today to urge Congress to permanently
465 extend Daylight Saving Time to make it all year round for
466 five important reasons.

467 Number one, the most important reason: permanent
468 Daylight Saving Time would save lives. Darkness kills and
469 sunshine saves.

470 Number two, we are going to talk about the crime
471 reduction that various representatives have already
472 referenced. Daylight Saving Time prevents crime by as much
473 as 20 percent.

474 Number three, we are going to talk about the energy
475 savings created by Daylight Saving Time. This was the
476 original justification for Daylight Saving Time. It is no
477 longer as strong as it used to be, but it still does save
478 energy.

479 Number four, we are going to -- I want to discuss
480 avoiding switching the clocks twice a year. As many
481 representatives have alluded to, people don't like changing
482 their clocks twice a year, and it is more than just dislike.
483 It messes up circadian rhythms, disrupts your sleep cycles,
484 and has all kinds of health and economic effects. But
485 permanent Daylight Saving Time can stop that.

486 And lastly, the fifth reason for going to permanent

487 Daylight Saving Time is that business and recreational
488 interest will flourish in the evening sunshine.

489 So I will take all five of those in turn.

490 First, lives saved. Darkness kills. Sunshine saves.
491 That is what I like to say to my students. And darkness is
492 twice as deadly in the evening hours as it is in the early
493 morning hours before sunrise. The evening rush hour is much
494 more fatal than the morning rush hour for various reasons.
495 There is more people on the road. There is more alcohol in
496 drivers' bloodstreams. People are tired and rushing to get
497 home, and that is when they make mistakes.

498 More children are outdoors, enjoying unsupervised play,
499 and it leads to lots of accidents. In fact, fatal vehicle-
500 on-pedestrian crashes skyrocket threefold once we hit the
501 twilight hour, once the sun goes down. Susan Ferguson's
502 research showed a 300 percent increase in fatalities.
503 Obviously, it is a lot harder to see that kid running across
504 the street once it is dark outside, once there is sunset.

505 And the idea of Daylight Saving Time is it pushes, it
506 moves one hour from the morning into the late
507 afternoon/evening, making it safer for drivers, making it
508 safer for pedestrians. In fact, a meta study by Rutgers
509 researchers Coate and Markowitz demonstrated that 343 lives
510 per year could be saved, on net, if we move to permanent
511 Daylight Saving Time. Obviously, the morning would be more

512 dangerous, but the afternoon would be much, much more safer
513 than the morning was.

514 Crime would decrease if we had Daylight Saving Time year
515 round. Darkness is a friend of crime. Criminals like to do
516 their work in the evening darkness, not the morning darkness.
517 So it is the evening hours where crime spikes, between 6:00
518 p.m. to midnight. That is the most dangerous time of year,
519 and Daylight Saving Time has the effect of taking one hour
520 out of their workday, right? Criminals are late to bed and
521 late to rise. They don't tend to commit crimes at 6:00 a.m.,
522 but 6:00 p.m. is a different story.

523 Third, energy savings. As Representative Upton noted,
524 this was the justification for Daylight Saving Time. In
525 World War I, in World War II, in the 1973/1974 OPEC oil
526 embargo, we wanted to save barrels of oil. Same thing with
527 2007, when Daylight Saving Time got extended. And the reason
528 is that if the sun is still out later in the afternoon, when
529 99 percent of the population is awake, right, the sun can
530 help heat your house, heat your business, and also light your
531 house and light your business. Now that argument has
532 diminished somewhat over time, as he mentioned, but it is
533 still true. The studies on -- the majority still show an
534 energy savings from Daylight Saving Time.

535 Fourth, let's avoid the biannual clock switch. That is
536 what most Americans are objecting to. It is not Daylight

537 Saving Time so much, right? We are on Daylight Saving Time
538 eight months out of the year. In fact, Standard Time is a
539 little bit of a misnomer, because it is only four months out
540 of the year. But if we went to permanent Daylight Saving
541 Time, we would no longer have the clock switch. That would
542 protect circadian rhythms.

543 And then finally, recreation and commerce interests
544 flourish in the sun. I know other witnesses will testify as
545 to that. But obviously, it is a lot easier to get off your
546 screens and go outside and enjoy a walk, a jog, play with
547 your kids in the backyard. It is a lot easier to go out
548 shopping if there is still sunlight out.

549 With that, I see my time is up. I apologize for going
550 over, but I thank you very much for listening to me today.

551 [The prepared statement of Mr. Calandrillo follows:]

552

553 *****COMMITTEE INSERT*****

554

555 *Ms. Schakowsky. I thank the gentleman.

556 And now Ms. Beckwith -- Mr. Beckwith, you are now
557 recognized for five minutes.

558 [Pause.]

559 *Ms. Schakowsky. Are you there, Mr. Beckwith?

560 *Mr. Beckwith. I apologize, I thought I had hit the
561 unmute button. Can you hear me now?

562 *Ms. Schakowsky. We can hear you. We can't see you.

563 *Mr. Beckwith. Okay.

564 *Ms. Schakowsky. There you go.

565 *Mr. Beckwith. Okay, can you -- all right.

566

567 STATEMENT OF LYLE BECKWITH

568

569 *Mr. Beckwith. Thank you, Madam Chair and members of
570 the committee. My name is Lyle Beckwith. I am senior vice
571 president of government relations for the National
572 Association of Convenience Stores or NACS, as we like to call
573 it. I appreciate the opportunity to come here today to
574 discuss this issue.

575 I actually started working for NACS in the mid-eighties,
576 and this issue was the first issue I worked on. So I am
577 looking forward to sharing my historic perspective on this,
578 but more so, I am looking forward to the conversation we will
579 have afterwards. And I will do my best to answer your
580 questions to the best of my ability.

581 As I will explain -- I am going to read a brief
582 statement. As I will explain, the bottom line is that
583 Daylight Savings Time is good for business and commerce
584 across the United States, and our industry urges you to keep
585 it in place.

586 By way of background, NACS is an international trade
587 association representing the convenience store industry, with
588 more than 1,500 retail and 1,600 supplier companies as
589 members, the majority of whom are based in the United States.
590 NACS represents over 150,000 domestic stores, and that
591 represents approximately 80 percent of the retail motor fuel

592 sales in the United States. The convenience industry employs
593 about 2.34 million workers, and generated more than \$548
594 billion in total sales in 2020, representing more than 3
595 percent of the U.S. gross domestic product. Of those sales,
596 approximately 292 billion come from fuel sales alone. We
597 conduct more than 160 million transactions every day. That
598 equates to about half the U.S. population on a daily basis.

599 Ninety-three percent of Americans live within ten
600 minutes of one of our store's locations. These businesses
601 are particularly important in rural and urban areas of the
602 country that might not have as many large businesses
603 available. In these locations the convenience store not only
604 serves as the place to get fuel, but is often the grocery
605 store and center of the community.

606 Daylight Saving Time was employed at different points
607 during the twentieth century, as we have all heard, you know,
608 previously, the history of this. As I said, NACS has been
609 involved in previous discussions of this.

610 Switching between Daylight Saving Time and Standard Time
611 is, of course, a balancing act. None of us can change how
612 much sunlight there is in a given day. As much as it
613 appears, Congress does not have the power to change time.
614 Congress has the power to balance time. But the day is going
615 to be the same length, regardless of what we do here today.

616 There are many benefits to having more time when it is

617 light in the afternoon, early evening, and we have heard
618 these, as well. They include increasing economic activity,
619 as well as reduced motor vehicle accidents. But the benefits
620 have always been weighed against the concerns that we should
621 not have kids going to school in the dark in the morning. So
622 this is balancing between the various interests that led us
623 to the longstanding policy of switching our clocks in the
624 spring and fall to take the most advantage of the daylight
625 that we can every year.

626 As I said, NACS testified in favor of extending Daylight
627 Savings Time before an Energy and Commerce Subcommittee as
628 early as 1983, and has supported extensions of the policy.
629 While there are questions about how much, if any, energy is
630 saved with Daylight Saving, the majority of studies show that
631 reduced use of electricity for lighting does decrease overall
632 energy demand. That has been one of the overriding points of
633 public discussion regarding the use of Daylight Saving Time,
634 but there are other reasons that moving from Standard Time to
635 Daylight Savings Time in the spring is good policy.

636 Our industry has consistently found that commerce
637 increases when the nation moves to Daylight Saving Time.
638 When the clocks change in the spring, people feel as though
639 they have more time after work to engage in a range of
640 activities that increase commerce, from eating out to
641 shopping to participating in or taking kids to a variety of

642 outdoor activities. They consistently show increased
643 spending when daylight hours are shifted later in the day
644 throughout Daylight Saving.

645 One study compared spending changes when Daylight
646 Savings started and stopped in Los Angeles with spending in
647 Phoenix, which does not observe Daylight Saving Time, and the
648 result was clear increases in spending in Los Angeles when
649 Daylight Savings started, and losses of spending when it
650 ended.

651 For the convenience industry specifically, 76.5 percent
652 of sales come during the part of the year when we are on
653 Daylight Savings Time, yet a significantly higher percentage
654 than the 65 percent of the year we spend -- where we spend
655 using Daylight Saving Time (sic). Overall, this means about
656 \$5 billion in incremental sales for the industry attributable
657 to the change. Those are big numbers.

658 The legislative record of past debates of these policies
659 showed consistent statements regarding the benefit to the
660 economy of Daylight Saving Time.

661 Everyone understands the change in the clocks can be
662 annoying. We all lose that hour of sleep in the spring, and
663 can feel tired adjusting to the change. But my personal
664 experience and the evidence of our behavior shows that we are
665 all pretty happy to have that extra hour of daylight later in
666 the day when we go home. It matters more than you think when

667 you look at the shopping, as well as the data behavior.

668 I know I am running out of time, so I am going to
669 suspend the rest of my written testimony, and I look forward
670 to having a dialogue with you on this issue. Thank you.

671 [The prepared statement of Mr. Beckwith follows:]

672

673 *****COMMITTEE INSERT*****

674

675 *Ms. Schakowsky. Thank you.

676 And now I recognize Dr. Malow for your five minutes.

677

678 STATEMENT OF BETH MALOW

679

680 *Dr. Malow. Thank you, Chairwoman Schakowsky, Ranking
681 Member Bilirakis, and other members of the committee. I
682 really appreciate being able to participate in this important
683 hearing today. My name is Dr. Beth Malow.

684 I am a practicing neurologist and sleep medicine
685 specialist at Vanderbilt University Medical Center in
686 Nashville, Tennessee. I am here today in my personal
687 capacity as a sleep clinician and researcher, and in
688 coordination with my colleagues at the American Academy of
689 Sleep Medicine, the National Sleep Foundation, the Society
690 for Research on Biological Rhythms, and the Sleep Research
691 Society, all of whom support permanent Standard Time as the
692 healthy choice.

693 I commend the subcommittee for thoughtfully considering
694 changes to Daylight Saving Time, which I will refer to as
695 DST, including consequences related to the health and the
696 well-being of the American people.

697 I strongly recommend both eliminating the transition
698 back and forth to DST, as others have mentioned, and adopting
699 permanent Standard Time. In my opinion, and in the opinion
700 of other sleep medicine experts, doing so would have multiple
701 positive health benefits.

702 Most Americans favor those abrupt transitions between

703 Standard Time and DST (sic). And as we have heard, there is
704 a lot of inconvenience. But there are clear adverse health
705 effects attributed to this abrupt transition every March, as
706 well. And in a 2020 commentary published in JAMA Neurology,
707 my coworkers and I reviewed the evidence linking the annual
708 transition to DST to increased strokes, heart attacks, and
709 adolescent sleep deprivation, and I have included those
710 details in my written testimony. I would be happy to
711 elaborate on any of those studies in the Q&A portion of this
712 hearing.

713 Now, if there is general agreement that transitioning
714 back and forth between Standard Time and DST is not only
715 unpopular, but detrimental to health, then we are faced with
716 the question: Where do we land? And this morning my goal is
717 to talk with you about clock changes and how they affect
718 health, address your questions about the science of sleep and
719 circadian rhythms, and present the accumulating evidence for
720 why permanent Standard Time is the healthy choice.

721 I will be talking a lot about sunshine today, and
722 sunlight, and permanent Standard Time maximizes sunlight in
723 the winter mornings when we need abundant light to wake up
724 and become alert, and minimizes sunlight late into the summer
725 evenings when too much light can work against our sleep. It
726 is called Standard Time because Standard Time lines up with
727 our natural biological rhythms.

728 Some Americans, including our essential workers who need
729 to report by 7:00 a.m. or earlier, really stand to benefit
730 from permanent Standard Time. And roughly half of our K
731 through 12 students need to be in school before 8:00 a.m.,
732 with many school districts starting in the 7:00 to 7:30 a.m.
733 time range. Our students and many American workers are at
734 risk for chronic sleep loss, and also what is called
735 circadian misalignment. It basically refers to a mismatch in
736 the timing between our work, our school, our sleep routines,
737 and the sun, that all-important light signal from the outside
738 world.

739 Chronic sleep loss, circadian misalignment, or both make
740 us more prone to a whole host of detrimental health effects
741 throughout the lifespan, including obesity, diabetes, ADHD,
742 depression, cardiovascular disease, cancer, and Alzheimer's
743 disease.

744 People with disabilities are also more susceptible to
745 clock changes. I work on how to help children with autism
746 sleep better, and I have cared for multiple children whose
747 sleep worsens after this change to DST with more meltdowns,
748 more hyperactivity, with the changes lasting weeks, very
749 stressful to their parents. And effective interventions for
750 sleep problems and autism include limiting evening light,
751 maximizing morning light. Permanent Standard Time would
752 optimize both of those interventions.

753 In summary, my colleagues and I strongly recommend
754 eliminating the transition back and forth to DST, and
755 adopting permanent Standard Time, the natural and healthy
756 choice. I am looking forward to answering your questions.
757 Thank you.

758 [The prepared statement of Dr. Malow follows:]

759

760 *****COMMITTEE INSERT*****

761

762 *Ms. Schakowsky. I neglected to mention that any
763 members who want to put an opening statement into the record,
764 it will be part of that -- part of the record.

765 So we have concluded with the witnesses' opening
766 statements at this time. We will move to member questions.
767 Each member will have five minutes to ask questions of the
768 witnesses.

769 Since we have witnesses that are presenting remotely, I
770 need to ask my colleagues in this hearing room to mute
771 themselves whenever you are asking a question, but after you
772 ask your question and not speaking, and it definitely helps
773 to more clearly hear the witnesses when they speak if you are
774 muted at that time.

775 I will start with -- by recognizing myself for five
776 minutes. And we know that this issue of Daylight Saving Time
777 has been gaining traction and becoming more widely talked
778 about. This Sunday we will move our clocks up an hour, one
779 hour forward.

780 To each of you, if you could, very briefly just say
781 whether or not you think we need to end the practice of
782 changing our clocks, or do you think that there is a benefit
783 to keeping the status quo that is going forward and backward?

784 So if I could begin with Professor Calandrillo, what is
785 your preference? We can go into more detail later, but what
786 do you think?

787 *Mr. Calandrillo. Yes, certainly, I would like to see
788 us stop the biannual clock switch and move to permanent DST.

789 *Ms. Schakowsky. Mr. -- Dr. Malow?

790 *Dr. Malow. Yes, I would agree there are both health
791 impacts, as well as a lot of inconvenience to people. So I
792 would say it is time to stop going back and forth.

793 *Ms. Schakowsky. Okay, and Mr. Beckwith?

794 *Mr. Beckwith. Yes, we support the current system as it
795 is, because we think there has been a lot of thought into
796 balancing the needs of commerce on one end and, as I said,
797 having kids being able to walk to school when it is light out
798 in the -- during the winter time. So we support keeping the
799 status quo.

800 *Ms. Schakowsky. Got it. The American people actually
801 believe that it is time to end the clock changing. A recent
802 study showed that over 70 percent of Americans are in favor
803 of a systematic -- of a system where we no longer switch our
804 clocks.

805 Again, this question is for each of you: if you had
806 then -- and I think, you know, we heard a bit more, but you
807 may want to elaborate -- if you had to choose between the
808 status quo of changing our clocks permanently -- permanent
809 Daylight Savings Time -- Saving Time or permanent Standard
810 Time, which would you choose, or is there a -- someplace in
811 the middle, in your view?

812 So again, Professor Calandrillo.

813 *Mr. Calandrillo. Yes. Of course, I have given away my
814 punch line already. Permanent Daylight Saving Time has
815 enormous net economic and health benefits.

816 *Ms. Schakowsky. Okay, and Dr. Malow?

817 *Dr. Malow. Yes, I am on the opposite side. I think
818 that permanent Standard Time is the way to go, would be my
819 first choice.

820 *Ms. Schakowsky. And Mr. Beckwith, I guess you said
821 that. You might want to reiterate a reason why you think it
822 is important to maintain the status quo.

823 *Mr. Beckwith. Well, I think it is a balancing act, and
824 we are taking into account both of the discussions in doing
825 so. If there were to be a change, however, we would support
826 permanent Daylight Savings Time.

827 *Ms. Schakowsky. Okay, thank you. So there is a vote
828 that has been called. What we are going to do right now,
829 then, is recess, if that is all right with my co-chair. The
830 -- not co-chair. My ranking member. I do that all the time.
831 My ranking member. And then we will come back and finish the
832 questioning, and hopefully then conclude our hearing.

833 I appreciate the cooperation of our witnesses and
834 members. So let's recess right now, and we will come back
835 after.

836 [Recess.]

837 *Mr. Cardenas. [Presiding] This meeting is now out of
838 recess, and we are back in order.

839 The first order of business is I will recognize
840 Congressman Bilirakis for his five minutes.

841 *Mr. Bilirakis. Thank you, Mr. Chairman, I appreciate
842 it very much.

843 And I want to thank the witnesses again for your
844 valuable insights to this discussion.

845 Mr. Calandrillo -- I hope I pronounced it right -- in
846 your testimony you speak to several reasons why daylight in
847 the evening will make our roads safer. Numbers from NHTSA
848 were recently released on the number of deaths that occur on
849 our roads each year. They are staggering and, frankly,
850 unacceptable, as far as I am concerned.

851 We have to do better, and it starts with this
852 subcommittee acting on legislation that my friend,
853 Representative Bob Latta, has led on for the last five years
854 for advanced driving systems and autonomous vehicles to
855 ensure America leads in these new technologies.

856 So, Mr. Calandrillo, again, a question: can you
857 elaborate on the dangers both our children and senior
858 citizens face in the evening when it gets dark sooner during
859 Standard Time? Obviously, that is a big issue for my
860 district in Florida --

861 *Mr. Calandrillo. Thank you --

862 *Mr. Bilirakis. Yes.

863 *Mr. Calandrillo. Yes, yes, thank you so much, Ranking
864 Member Bilirakis -- another Greek-American, who is wonderful,
865 like my wife, Chryssa.

866 I am excited to hear your question because, you know, I
867 care a lot about traffic fatalities. And the evening rush
868 hour, as I mentioned in my opening, is twice as dangerous as
869 the morning rush hour, right? Many more people on the road,
870 much more [inaudible], and many more car accidents, a 300
871 percent increase in vehicle-on-pedestrian fatalities once
872 twilight hits, according to Susan Ferguson.

873 You know, it is -- we need to push sunlight into the
874 evening. That is when people can benefit from it. That is
875 the most dangerous time to drive, compared to the morning.

876 Now, I am sensitive to childhood fatalities, especially.
877 I got four young school kids myself, and you don't want to be
878 sending them to school in the early morning darkness, right?
879 It is a trade-off, and I get that, and I am very sensitive to
880 that.

881 One of the ways you can deal with that problem is by
882 starting school times later. Certainly in Florida, I know
883 this was experimented with. We need to be pushing back
884 school times, especially for teenagers. My teenager, I don't
885 think, has seen the sunrise in a year or two. They don't
886 like to wake up early. We should be having school at 7:00 or

887 7:00 p.m. -- or a.m. for them. And if we pushed it back, we
888 could deal with some of the danger of early morning darkness
889 that would be created by Daylight Saving Time.

890 *Mr. Bilirakis. I happen to agree, 7:20 is when my kids
891 started high school, and I thought that was always too early.
892 Actually, I started at 7:20, as well, so -- but that is a
893 great reason to start a little later.

894 So, Dr. Malow, I want to ask you a similar question,
895 because in your testimony you include a graphic comparing the
896 difference in Daylight Savings -- or daylight in different
897 cities during Daylight Saving Time. I agree, there are stark
898 differences in the pictures. But I am curious about the flip
899 side.

900 If children are playing in the streets at 4:00 p.m., or
901 if they are playing in their driveways, what have you, at
902 4:00 p.m., and all of a sudden it gets dark -- and that is
903 true in some parts of the country -- this may impact their
904 ability to get enough exercise during the day, which I think
905 is crucial, which, as we know, again, is critical for the
906 health and safety of our kids. This is especially true in
907 the past few years, as our kids are increasingly addicted to
908 social media, unfortunately, and screen time.

909 Do you have any concerns about the level of childhood
910 activity that may be impacted by a potential shift to
911 Standard Time permanently?

912 Again, the question is for Dr. Malow.

913 *Dr. Malow. Yes, that is a great question. And I think
914 that physical activity in kids is really important, and it is
915 a complicated issue because it is not just light, it is also
916 how tired they are, what is going on in their schools.

917 I do want to commend Dr. -- witness Calandrillo for his
918 emphasis on later school start times. I think that is a
919 really important piece of the puzzle. But it is not the only
920 puzzle.

921 I think if our kids are waking up, getting that bright
922 light in the morning, it resets their clock for the night, as
923 well, and they can get much more sleep. Sleep deprivation is
924 improved when you expose people to bright light in the
925 morning because it synchronizes your clock, and I can talk
926 more about that later.

927 So I would say it is a complex issue, and bright light
928 in the morning is a piece of the puzzle that will help our
929 kids get more sleep.

930 *Mr. Bilirakis. I yield back the balance of my time.

931 [Inaudible.]

932 *Mr. Cardenas. The gentleman yields back the balance of
933 his time. Next I will recognize the chairman of the full
934 committee, Chairman Pallone, for his five minutes.

935 *The Chairman. Thank you, Chairman. We heard today, of
936 course, that changing our clocks twice a year severely

937 impacts our health. And over the years the science continues
938 to get clearer, that sleep is vital for our health and
939 well-being. So let me start with Dr. Malow.

940 In your testimony you speak to how sleep loss and
941 changing sleep patterns can have a major effect on our
942 health. Can you elaborate on those concerns, and how
943 stopping spring forward/fall back time changes could help
944 alleviate some of those negative health impacts?

945 *Dr. Malow. Yes. I just want to make sure I understand
946 the question. So --

947 *The Chairman. Well, you know, actually, I can combine
948 two questions, if you don't mind, Doctor.

949 First, I am trying to find out --

950 *Dr. Malow. Okay, sure.

951 *The Chairman. -- you know, how we can -- how, if you
952 got rid of the changing it twice a year, and just either had
953 it all Daylight or all Standard Time, that that would
954 alleviate some of the health impacts, and then more about how
955 we should be thinking about kids in the context of that.

956 I am an advocate for getting rid of the changing it. I
957 haven't decided yet whether I want Daylight or Standard, but
958 I don't think we should go back and forth.

959 *Dr. Malow. Right. So starting with that issue, the
960 going back and forth, really briefly, and then I will get to
961 the other one, where should we go with that.

962 I think that there are -- there is clear evidence that
963 going back and forth not only affects adults with the heart
964 attacks and strokes, but also affects our kids, particularly
965 with teen sleep deprivation. Teens are really susceptible
966 because, as we go through puberty, our melatonin, our natural
967 melatonin levels are pushed later, and we just have a really
968 hard time going to sleep, particularly as teens. And then
969 you throw in everything else that is going on with teens, in
970 terms of school and all, and it really could create a lot of
971 sleep deprivation -- the school start times that were
972 mentioned that are often times very early.

973 So I do think there is a big argument for child health,
974 teen health by getting rid of this transition back and forth.
975 Now, the reason I think permanent Standard Time is the
976 healthy choice is because we need light in the morning to
977 become alert, to get ourselves going. The kids need to be
978 alert to go to school to learn. They are also often times on
979 the road driving in the dark, and there have been multiple
980 studies that have shown that motor vehicle crashes are more
981 common when kids are driving to school in really early
982 morning hours, like the 7:00 hour versus the 8:00 hour. So
983 that is one area where kids are really affected, and the
984 permanent Standard Time would make a huge difference.

985 And then we also see the impacts of sleep loss in these
986 kids on depression, ADHD, self-harm, obesity, which is a huge

987 issue right now in our kids. So there is a lot of health
988 aspects where getting more sleep, which would happen when you
989 get that daylight in the morning to wake you up, get you go,
990 makes it easier to go to sleep at night, and having less of
991 that late evening light, which can really mess up our sleep
992 patterns.

993 All of that, the early morning light, less light in the
994 evening would be promoted by having permanent Standard Time
995 adopted.

996 *The Chairman. Thank you.

997 Now let me just ask -- we know that the economy is hurt
998 by changing our clocks. Workers lose productivity, workplace
999 injuries rise. So let me just ask Mr. Calandrillo. I only
1000 have a minute.

1001 In your testimony you mentioned the stock market
1002 averages a negative return on the Monday following when we
1003 switch our clocks. What other parts of the economy see a
1004 swing when we change our clocks?

1005 *Mr. Calandrillo. Thank you so much, Chair Pallone, I
1006 really appreciate that from my great home state of New
1007 Jersey, where I was born and raised.

1008 I really appreciate the emphasis on not just the health
1009 effects, but also the economic effects. As Dr. Malow says,
1010 right, you know, it is the changing of the clocks that is
1011 most responsible for health impacts.

1012 And as far as the economic impacts, right, you know,
1013 commerce flourishes in the sunshine, right? People feel a
1014 lot safer going out to the store to go shopping in the
1015 evening sunshine. They don't do a lot of that at 6:00 a.m.
1016 [Inaudible] a lot of that at 6:00 p.m., in the after school
1017 hours or after work hours. That is when people go out and
1018 engage in economic commerce. And so that is why putting our
1019 sunlight there helps aid that process.

1020 *The Chairman. All right. Thank you so much.

1021 Thank you, Mr. Chairman.

1022 *Mr. Cardenas. The gentleman yields back. Mrs.
1023 Rodgers?

1024 *Voice. Not here. Mr. Upton is not here. Latta.

1025 *Mr. Cardenas. Okay, next we will go to Congressman
1026 Latta for his five minutes.

1027 *Mr. Latta. Well, thank you very much, Mr. Chairman.
1028 And today we are in committee examining Daylight Savings
1029 Time.

1030 The question is, is this the topic on the top of our
1031 constituents' mind right now? I haven't had a constituent
1032 write to my office since October 2020 about Daylight Savings
1033 Time. What they are contacting about is the invasion of the
1034 Ukraine, rising gas prices, and inflation.

1035 The other things we should be talking about is American
1036 energy independence. Last year the United States purchased

1037 approximately \$17.3 billion in crude oil and petroleum
1038 products from Russia. That money is being pumped into
1039 Putin's economy, and turned into the usage of war against
1040 Ukraine.

1041 Examining on how we can keep our communities safe and
1042 stopping the spread of illegal substances such as fentanyl --
1043 and the emergency fentanyl scheduling expires on the 11th.

1044 You might say, well, this is the Consumer Protection
1045 Subcommittee. We don't have jurisdiction over those issues.
1046 In that case, let's talk about the important issues that we
1047 could be examining in a hearing today: autonomous vehicles,
1048 as our ranker mentioned a little bit earlier; the national
1049 privacy standard; holding Big Tech accountable. While we
1050 have had a few hearings, we need to have more because of the
1051 attention it needs.

1052 Cybersecurity, especially how it relates to securing our
1053 systems against bad actors like Russia.

1054 Ongoing issues with WHOIS availability, so that our law
1055 enforcement can track down bad actors online.

1056 Oversight of the FTC. The Commission has been pretty
1057 busy, and we should have them before us so we can perform our
1058 oversight role.

1059 The question surrounding artificial intelligence has
1060 counterparts in Europe set down their own standards, leaving
1061 us to catch up.

1062 It is my sincere hope that we move forward this
1063 Congress. We can have hearings in this committee and
1064 subcommittee aimed to address the issues that are affecting
1065 the day-to-day lives of Americans.

1066 But moving on to today's topic, one of the -- you know,
1067 it has been talked about a little bit earlier, but I would
1068 like to maybe go back and examine it again and ask a few
1069 questions. Dr. Malow, if I could ask you, you know, when you
1070 look at the question about kids going to school earlier in
1071 the morning -- and again, I live on the -- more on the
1072 western side of the Eastern Time zone -- but you had some
1073 photos in your testimony about showing what 8:00 a.m. looks
1074 like across the different areas and different times.

1075 And so I am just kind of curious. In your research --
1076 again, if I could bring it up again -- the safety factors of
1077 kids, I know it was mentioned a little bit earlier, maybe
1078 that the -- starting schools later, but a lot of that can't -
1079 - you know, you can't start schools, because they are set to
1080 a certain time.

1081 But the safety issues for children going to school,
1082 especially in the dark, have you done any research on
1083 accidents and things like that?

1084 *Dr. Malow. Thank you so much for asking that. There
1085 are quite a few studies that have been done, and some of them
1086 are in my testimony, and I can send others. I will just

1087 quote one, which was done in Virginia and looked at -- it was
1088 published in the last few years, but it looked at 2009 to
1089 2011 and the teen drivers who were driving at -- let's say
1090 they had school starting at 7:20 in the morning. They had
1091 much higher crash rates than those with start times at 8:45
1092 a.m., and it was attributed to driving to school in the dark,
1093 and being sleep deprived.

1094 And what -- the issue there is, when we are sleepy, we
1095 not only have that tendency to want to fall asleep and drift
1096 off at the wheel, but we are also more likely to take risks.
1097 We are more likely to text while driving, or not wear our
1098 seatbelt.

1099 So those are really important issues, and permanent
1100 Standard Time, by maximizing light in the morning,
1101 particularly in those areas you mentioned, those western edge
1102 time zones, where it is even darker in the morning -- or I
1103 should say it doesn't become light at the same time as the
1104 rest of the country as easily -- those are specific areas
1105 that would benefit from permanent Standard Time.

1106 *Mr. Latta. Thank you. Well, you know, my work with
1107 working on autonomous vehicles, one of the things we know is
1108 that, you know, unfortunately, traffic accidents are up
1109 across the country. When you look at 94 percent of
1110 automobile accidents are caused by driver error, and
1111 unfortunately, in the last -- you know, when you look at the

1112 statistics from 2020, we see that pedestrian deaths have gone
1113 up.

1114 And an interesting -- you know, unfortunately, when you
1115 look at this going up five percent from the year before, and
1116 seven states in particular have more than half of the deaths,
1117 and that is Arizona, California, Florida, Georgia, New York,
1118 North Carolina, and Texas. And so, you know, I worry about
1119 not only the kids going to school in the dark, but also when
1120 you think about our morning runners, walkers, and bike riders
1121 out there.

1122 So, you know, as we proceed, you know, we have to look
1123 at all these factors because, again, we want to make sure
1124 that the roads are safe out there, the roads are safe for our
1125 kids, and for the people that use them, either the motorists
1126 or the people walking, riding, or running beside them.

1127 And so, Mr. Chairman, I have a couple of seconds left,
1128 but I will yield back the balance of my time. Thank you very
1129 much.

1130 *Mr. Cardenas. The gentleman yields back the balance of
1131 his time. Next I will recognize Congressman Rush for his
1132 five minutes.

1133 *Mr. Rush. I want to thank you, Mr. Chairman, for this
1134 outstanding and critical hearing.

1135 Dr. Malow, in your testimony you discuss the "adverse
1136 health effects'' that comes from changing our clocks twice a

1137 year. And, as we have seen time and time again, it is a
1138 factor that -- across multiple sectors, when White America
1139 gets a cold, Black America gets pneumonia. That stated, is
1140 there any evidence that this trend holds here in this
1141 particular topic that we are discussing?

1142 More simply, are the -- are there -- are these negative
1143 consequences felt more acutely or more permanently in low-
1144 income or minority communities? If so, can you please
1145 discuss why this exists?

1146 *Dr. Malow. Thank you for that question very much.
1147 Yes, I do feel that people of low income, regardless of
1148 color, are susceptible to these effects, even more of sleep
1149 loss. And the reason I say that is some of us are able to
1150 wake up and roll out of bed and join a Zoom meeting, but some
1151 of us can't. Some of us have to be at work -- essential
1152 workers, for example -- at 6:00 a.m., 6:30, 7:00 a.m., when
1153 it is pitch dark outside. And that really puts a burden on
1154 people who can't control their hours.

1155 And that is, to me, the -- that and the students are the
1156 two groups that are most vulnerable to it being dark in the
1157 morning, because they get -- they don't get as much sleep at
1158 night because, as I said, you need that light to synchronize
1159 your rhythms.

1160 And there is also this concept I mentioned in my
1161 statement called circadian misalignment, where, when you are

1162 trying to go somewhere in pitch black, and you are turning on
1163 artificial lights, and you are trying to drive somewhere to
1164 get to your job, that is where we start seeing obesity,
1165 cancer, all these co-hosts of detrimental effects. And
1166 people who can't control their hours, like those who have
1167 lower socioeconomic, potentially some racial differences as
1168 well, are going to be more susceptible to those health
1169 effects. So they are quite vulnerable.

1170 *Mr. Rush. So would you elaborate on the changing time,
1171 and the negative effects on the mental health conditions of
1172 our -- citizens of our nation, specifically?

1173 And is changing time responsible for producing or
1174 exaggerating any mental health symptoms or illnesses?

1175 *Dr. Malow. Yes. And again, I want to say mental
1176 health is a complicated thing. It is not just one thing.
1177 But I do -- there is literature to support that depression
1178 and other mental health issues, ADHD are affected by not
1179 having proper sleep.

1180 And we know that the idea of permanent Standard Time
1181 would maximize sleep. It is the right choice for sleep. And
1182 everything else, all those health benefits, would then follow
1183 from adapting the permanent Standard Time.

1184 *Mr. Rush. So the lack of sleep, does that in any way
1185 hamper your ability to cope with the -- what one might
1186 consider stress, or does that exacerbate stress in one's

1187 life?

1188 *Dr. Malow. Yes. Yes, I mean, I know -- we all know
1189 how we feel when we are sleep deprived. We are more apt to
1190 send that email we will regret later.

1191 I just experienced sleep deprivation the last few days
1192 because I have been working to get this brief done and
1193 testify today. And it reminded me how, when I don't get my
1194 seven to eight hours of sleep, how I just don't feel like I
1195 am fully on my game, and that affects mood, that affects
1196 irritability, that affects how we talk to each other as
1197 American citizens.

1198 So I am a huge advocate -- that is why I am a sleep
1199 specialist -- in getting enough sleep. And again, that
1200 permanent Standard Time would promote more sleep for everyone
1201 -- well, for most of us.

1202 *Mr. Rush. And my last question -- I only have a few
1203 seconds -- are you -- is your calendar open for about 400
1204 Members of Congress to be your patients?

1205 [Laughter.]

1206 *Dr. Malow. Absolutely, [inaudible].

1207 *Mr. Rush. Thank you. I yield back, Mr. Chairman.

1208 *Mr. Cardenas. The gentleman yields back the balance of
1209 his time. Next I will recognize Congresswoman Rodgers, the
1210 ranking member of the full committee.

1211 *Mrs. Rodgers. Thank you, Mr. Chairman.

1212 Mr. Beckwith, today is the National Association of
1213 Convenience Stores fly-in day. I am looking forward to
1214 meeting with a couple of your colleagues from my home
1215 district, Dan Alsaker and Tammy Hedrick. I know you are busy
1216 with the fly-in, and so I really appreciate you joining us.

1217 In your testimony you reference a study that compared
1218 the spending changes in LA, which observes Daylight Savings
1219 Time, and Phoenix, which does not. While the results of this
1220 study found that spending in LA increased during Daylight
1221 Savings Time and decreased in Standard Time, I believe it is
1222 important to highlight two bordering states that use
1223 different practices for determining the time.

1224 Currently, the patchwork of state privacy and data
1225 security laws continues to increase, and that will lead to
1226 greater confusion for businesses and consumers. I fear that
1227 the same may occur with the fragmented Daylight Savings Time
1228 practices. Can you speak to any potential burdens your
1229 members may face in each state when they are choosing whether
1230 to recognize the permanent Standard Time, permanent Daylight
1231 Time, or remain status quo?

1232 *Mr. Beckwith. Thank you for the question. Absolutely.
1233 First of all, we completely agree with you on data security,
1234 that that needs to be standardized.

1235 When we look at Daylight Savings Time, it is [inaudible]
1236 less clear. I put in my testimony, written testimony, that I

1237 think it is a misnomer to call it Daylight Saving Time. It
1238 is really daylight optimization time. It recognizes the fact
1239 that the days get shorter in the winter and get longer in the
1240 summer, and that is exacerbated the further away from the
1241 equator you get. So the northern states have a far greater
1242 effect of that.

1243 I think it is really helpful in this discussion to also
1244 utilize time zones as a point of reference. So we all
1245 acknowledge that the sun rises differently in Washington,
1246 D.C. than it does in a different time in Los Angeles. And so
1247 we have different time zones. And yet it is an imperfect
1248 system, because you have to draw the line somewhere, and
1249 eventually you are going to have that weird situation
1250 somewhere in America, where it is 7:00 on one side of the
1251 street and 8:00 on the other side of the street. And yet we
1252 understand the value of having different time zones.

1253 So certainly, there are situations where communities or
1254 states are less affected by the time change. You know,
1255 either they are close to a time zone change, or they are
1256 farther south, and the days -- the difference between day
1257 length isn't that significant between winter and summer. And
1258 so certainly there is room for flexibility, and that
1259 flexibility exists right now in certain communities where it
1260 just doesn't work for them.

1261 But as a general rule, having the same type of time

1262 change around the country makes sense, so everyone is working
1263 off the same clock. So yes, there is room for exceptions
1264 because it is an imperfect system. But in general, it is
1265 good for everyone to adhere by basically the same rules.

1266 *Mrs. Rodgers. Thank you. I appreciate that insight.

1267 Mr. Calandrillo, it is great having a Washington Husky
1268 with us today. Thank you for participating, and you have
1269 done a lot of work around this. Would you comment on the
1270 potential patchwork of state bills from a broader economic
1271 and industry perspective, and specifically some of the
1272 industries like airlines?

1273 *Mr. Calandrillo. Yes, thank you so much, Ranking
1274 Member Rodgers. I really appreciate the U-dub shout-out,
1275 too.

1276 Right, we want to have uniformity, generally. I mean,
1277 that is why we -- Congress -- passed the Uniform Time Act
1278 back in 1966, because at the time, you know, different states
1279 and different cities were observing different clocks. And so
1280 Minneapolis, Minnesota was on a different clock than St.
1281 Paul, Minnesota, which is right across the river. And that
1282 creates confusion. So that is why we passed the Uniform Time
1283 Act, which is, if you are going to spring forward, it has got
1284 to be on the same day as everybody else. If you are going to
1285 fall back, it has got to be on the same day as everybody
1286 else, and that helps. That uniformity certainly does help

1287 commerce. So I am in favor of that.

1288 But I want to make it clear I favor the permanent
1289 Daylight Saving Time. You know, we talked about the safety
1290 issues just a few minutes ago. The National Safety Council
1291 found that pedestrians would be safer with Daylight Saving
1292 Time than with Standard Time. We don't want sunlight at 4:30
1293 a.m. in the morning for economic and health reasons. I
1294 assure you, if we had Standard Time [inaudible], and that was
1295 the sunrise time, 4:24 a.m., New York City in the start of
1296 summer, nobody is going to be out as a pedestrian at that
1297 time observing it, and nobody is out engaging in commerce at
1298 4:30 a.m., right? We need to put the hour of the sunlight
1299 into the day, part of the day, where it matters most. That
1300 is what Ben Franklin talked about centuries ago in his
1301 satirical discussion of the waste of daylight.

1302 Certainly, you know, in terms of economics, all the
1303 Chambers of Commerce -- I shouldn't say all, but the great
1304 majority, including the U.S. Chamber of Commerce, says the
1305 economic effects of Daylight Saving Times are dramatically
1306 positive.

1307 *Mrs. Rodgers. Great. I appreciate the inspiration of
1308 Ben Franklin.

1309 I yield back.

1310 *Mr. Cardenas. The gentlewoman yields back the balance
1311 of her time, and I will now recognize Congresswoman Trahan

1312 for her five minutes.

1313 *Mrs. Trahan. Well, thank you, Mr. Chair.

1314 Last Tuesday, during his first State of the Union
1315 address, the President highlighted an issue I know my
1316 colleagues care deeply about, and that is youth mental
1317 health. The issue has been one of the centerpieces of my
1318 legislative agenda.

1319 In fact, in March I joined the chair, Congressman
1320 Cardenas, to introduce Youth Mental Health and Suicide
1321 Prevention Act, legislation to support positive mental health
1322 promotion and suicide prevention programs in high schools.
1323 The bill would authorize HHS to establish a grant program for
1324 school districts to strengthen behavioral health services
1325 awareness, and address mental health and suicide prevention
1326 needs.

1327 Additionally, I have worked with Congresswoman Castor to
1328 continually advocate for kids' safety online, aiming to
1329 create online spaces that have a positive impact on youth
1330 mental health through the Kids Internet Design and Safety
1331 Act, or KIDS.

1332 And most recently, my office has been investigating
1333 online suicide forums and the ways they encourage and provide
1334 instruction to struggling youth.

1335 These are big issues. They require new regulations, new
1336 funding streams, and agency resources. Today we are talking

1337 about something that may feel simple to a lot of folks:
1338 changing clocks. But changing clocks can impact teen mental
1339 health, and that is what I want to explore today.

1340 Dr. Malow, can you speak as to why a consistent sleep
1341 pattern is important for teen brain development and mental
1342 health?

1343 *Dr. Malow. Yes, thank you so much for that question,
1344 and I referenced in my written testimony a consensus
1345 statement of the American Academy of Sleep Medicine on health
1346 and the consequences for our kids.

1347 I was fortunate enough to be one of the authors on this.
1348 It was published in 2016, but I think things are even more
1349 grim these days with teen mental health. And we basically
1350 talked about what are the consequences when kids are not
1351 getting the sleep they need, and we specifically talked about
1352 mental health, including risk of self-harm, suicide thoughts,
1353 and suicide attempts. So I really appreciate your bringing
1354 this forward.

1355 When kids are sleeping better, they are less apt to take
1356 a role in risk-taking activity, in suicide issues. And the
1357 best way -- I think there are a few simple things our country
1358 could do, either at the state level, with the later school
1359 start times -- that has been brought up by others today --
1360 and then, of course, having more light in the morning to
1361 promote sleep, which would be the permanent Standard Time.

1362 And I so commend you for bringing that up, because I
1363 think that the mental health of our children is critical
1364 right now.

1365 *Mrs. Trahan. Thank you, Doctor. And Professor
1366 Calandrillo, how could extra sunlight in the evening
1367 encourage outdoor play?

1368 Have you seen any data regarding an increase in outdoor
1369 play correlating with less screen time for children?

1370 *Mr. Calandrillo. I really appreciate that question,
1371 and I agree with everything that Dr. Malow and you just said,
1372 but I actually think that the mental health issue -- and
1373 certainly, the screen time issue -- these are all bettered by
1374 permanent Daylight Saving Time, not permanent Standard Time.
1375 No kid is going off to play at 4:30 a.m. or 5:30 a.m. or 6:30
1376 a.m. in the morning. They do that at 4:30 or 5:30 or 6:30
1377 p.m., and that is what gets kids outside, like my kids,
1378 enjoying outdoor unsupervised [inaudible].

1379 And by the way, you know, in terms of the mental health
1380 goals, right, you know, there is a big problem with SAD,
1381 Seasonal Affective Disorder, and depression if you don't have
1382 sunlight in the part of the day when you are awake to use it,
1383 which is the afternoon and evening. Ninety-nine percent of
1384 the public is awake, kids are awake. They are not -- you
1385 know, only half of them are awake in the morning.

1386 We need to -- I think both -- you know, I think the

1387 depression statistic, health outcome measures, the other
1388 economic measures all would be served by moving that hour
1389 into the part where more people can use it.

1390 *Mrs. Trahan. Well, thank you for that.

1391 Mr. Beckwith, do you have anything to add?

1392 *Mr. Beckwith. I am not a doctor, so I don't really
1393 have anything to comment about mental health.

1394 I will comment briefly, though. The comment that moving
1395 the clock ahead one hour once a year is dangerous really begs
1396 the common sense question: If that is true, we have bigger
1397 problems.

1398 If you look at your colleagues, every Sunday or Monday
1399 the majority of your colleagues are returning from their
1400 districts. They are returning with one, two, three hours of
1401 sleep deprivation. And let's not even talk about the ones
1402 from Hawaii and Alaska. So if setting the clocks ahead one
1403 hour is dangerous, flying east is deadly.

1404 *Mrs. Trahan. Yes, thank you for that.

1405 Look, mental health challenges have become a national
1406 crisis. And as a mother of five, this issue hits home, and
1407 it is worth thinking about a variety of legislative
1408 approaches that could address the problem, including putting
1409 an end to changing the clocks.

1410 Thank you, Mr. Chair. I yield back.

1411 *Mr. Cardenas. The gentlewoman yields back the balance

1412 of her time. Next I will recognize Congressman Dunn for his
1413 five minutes.

1414 *Mr. Dunn. Thank you, Mr. Chairman. You know, I am
1415 keenly aware of the arguments regarding Daylight Savings Time
1416 for Florida, where any average day is so enjoyable, so
1417 healthy, so full of beauty that it seems only logical that
1418 many of our residents and our over 100 million tourists a
1419 year are longing to extend every day.

1420 I confess, however, that I was surprised -- shocked,
1421 even -- that this subject took central stage in the
1422 deliberations of this committee at this particular moment in
1423 history. Like all of us gathered here, my days, nights,
1424 weeks, and weekends have been consumed for months with our
1425 efforts to avoid war, save our brave Ukrainian friends, and
1426 unify our NATO allies so that this barbaric invasion does not
1427 spill over into even more of Europe, thus precipitating the
1428 most dangerous possibility of thermonuclear war that we have
1429 seen since the Cuban Missile Crisis.

1430 We also need to restore our energy independence, gone
1431 now for just one year. It seems so long ago. January of
1432 2021, American independence was real. I was paying \$2 a
1433 gallon for gas. Energy independence for the free world is a
1434 vitally important goal for international security, for life,
1435 and for liberty.

1436 And crime -- my God, the crime wave we face with our

1437 defunded and demoralized police, still heroic law enforcement
1438 officers at all levels. Surely this subject commands our
1439 attention.

1440 I know that our sheriffs and police would be grateful if
1441 we focused some of our attention and time on the massive
1442 human trafficking operations on our southern border that pour
1443 billions of dollars into the drug cartels' pockets, and
1444 deliver record amounts of deadly drugs to America at the same
1445 time. Sadly, this leads to record numbers of death among our
1446 young Americans by overdose, and a surge in associated crime.

1447 Or we might have devoted this time to examining ways to
1448 reverse the highest inflation we have seen in 40 years,
1449 inflation that is rapidly eroding the life savings of many
1450 Americans, and decreasing real wages for all of us daily.

1451 All of these problems have roots in areas that this
1452 committee has jurisdiction over. And I know all of our
1453 members on both sides of the aisle have ideas about how to
1454 help our fellow Americans. However, we have chosen to turn
1455 the talents and time of this committee to review the benefits
1456 and costs of permanent Daylight Savings Time.

1457 Well, for the record, I favor permanent Daylight Savings
1458 Time that does not move the current boundaries of time zones.
1459 But I don't believe that doing that will improve any of the
1460 problems that I just mentioned, all of which still await our
1461 urgent attention.

1462 With that, Mr. Chair, I yield back.

1463 *Ms. Schakowsky. The gentleman yields back the balance
1464 of his time. Next I will recognize Congressman McNerney for
1465 his five minutes.

1466 *Mr. McNerney. I thank the chairman, I thank the
1467 witness. It is an interesting discussion, for sure, one that
1468 affects all of us every year. So I am going to get it out on
1469 the table here.

1470 Dr. Malow, I believe the science surrounding this issue
1471 must inform our policy decisions. So how do you view the
1472 health benefits of utilizing sunlight versus the health
1473 benefits of a proper circadian alignment?

1474 *Dr. Malow. Yes. So I think what you are asking is how
1475 does sunlight fit into this whole circadian misalignment
1476 issue, is that correct?

1477 *Mr. McNerney. Right.

1478 *Dr. Malow. Yes. I am really glad you asked that
1479 question, just so I could clear it up a little bit.

1480 So basically, when it is light in the morning, I have
1481 explained that that gets us going, gets us alert. It
1482 actually resets our clock, so that it is easier to fall
1483 asleep at night. And that is important, because we need to
1484 get proper sleep so that we can feel good and do all the
1485 things that are important for our health.

1486 And when we get light too late in the day and in the

1487 evening -- so -- basically, in the winter we want to get our
1488 light in the mornings, and that is what the permanent
1489 Standard Time would help promote.

1490 Now, in the evening we want to get less light. I am not
1491 talking about 5:00, 6:00 at night. I am talking about 10:00
1492 at night. When I lived in Michigan, we would have to
1493 postpone fireworks on July 4th until after 10:00, because it
1494 wasn't dark yet. And that light is what interferes with our
1495 falling asleep, because we need it to be dark to produce our
1496 natural melatonin and help us fall asleep.

1497 So as an example, people who are on those western edges
1498 of those time zones tend to get less sleep. People have
1499 actually documented they get less sleep, they have more
1500 health issues like obesity. Even cancer has been linked to
1501 those western edges because they are not getting enough light
1502 in the morning, and they are getting too much light in the
1503 evening. And that is what contributes to not just sleep
1504 deprivation, but that whole mismatch that we refer to as
1505 circadian misalignment.

1506 And what the permanent Daylight Time would do is
1507 exacerbate that effect, because you would be getting even
1508 less light in the morning in the winter, and more light in
1509 the evening, while permanent Standard Time, which is more
1510 healthy, would promote more sleep, promote more circadian
1511 alignment. It is called Standard Time because it is more

1512 natural. It fits our regular sleep/wake patterns --

1513 *Mr. McNerney. So --

1514 *Dr. Malow. -- and promotes sleep.

1515 *Mr. McNerney. I don't want you to filibuster my whole
1516 three to five minutes.

1517 How does the impact of changing a clock by one hour
1518 compare with jet lag for one hour difference, or --

1519 *Dr. Malow. Yes, yes --

1520 *Mr. McNerney. -- for more than one hour?

1521 *Dr. Malow. Yes, and I will try to be brief, but I just
1522 had wanted to make sure I got the basic facts in.

1523 So it is very different when we go, let's say, from
1524 Chicago to D.C., because what is happening is we are changing
1525 our clock, but we are also changing our environment, and we
1526 are following the sun. So everything changes. And it is --
1527 we -- the sun actually helps us reset our circadian rhythms.

1528 But when we -- next weekend, when we turn the clock
1529 forward, we are not changing our environment. So it is a
1530 very artificial thing, and we are actually on -- we are off
1531 kilter. We are off sync by an hour for eight months during
1532 the year, when we are on this -- the permanent -- you know,
1533 when we make the change to Daylight Saving Time.

1534 *Mr. McNerney. Okay.

1535 *Dr. Malow. So that is the difference.

1536 *Mr. McNerney. Professor Calandrillo, in 2011 Russia

1537 switched to a permanent Daylight Savings Time, but it was
1538 widely unpopular, and the decision was reversed in three
1539 years. The same thing happened in the UK in 1971, and the
1540 U.S. in 1974, after complaints about children going to school
1541 in the dark, and so on.

1542 How do proponents of Daylight Savings Time address that
1543 sort of issue, that sort of challenge?

1544 *Mr. Calandrillo. Yes, thank you, Representative. It
1545 is a good question.

1546 Certainly, we don't want to increase harm to
1547 schoolchildren in the early morning darkness. And certainly,
1548 in the 1974 year-round Daylight Saving Time experiment, some
1549 of the headlines were schoolkids were at greater risk in the
1550 morning, certainly in Florida and maybe California.

1551 But it is important to not just look at anecdotes, but
1552 to look at studies, right? The National Safety Council, you
1553 know, looked at the 1974 data, and concluded in 42 states
1554 plus Washington, D.C. there was no increase in danger to
1555 schoolchildren. Because even though there was more morning
1556 darkness, there was much more afternoon sunlight, and those
1557 kids saved in the afternoon. But they never made headlines,
1558 right?

1559 Obviously, the accidents in the mornings do make
1560 headlines, and it breaks my heart, right? That is a tragedy,
1561 when that happens. But we have to understand that we need to

1562 put the sunlight into the portion of the day when all kids
1563 are up and moving around the town, not just the portion of
1564 the day when only half are awake.

1565 Like I say, 4:30, 5:30, 6:30 a.m., a lot of people are
1566 still asleep at that time, and no one benefits from sunlight
1567 at that time. Whereas, if you look at sunset times, 99
1568 percent of the population is awake, and benefits in terms of
1569 their health and in terms of the economy.

1570 *Mr. McNerney. All right. Well, my time has expired,
1571 more than expired, so I am going to have to yield. Thank
1572 you.

1573 *Mr. Cardenas. The gentleman yields back. Next I will
1574 recognize Congresswoman Lesko for her five minutes.

1575 *Mrs. Lesko. Thank you, Mr. Chair, and thank you to the
1576 people testifying today.

1577 I am from the great state of Arizona. Dr. Malow, in
1578 your testimony you spoke about the health benefits of
1579 permanent Standard Time. Arizona has observed permanent
1580 Standard Time for 40 years now. Has there been any medical
1581 studies done or medical data to demonstrate that Arizonans
1582 are less likely to experience the negative health outcomes
1583 you described if we went to permanent Daylight Time?

1584 *Dr. Malow. That is a great question, and I have not
1585 been able to find that. I think most of the work has been
1586 done more on these edge effects and all, and trying to look

1587 at health issues. So no. I am going to continue to look for
1588 that, and if I find anything I will let you know.

1589 *Mrs. Lesko. Thank you. And I am just -- I said the
1590 same thing to the chairwoman -- is -- don't -- please don't
1591 mess with Arizona. We have been doing this for 40 years.
1592 There is differences in the states. In Arizona it is very
1593 hot in the summer. In fact, a lot of our workers that work
1594 on rooftops, doing new roofs, or on the highways, they
1595 actually work in the middle of the night, because it is just
1596 too hot. And so any time you change anything to Arizona,
1597 Arizonans are going to be upset, and it will have
1598 consequences that may -- that people from the East Coast may
1599 not think about.

1600 And with that, I yield back.

1601 *Mr. Cardenas. The gentlewoman yields back the balance
1602 of her time. I will recognize myself for five minutes.

1603 I would like to thank the witnesses for coming today,
1604 and for your testimony and your opinions, and conveying your
1605 research to us, as well. Also to the chairwoman, thank you
1606 so much for having this important issue discussed before the
1607 people of our country. And also, Ranking Member Bilirakis,
1608 thank you so much, as well.

1609 As was mentioned earlier, there are many, many issues
1610 that we could be discussing in this committee. And believe
1611 it or not, this committee is a very prolific committee,

1612 covering probably more issues than any other policy committee
1613 in the House or the United States Senate. So with that I
1614 would like to once again thank all the chairs and ranking
1615 members of all the committees for all the important issues
1616 that we cover.

1617 And we can walk and chew gum at the same time in the
1618 United States Congress, and we can talk about time zones, and
1619 what it does to people, especially our children. So with
1620 that, Dr. Malow, in your testimony you touch on the effects
1621 on -- transitioning from Standard Time to Daylight Savings
1622 Time every year in March, and the negative effects that are
1623 associated with -- sleep loss has on adolescent attention
1624 span and mental health.

1625 You mentioned depression, specifically. Can you expand
1626 on how losing even as little as 30 minutes of sleep can
1627 affect adolescent mental health?

1628 *Dr. Malow. Yes, thank you so much for that question.

1629 I have been impressed in the work I did with the
1630 consensus panel of the American Academy of Sleep Medicine.
1631 We reviewed many, many studies. And even a small amount of
1632 sleep loss can make a huge difference in how our adolescents
1633 feel, and how they -- how alert they are in school, their
1634 mental health.

1635 You know, I know things have been said about the screen
1636 time, and I -- in the afternoons, and I certainly see that it

1637 is a complex picture. It is a lot of different things. But
1638 I, as a sleep specialist, feel like the [inaudible] cause of
1639 so much [inaudible] adolescence is the poor sleep and the
1640 fact that they are just really sleep deprived. A lot of them
1641 aren't even getting six hours of sleep a night. And light in
1642 the morning would help tremendously, along with, as was
1643 mentioned, making school start times later, which would help
1644 promote sleep.

1645 *Mr. Cardenas. I would like to ask you a question, Dr.
1646 Malow, in your expert opinion.

1647 Let's just say a child is playing video games for four
1648 or five and six and eight hours a day, and -- what kind of
1649 effect could that have on a child's sleep pattern, if they
1650 are doing something like that in a chronic way, where they
1651 are actually doing it daily, they are doing it very
1652 consistently, and something that perhaps is -- a question
1653 mark for me is, could that have an effect on a child's sleep?

1654 *Dr. Malow. Yes, for sure. When people are -- when
1655 kids are on their phones, it can affect their sleep patterns.
1656 The way I look at it is there is blue light from our phones.
1657 You probably have heard about that. Well, sunlight is the
1658 most potent source of blue light.

1659 So getting those phones out of the bedroom, and being
1660 turned off at night, and also trying to get rid of some of
1661 that excessive light -- again, we are not talking about light

1662 at 5:00 or 6:00, we are talking about light at 9:00, 10:00
1663 that really interferes with sleep. And sunlight is one of
1664 the most potent sources of blue light there is, so -- it is
1665 the key source.

1666 So I think we need to do both. We can't say it is just
1667 the times. I think we have to look comprehensively at what
1668 is going on with our kids.

1669 *Mr. Cardenas. Well, Doctor, speaking of
1670 comprehensively, it just occurred to me that perhaps at least
1671 twice a year, maybe we -- whether it is state governments,
1672 local governments, and Federal governments -- when people are
1673 finally thinking about daylight or darkness, and having to
1674 change their clocks, maybe that is a great opportunity to
1675 remind the American people about maybe some better practices,
1676 like how to help people to ask their kids or get their kids
1677 to get outside, and get some of that sunlight. Do you think
1678 it would be a good practice for us to try to do something
1679 like that?

1680 *Dr. Malow. I do. I mean, I take advantage of what I
1681 call and my colleagues call the twice-yearly media blitz
1682 related to Daylight Saving Time, going back and forth, to
1683 really educate the American public on sleep and its
1684 importance, and getting off your phones, getting more
1685 exercise, getting more morning light. All of that is super
1686 important. I think that is a great point you made.

1687 *Mr. Cardenas. Okay. Well, thank you. I know that
1688 some of the testimony has to do with the economy and things
1689 of that nature, but I think well-educated school kids, if we
1690 focus on them, that will definitely contribute to a stronger
1691 economy when they are actually better educated and better
1692 prepared to enter into the workforce.

1693 So whether it is Daylight Savings Time or anything like
1694 that, I think it is important for us to recognize that we
1695 have opportunities to go ahead and enlist other policies and
1696 other activities when people are paying attention to these
1697 kinds of things.

1698 Next -- my time is expired, and I will recognize
1699 Congresswoman Dingell.

1700 *Mrs. Dingell. Thank you, Mr. Chairman. This hearing
1701 could not be more timely, as we prepare to spring forward
1702 this weekend and witness the resulting impacts to our small
1703 businesses, economy, and public health.

1704 It is our responsibility to weigh the benefits of any
1705 potential changes to Federal policy regarding Standard and
1706 Daylight Savings Time. As a member representing Michigan, as
1707 you cite in your testimony, Dr. Malow, this hearing is
1708 incredibly impactful for my constituents, and I look forward
1709 to the discussion and listening to everybody this morning.

1710 This is a question for the entire panel. Do you believe
1711 that switching between Standard and Daylight Savings Time

1712 twice a year ultimately has set -- has had negative health
1713 impacts on Americans, yes or no?

1714 Professor Calandrillo?

1715 *Mr. Calandrillo. Yes, and I certainly agree the
1716 biannual switch is bad. But permanent Daylight Savings Time
1717 is the way to solve those health problems.

1718 *Mrs. Dingell. Thank you. Dr. Malow?

1719 *Dr. Malow. I would say I am on the flip side. I agree
1720 with Dr. Calandrillo, we shouldn't go back and forth. I
1721 think, from a health perspective at least, the permanent
1722 Standard Time is the best healthy choice.

1723 *Mrs. Dingell. And Mr. Beckwith?

1724 *Mr. Beckwith. Thank you. I am not a health expert, so
1725 I will abstain from answering that aspect. But I will point
1726 out that I fall in the middle between the other two panelists
1727 in saying that what we have created in our optimization of
1728 daylight really does take into account both of their
1729 opinions, and tries to find the happy medium.

1730 *Mrs. Dingell. Which is why we are always back having
1731 hearings on this subject.

1732 As you all know, this issue hits very close to home,
1733 especially for those who have children, but have had to deal
1734 with cranky babies or, worse yet, cranky teens who haven't
1735 gotten enough sleep.

1736 Dr. Malow, can you expand on the impact sleep

1737 deprivation has on our overall health, on our minds, our
1738 moods, and especially in young children for whom we know
1739 sleep is vital?

1740 *Dr. Malow. Yes, thank you for that question. When we
1741 are not sleeping well it has a whole host of ramifications.
1742 A lot of them we have talked about already, but just to hit
1743 the high points again: obesity, diabetes, heart disease.
1744 Even cancer and Alzheimer's disease have been linked to
1745 either sleep loss or that circadian misalignment, getting our
1746 sleep at the wrong time, getting our light at the wrong time.

1747 And then children are not exempt. Children are also
1748 super-affected by these conditions, by depression. We heard
1749 earlier about the self-harm, the suicide risks, and by
1750 obesity and ADHD. And I think it is just really important to
1751 recognize that it is a piece of the puzzle.

1752 But sleep is a super-important piece of the puzzle
1753 toward promoting health. And that light in the morning
1754 really sets us up for healthy sleep.

1755 *Mrs. Dingell. So can you tell us, though, why it is
1756 harder for the body to adapt to Daylight Savings Time than it
1757 is for the body to adapt to a new time zone when traveling?

1758 *Dr. Malow. Yes. When we travel, let's say, from
1759 Michigan in the Eastern Time zone -- well, let's take the
1760 Central Time zone -- Chicago, in the Central Time zone to
1761 D.C. in the Eastern Time zone, we are changing our clocks,

1762 but also our environment. So the sun cues are there to help
1763 us adapt and adjust. When we change our clocks this weekend,
1764 we are changing our clocks. But the sun isn't changing. The
1765 sun is still in the same place. And because of that we are
1766 off. We are not able to adjust the way we naturally would if
1767 we had those environmental cues as well. So it is more
1768 detrimental.

1769 And then what people forget, they think it is just an
1770 hour, right? But it is actually almost eight months of the
1771 year that we are off sync, that we are getting that sunshine
1772 when we shouldn't be. You know, we are one hour off, so we
1773 are not getting as much in the morning, and we are getting
1774 too much in the evening.

1775 *Mrs. Dingell. So Dr. Malow, you mentioned the
1776 increased risk of heart attacks and stroke during the
1777 springtime change to Daylight Savings Time. What exactly
1778 about the loss of sleep causes this?

1779 And is this more prevalent among shift workers and those
1780 of lower socioeconomic status?

1781 *Dr. Malow. Yes. In a nutshell -- because I know we
1782 are getting short on time -- I would say it is a combination.
1783 It is hard to sort out the change in the sleep, the loss of
1784 sleep, as well as, as I mentioned, the circadian misalignment
1785 and being off schedule and off cycle. But we do see it more
1786 in vulnerable populations, as you mentioned.

1787 I mentioned the cancer was brought up in the article,
1788 and the elderly, and then people like shift workers, who
1789 can't control their schedules as much.

1790 *Mrs. Dingell. Thank you, Mr. Chairman, I yield back.

1791 *Mr. Cardenas. The gentlewoman yields back. Next I
1792 will recognize Congresswoman Kelly for her five minutes.

1793 *Ms. Kelly. Thank you, Mr. Chairman.

1794 Mr. Calandrillo, I would like to start with you on this
1795 topic. You have said stopping the time switch is important.
1796 And in your testimony, you have stated that switching to
1797 permanent Daylight Savings Time will reduce crime. Can you
1798 elaborate more on how that works, and what the connection is
1799 between time change and crime?

1800 *Mr. Calandrillo. Thank you so much for that question.
1801 Darkness is a friend of crime, sunshine is a great
1802 disinfectant.

1803 Crime goes dramatically upwards at the 5:00 p.m., 6:00
1804 p.m., after school/after work hours, all the way through
1805 midnight. People don't like to commit bad acts in the
1806 sunlight. They want -- they would like the cover of
1807 darkness. British studies have estimated as much as a 20
1808 percent reduction in street crime, juvenile crime, vandalism,
1809 graffiti.

1810 If we take an hour out of criminals' work day by pushing
1811 sunlight into the evening, that has that effect, right? As I

1812 like to say, criminals are late to bed and late to rise.
1813 They don't wake up with the sunrise, but they do stay up
1814 late.

1815 And it is important in all of our discussion to not
1816 fight human nature. I mean, it would be awesome if we all
1817 woke up with the sunrise, but we are not going to wake up at
1818 4:30 or 5:30 in the morning. We have to recognize human
1819 nature. My son, who is in college, has never done that.

1820 We have to put those hours of sunlight into the part of
1821 the day where kids can use that, and enjoy outdoor,
1822 unsupervised play. And that will help their sleep cycles,
1823 and certainly help crime, and certainly help the economy.

1824 *Ms. Kelly. We tend to think of criminals as
1825 opportunistic. Given that, wouldn't they simply take
1826 advantage of a different opportunity?

1827 *Mr. Calandrillo. Well, again, like, you are taking one
1828 hour out of their workday. It is true that they could just
1829 stay up later, right? They do try to stay up later. But
1830 they don't work in evening -- sorry, in morning darkness. So
1831 Standard Time creates morning darkness, right, and at 5:00
1832 a.m., 6:00 a.m. crime rates are exceptionally low. That is
1833 the lowest hour of crime rate in the day.

1834 So it is not like criminals are switching their work to
1835 that point of the day. They engage in afternoon and evening
1836 criminal activity, and Daylight Saving Time helps prevent

1837 that.

1838 *Ms. Kelly. Mr. Beckwith, do you agree? Have your
1839 member companies raised this issue previously?

1840 *Mr. Beckwith. Obviously, crime is a huge concern to
1841 us, Congresswoman.

1842 I take a little different approach than my other witness
1843 here that -- it reminds me of the discussions many years ago,
1844 when farmers were concerned about Daylight Savings Time, that
1845 their cows -- it wouldn't know when to be milked. And the
1846 response is the cows know when to be milked. You just have
1847 to adjust to when they are ready. And I look at crime the
1848 same way, is -- I don't think criminals care what time it is.
1849 They just want to rob you when it is dark out.

1850 And so, you know, that, you know, I think certainly is
1851 an issue for us, but I would put less emphasis on it for our
1852 industry for that reason.

1853 *Ms. Kelly. Okay, thank you. Did you want to make a
1854 point, I think, Mr. Calandrillo?

1855 *Mr. Calandrillo. Yes, crime --

1856 *Ms. Kelly. A quick point?

1857 *Mr. Calandrillo. Yes, yes. Crime rates are super low
1858 in the morning darkness, 5:00 a.m., 6:00 a.m. If you look at
1859 crime data, it shows that that is the lowest crime rate of
1860 the day. So the criminals are not taking advantage of
1861 morning darkness.

1862 *Ms. Kelly. Okay, thank you.

1863 Dr. Malow, could you elaborate on how changing the
1864 clocks and loss of sleep, or sleep misalignment could affect
1865 young children and juveniles when it comes to crime and their
1866 ability to make smart decisions?

1867 *Dr. Malow. Yes, I think that we are all affected by
1868 sleep, and some folks or some kids who are struggling may,
1869 when their emotional systems are not in sync and they are
1870 depressed, might turn to crime. I don't know, I am not a
1871 crime expert, so I don't want to go down that path very far.

1872 I will say as a woman, though, that when I have slept,
1873 when I am fully awake, and I have gotten a good night's
1874 sleep, I think my wits are about -- around me more, and I
1875 think that is an important point that, at least for personal
1876 crimes, when we are more awake and more alert, we are less
1877 apt to be the target of crimes, because we have more
1878 situational awareness.

1879 But I am not going to say anything more about crime. I
1880 am going to leave that to my other witnesses, because I think
1881 they are far more expert in that area than me.

1882 *Ms. Kelly. And Mr. Calandrillo, would you care to
1883 comment?

1884 *Mr. Calandrillo. Yes. Certainly, I agree, sleep
1885 helps. But like I said, the crime studies have shown that
1886 the crime rates are much, much lower in morning darkness than

1887 they are in evening darkness. So it is important we take
1888 away that evening darkness. That is what Daylight Saving
1889 Time does.

1890 *Ms. Kelly. My grandparents and my dad, we owned -- it
1891 was -- we don't -- we didn't call it a convenience store, but
1892 we called it a mom-and-pop grocery store many, many, many
1893 years ago. So I know, you know, that it is a big concern,
1894 when -- and when -- I tried to think about -- we were robbed
1895 a couple of times, and it was, you know, in the evening. But
1896 still concerned, because we need our convenience stores, and
1897 we need you to feel safe.

1898 So thank you so much, and I yield back.

1899 *Mr. Cardenas. The gentlewoman yields back the balance
1900 of her time. Next I will recognize Congressman Soto for five
1901 minutes.

1902 *Mr. Soto. Thank you, Chairman.

1903 Coming from the Sunshine State, we value sunshine for
1904 our quality of life, recreation, and our tourism economy.
1905 Over the years I have heard countless complaints from
1906 constituents who hate going back to Standard Time in the
1907 winter months, losing hours of sunshine.

1908 In 2013 I drafted a bill called the Sunshine Protection
1909 Act during my first year in the Florida Senate. It would
1910 keep Florida on Daylight Savings Time all year round,
1911 Chairman. I filed the bill on a Friday. No press release,

1912 little fanfare. By Saturday morning, the Orlando Sentinel
1913 called me and wrote a story. Well, the rest became history.
1914 It became a statewide story. It became a huge debate covered
1915 by just about every news station in Florida, and constituents
1916 and Floridians debated this for many years. Each of the four
1917 years I filed the bill while in the Florida Senate. It was
1918 the most popularly viewed bill in the state legislature.

1919 Sadly, serving in the minority there, the Republicans
1920 never gave me a hearing on my bill. And after I got to the
1921 Congress in 2017, they gave the bill to my dear friend and
1922 colleague, Senator Steube at the time, now a Member of
1923 Congress, a Republican, and it was promptly passed into law.
1924 So I suppose it is sweet justice that I am here today,
1925 reviewing this issue again with a Democratic majority and our
1926 Republican colleagues.

1927 We found out a few revelations, as I heard from various
1928 constituents about the bill.

1929 First, we were going to give schools flexibility in
1930 their start times, so no student would have to go to school
1931 in the dark. Our schools know how to run transportation, and
1932 we can give them the flexibility to do that.

1933 Second, we found our local farmers really didn't need
1934 the government to tell them what time to wake up in the
1935 morning. They would rise at dawn, either way.

1936 Third, we found local tourism businesses and restaurants

1937 love the idea, from our major theme parks to our beaches and
1938 other local businesses in that area. Daylight in the
1939 afternoons led to more businesses getting more business from
1940 residents and tourists.

1941 Our constituents also loved it because they would no
1942 longer be in the dark for several months after they got out
1943 of a long day of work.

1944 It also encouraged more exercise in outdoor activities
1945 for Floridians, something that we care deeply about.

1946 As we complement ending the time change, don't send
1947 Florida and other states back to the Dark Ages, please. If
1948 we are going to set up one time, let's make it a Daylight
1949 Savings Time permanently. So I think the legislation we are
1950 looking at to at least start the ball rolling would be really
1951 helpful.

1952 Mr. Calandrillo, do you want to briefly go through the
1953 economics of how important this is for small businesses and
1954 mid-sized businesses, particularly in tourism and in
1955 restaurants and others?

1956 *Mr. Calandrillo. Thank you so much, Representative
1957 Soto. I really appreciate your work on the Sunshine
1958 Protection Act.

1959 By the way, it is one of the last bipartisan issues in
1960 America, right? You had Senator Patty Murray from my state
1961 and Senator Rubio from your state helping you along with

1962 those bills, although they haven't gone anywhere, right?

1963 You want to talk -- you want to think about the economic
1964 benefits of having that sunlight out in the afternoon and
1965 evening. That is when people shop, right? That is when
1966 people engage in outdoor activity. Again, putting that
1967 sunlight in the morning hours isn't going to have nearly the
1968 same effect. All the Chambers of Commerce that I have spoken
1969 to have supported the economic activity created by Daylight
1970 Saving Time, and it is important we recognize that.

1971 And it is a net issue for me. I do cost benefit
1972 analyses. Obviously, we are trading it off against morning
1973 darkness, and I am sensitive to the sleep concerns; as you
1974 mentioned, that Florida allowed for schools to start later.
1975 But we have to recognize the net benefit of pushing sunlight
1976 into the afternoon. There are costs to any proposal and
1977 there are benefits to any proposal.

1978 We call [inaudible] prime time for a reason, not 5:00 or
1979 6:00 a.m. That is when people want to get out in the
1980 evening, and they are much more willing to go out if there is
1981 sunlight. In fact, a lot of people don't even like to drive
1982 once sunset hits, right? They are nervous about the safety,
1983 and with good reason, because the traffic accidents go up
1984 dramatically, and it is way more fatal.

1985 So again, the economic impact -- you know, tourism
1986 industry, the restaurant industry, all of these industries

1987 prefer having sunlight in the part of the day when we can use
1988 it.

1989 *Mr. Soto. Thank you. And I am also worried about our
1990 seniors and our kids, which is why the flexibility is going
1991 to be critical for school start times and for our seniors to
1992 have more consistent life rhythm to make sure we are avoiding
1993 strokes and heart attacks and some of these other conditions.

1994 Thank you, Chairman, and I yield back.

1995 *Mr. Cardenas. The gentleman yields back. With that I
1996 would like to thank our witnesses for their participation in
1997 today's hearing.

1998 I remind members that, pursuant to committee rules, they
1999 have 10 business days to submit additional questions for the
2000 record to be answered by the witnesses who have appeared. I
2001 ask each witness to respond promptly to any questions that
2002 you may receive.

2003 At this time I will read, before we adjourn, the letters
2004 to be submitted for the record: a letter from the American
2005 Academy of Sleep Medicine; a letter from Save Standard Time;
2006 a letter from -- updated witness testimony from Dr. Beth
2007 Malow.

2008 [The information follows:]

2009

2010 *****COMMITTEE INSERT*****

2011

2012 *Mr. Cardenas. And with that, this committee is now
2013 adjourned.

2014 [Whereupon, at 12:03 p.m., the subcommittee was
2015 adjourned.]