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4 PROMOTING BROADBAND INFRASTRUCTURE INVESTMENT

5 WEDNESDAY, JULY 22, 2015

6 House of Representatives,

7 Subcommittee on Communications and Technology

8 Committee on Energy and Commerce

9 Washington, D.C.

10 The subcommittee met, pursuant to call, at 12:30 p.m.,
11 in Room 2322 of the Rayburn House Office Building, Hon. Greg
12 Walden [Chairman of the Subcommittee] presiding.

13 Members present: Representatives Walden, Latta,
14 Shimkus, Scalise, Lance, Guthrie, Olson, Bilirakis, Johnson,
15 Long, Collins, Cramer, Eshoo, Doyle, Loeb sack, Matsui,
16 McNerney, Lujan, and Pallone (ex officio).

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17 Staff present: Ray Baum, Senior Policy Advisor for
18 Communications and Technology; Leighton Brown, Press
19 Assistant; Andy Duberstein, Deputy Press Secretary; Gene
20 Fullano, Detailee, Telecom; Kelsey Guyselman, Counsel,
21 Telecom; Grace Koh, Counsel, Telecom; David Redl, Counsel,
22 Telecom; Charlotte Savercool, Legislative Clerk; Christine
23 Brennan, Democratic Press Secretary; Jeff Carroll, Democratic
24 Staff Director; David Goldman, Democratic Chief Counsel,
25 Communications and Technology; Lori Maarbjerg, Democratic FCC
26 Detailee; Margaret McCarthy, Democratic Senior Professional
27 Staff Member; and Tim Robinson, Democratic Chief Counsel.

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28 Mr. {Walden.} If we could go ahead and get started, I
29 am going to call to order the Subcommittee on Communications
30 and Technology with apologies up front that with the
31 classified briefing that got scheduled at the end of last
32 week for later today on the Iranian agreement. That got
33 scheduled about the same time this hearing was originally
34 scheduled to start. So we moved it up to now so that we
35 could hear from this distinguished panel of witnesses.

36 And I have asked my colleagues, and I think this is on
37 both sides, because we also now have votes scheduled prior to
38 all of that, we are going to dispense with our opening
39 statements, which is anybody who watches Congressional
40 hearings knows is unprecedented in the historical annals of
41 Congress, but they will all be in the official record.

42 So unless there is objection from either side of the
43 aisle, I would like to just proceed straight to our panel of
44 witnesses for their expert testimony.

45 This is an important hearing on promoting broadband
46 infrastructure investment. You all are on the front lines of
47 that, and we look to you for guidance, suggestions as we

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48 forward.

49 [The prepared statement of Mr. Walden follows:]

50 ***** COMMITTEE INSERT *****

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|

51 Mr. {Walden.} So we will start right out with Jonathan
52 Adelstein, President and CEO, PCIA, former distinguished
53 Commissioner of the Federal Communications Commission.

54 Mr. Adelstein, we are delighted to have you here.

55 Please go ahead with your testimony.

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56 ^STATEMENTS OF JONATHAN ADELSTEIN, PRESIDENT AND CEO, PCIA;
57 STEPHEN THE HONORABLE STEPHEN ROE LEWIS, GOVERNOR, GILA RIVER
58 INDIAN COMMUNITY, ARIZONA; CRAIG MOFFETT, SENIOR RESEARCH
59 ANALYST, MOFFETT NATHANSON; MICHAEL SLINGER, DIRECTOR, GOOGLE
60 FIBER CITIES; AND DEB SOCIA, EXECUTIVE DIRECTOR, NEXT CENTURY
61 CITIES

|

62 ^STATEMENT OF JONATHAN ADELSTEIN

63 } Mr. {Adelstein.} The committee has shown leadership on
64 this issue over many years. We appreciate the opportunity to
65 testify at such a critical hearing today.

66 As you said, I run PCIA. We represent the companies
67 that build, design, own and manage telecommunications
68 facilities around the world and in the United States. The
69 members include wireless carriers, infrastructure providers,
70 equipment manufacturers, and professional services firms.
71 Our mission is to expand wireless broadband to everywhere,
72 helping our members provide wireless facilities to meet
73 consumers' growing mobile data needs any time, any place.

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74 The wireless infrastructure industry, as you know, plays
75 an essential role in meeting that data demand that people are
76 asking for so much of. Put simply, infrastructure makes
77 wireless work. It enables the delivery of innovative
78 applications and life-changing services like telemedicine and
79 distance learning. Wireless infrastructure is a catalyst for
80 economic growth and job creation. A PCIA study found that
81 investments in our industry will generate \$1.2 trillion--that
82 is trillion with a T--in economic growth and create 1.3
83 million new jobs over 5 years.

84 And this committee, as I said, has shown grown
85 leadership, Mr. Chairman. You have done so much to try to
86 eliminate barriers to infrastructure deployment. I commend
87 you, and our industry is thrilled with the leadership of this
88 committee. Most notably, section 6409(a) of the Spectrum Act
89 of 2012 has had a real impact on the ground in speeding the
90 deployment of 4G infrastructure. It eliminated major local
91 regulatory barriers to upgrading existing wireless
92 infrastructure, and the FCC, I might add, has done an
93 outstanding job on a bipartisan basis of implementing that
94 law with a clear framework of rules.

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95 Now, we will face major challenges. Cisco projects that
96 demand for wireless data is going to increase by about 700
97 percent over the next 5 years, and the question is how we are
98 going to meet that exploding demand for data.

99 Now, one way is more spectrum, as much as we can get as
100 fast as we can get it. And again, this committee has done
101 great work on that front. Spectrum, as you know, is
102 expensive, scarce, and takes a long time to get into actual
103 use by consumer, all the more reason to move quickly.

104 Another way to increase data throughput is technological
105 advances that foster greater spectral efficiencies like
106 moving from 2G to 4G and beyond, and the networks themselves
107 are getting smarter, directing capacity where it is needed.
108 These advances also take time to develop and to implement.

109 A third way to meet the exploding demand for data is
110 through the rapid deployment of infrastructure. Wireless
111 infrastructure driven by private capital addresses the
112 wireless data crunch as soon as it is deployed. Solutions
113 range from traditional tall towers that provide wide coverage
114 and capacity to small cells and distributed antenna systems
115 that fill gaps in capacity and target high-traffic areas,

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116 intensifications of networks reused as existing scarce
117 spectrum. Deploying more antennas closer to end users allows
118 carriers to squeeze more out of existing spectrum.

119 Now, there is still resistance to siting this equipment
120 where it is necessary, and Congress can help even more to
121 remove these barriers. One way is by streamlining the
122 process of siting wireless infrastructure on federal lands.
123 Despite the law enacted by Congress with the leadership of
124 this committee and an Executive Order by the President,
125 significant challenges remain on federal property. Further
126 legislation is needed to facilitate access to federal lands
127 to expand broadband coverage and increased deployment in
128 rural areas.

129 PCIA supports S. 1618, which was recently introduced in
130 the Senate to address this issue, and we look forward to
131 continuing to work with this committee on developing
132 legislation as well. Additional roadblocks remain despite
133 the assistance this committee has provided. For example,
134 some State and local entities require proof of need before
135 authorizing infrastructure bills. These requirements are
136 both illogical and costly. Local communities shouldn't be in

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137 the CTO business of deciding where services are needed. Our
138 members invest their capital where it is needed to serve
139 consumers and local governments aren't in a good position to
140 be second-guessing these kind of technical questions.
141 Continued efforts to harmonize the rates for pole attachments
142 would also help promote broadband investment.

143 The FCC has taken important steps to provide greater
144 access, timing, and fair rates. States that regulate their
145 own poles should follow the FCC's lead.

146 In sum, wireless infrastructure boosts every sector of
147 the economy. Mobile broadband is demonstrating its
148 effectiveness in promoting economic growth, job creation, and
149 global competitiveness yet challenges remain in reaching its
150 full potential. Policymakers from Congress to local
151 governments need to eliminate regulatory barriers so our
152 industry can invest their capital without resistance and not
153 add costs and delays that will slow the rollout of wireless
154 broadband.

155 Our member companies are very grateful for the
156 bipartisan recognition of the centrality of wireless
157 infrastructure by this committee, by Congress, by the

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158 Administration, and by the FCC.

159 I would add that we look forward to making continued
160 progress together on some of the ideas we have laid out here
161 today and other panels will share, and we thank you, and
162 thank you, Ranking Member Eshoo, for joining us, and thank
163 you for holding this hearing to address these urgent issues.

164 [The prepared statement of Mr. Adelstein follows:]

165 ***** INSERT A *****

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166 Mr. {Walden.} Thank you, Mr. Adelstein. We appreciate
167 your testimony and look forward to further discussions on
168 these matters.

169 We will now go to the Honorable Stephen Roe Lewis,
170 Governor, Gila River Indian Community in Arizona. Governor,
171 we are delighted to have you here. I enjoyed the time I was
172 in your community and toured your facilities, and we are glad
173 you could be here to share your thoughts on the challenges
174 you face.

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175 ^STATEMENT OF STEPHEN ROE LEWIS

176 } Mr. {Lewis.} Thank you, Chairman Walden and members of
177 the committee. Thank you for the opportunity to testify on
178 behalf of the Gila River Indian Community. I also want to
179 again thank Chairman Walden and Mr. Lujan for visiting the
180 community, as you just heard, to see firsthand the obstacles
181 that tribes face in deploying broadband. And I want to thank
182 Ranking Member Eshoo and Mr. Lujan for their request to have
183 the Government Accounting Office, the GAO, look into the
184 challenges and barriers to deployment on tribal lands.

185 Our broadband provider is Gila River Telecommunications
186 Incorporated, which we refer to as GRTI. It was founded in
187 1988 and is wholly owned by our community. Our reservation
188 is approximately 372,000 acres. We have more than 20,000
189 members and almost 12,000 community members living on our
190 reservation. When we first purchased the exchange from
191 Mountain Bell in 1988, only 10 percent of our residents had
192 access to basic phone service. More, those looking to get
193 connected had to pay tens of thousands of dollars before

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194 Mountain Bell would install a party line connection.

195 Today, GRTI offers phone service to 100 percent of our
196 residents, and 84 percent of the residents subscribe. We
197 also offer broadband service across the reservation. We are
198 very proud of GRTI's success.

199 GRTI along with the National Tribal Telecommunications
200 Association work together to raise awareness about the unique
201 challenges for deploying broadband on tribal lands. Tribal
202 lands are the least served areas in the country.
203 Approximately 48 percent of tribal lands in the lower 48
204 States lack access to speeds of 10 down, one up, and 68
205 percent lack access to 25 down, 3 up.

206 There are a number of obstacles that present challenges
207 to broadband deployment on tribal lands, and I have set those
208 out with more detail in my written testimony, but I would
209 like to summarize them for you here.

210 First, population density is an obstacle. The Gila
211 River, for example, is at 20 persons per square mile.
212 Maricopa County, which is adjacent to the reservation, has
213 approximately 414 persons per square mile. Rugged terrain,
214 characterized by mountains and hard soil, is also typical of

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215 tribal lands. Low median income and high rates of poverty on
216 most reservations present a severe challenge for the delivery
217 of broadband. The median income on our reservation is
218 \$24,000 to \$59,000 in Arizona. Approximately 48 percent of
219 the persons living on the reservation live below the poverty
220 level compared to 15 percent for Arizona. These economic
221 circumstances are not unique to our tribal community.

222 Failed federal policies from the past continue to
223 negatively impact many tribes. Our community and others like
224 it continue to struggle with the failed policy of allotment.
225 Because of the allotment policy, obtaining rights-of-way in
226 order to deploy broadband is complex and raises costs
227 substantially and delays deployment.

228 Finally, access to capital is a barrier. Tribal lands
229 cannot be leveraged as collateral for securing loans because
230 they are held in trust by the United States for the benefit
231 of the tribe. Thus, private capital is often not available,
232 meaning the only lender available is the Federal Government,
233 specifically, the Rural Utilities Service. RUS loans were
234 critical to GRTI when it took over its service area and
235 remains critical as a Warm Springs tribe in Oregon can

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236 attest.

237 The combination of these challenges has resulted in
238 GRTI's average cost per loop being over \$2,873. Because
239 tribal nations face many unique challenges, we often need
240 unique solutions. Having tribes at the table and engaging in
241 government-to-government consultation is critical. Too
242 often, federal policies have unintended consequences on
243 tribes because we weren't properly consulted in the
244 beginning.

245 The current effort to reform the Universal Service Fund
246 is a good example. USF is, when properly scoped, a
247 critically important source of funding that can help make it
248 possible to deploy broadband to our reservations.

249 Tribes have offered a proposal that will target specific
250 support to tribal lands through a Tribal Broadband Factor
251 that could be added to proposals for a standalone broadband
252 fund. Inclusion of this Tribal Broadband Factor would
253 promote the targeted use of Universal Service Funding to
254 advance the policy objective of ensuring that broadband is
255 made available to all Americans including those living on
256 tribal lands.

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257 The FCC's Office of Native American Affairs and Policy
258 has been a welcome addition to the Commission's outreach
259 efforts to ensure that tribes are included in the development
260 of proposals to deploy more broadband but sometimes the FCC
261 forgets about tribes. That is why we appreciate the letter
262 sent to the FCC from a broadband group of members of this
263 committee, reminding the commission that tribal leaders need
264 a seat at the table.

265 I appreciate the opportunity to speak with you today and
266 hope to be an ongoing resource for the committee. Thank you.

267 [The prepared statement of Mr. Lewis follows:]

268 ***** INSERT B *****

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269 Mr. {Walden.} Thank you, Governor. You can count on
270 that. We appreciate your testimony and your insights. They
271 are very valuable.

272 We will go now to Craig Moffett, Senior Research
273 Analyst, Moffett Nathanson. Mr. Moffett, we are delighted to
274 have you here as well. Please go ahead.

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275 ^STATEMENT OF CRAIG MOFFETT

276 } Mr. {Moffett.} Thank you, members of the subcommittee,
277 for your kind invitation to participate in today's hearing.

278 By way of introduction, I have been a financial analyst
279 focusing on the cable and telecommunications industries for
280 the past 14 years. Before that, I spent 11 years at the
281 Boston Consulting Group advising telecommunications
282 companies, so this is now my 25th year in the sector, and I
283 have spent much of that career focused on issues of broadband
284 deployment and microeconomics.

285 With that in mind, I thought I would share some general
286 observations today about the economics of broadband,
287 particularly focusing on the economics of competitive
288 broadband.

289 First, I would start by saying the obvious.
290 Infrastructure deployment requires the expectation of a
291 healthy return on capital. That should be taken as a given
292 but all too often in my experience, the issue of return on
293 capital is either ignored or misunderstood in policy forums.

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294 It is not a matter of whether a business is or isn't
295 profitable; it is instead a matter of whether a business is
296 sufficiently profitable to warrant the high levels of capital
297 investment required for the deployment of infrastructure.

298 With that in mind, in 2014, the largest companies in the
299 cable industry earned a very healthy return. The physical
300 assets of Comcast, Time Warner Cable, Charter, and
301 Cablevision, the four publicly traded U.S. cable operators
302 during 2014, all earned healthy returns in excess of their
303 cost of capital with returns ranging from 13 to 33 percent.
304 Those returns are unusually high for a capital-intensive
305 industry. On the other hand, it should be noted that the
306 cable industry earned returns below the cost of capital for
307 decades. Any long-term return on network infrastructure has
308 to earn returns well in excess of the cost of capital during
309 the maturity of that network to offset what were typically
310 years or even decades of losses.

311 By contrast, large incumbent telephone companies do not
312 earn attractive returns on their wireline businesses. For
313 example, a decade after first undertaking their FiOS fiber to
314 the home buildout to 18 million homes, Verizon has not yet

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315 come close to earning a return in excess of their cost of
316 capital. In 2014, their aggregate wired infrastructure
317 business earned a paltry 1.2 percent return against a cost of
318 capital of 5 percent. For the nonfinancial types in the
319 room, that is the equivalent of borrowing money at 5 percent
320 interest in order to earn 1 percent interest. That is a good
321 way to go bankrupt. No one would undertake to replicate
322 those disastrous financial returns.

323 AT&T, which at around the same time began deploying a
324 much less robust and therefore less costly fiber to the node
325 network has also earned poor returns. Their ROIC, or return
326 on invested capital, has been declining for a decade and is
327 like Verizon well below the cost of capital. AT&T is
328 committed to the FCC to make fiber available to a total of, I
329 know believe it is 12-1/2 million homes as of what was
330 reported last night to their footprint in order to make their
331 acquisition of DIRECTV more palpable to policymakers, but it
332 is hard to be optimistic that they will do much better this
333 time around.

334 That said, there have been some changes in the market
335 that make deployment of competitive broadband networks less

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336 unattractive than they have been in the past. Corning has
337 developed bendable fiber that has helped lower the labor cost
338 of deployment. Google has popularized the concept of demand
339 aggregation whereby communities pledge to subscribe to
340 advanced network services before the network is built so that
341 Google can target areas where the company has the best chance
342 of earning an acceptable return, and while some critics would
343 call that redlining as it typically means that broadband
344 won't be built to the lower-income communities, it has been
345 successful in boosting overall project returns, and you can
346 think of it as a way of ensuring that all the children in the
347 class really are above average.

348 Still, the broader takeaway here is that the returns to
349 be had from overbuilding, that is, being the second or third
350 broadband provider in a given market are generally poor.

351 So let that sink in for a moment. Simply stated, it
352 means that market forces are unlikely to yield a fully
353 competitive broadband market. Neither, by the way, does
354 wireless appear to offer the promise of imminent competition
355 for incumbent wired broadband providers. Wireless networks
356 simply aren't engineered for the kind of sustained throughout

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357 required for wired broadband replacement services. And
358 wireless networks, by the way, also generally earn relatively
359 poor returns on capital. Returns for Verizon and AT&T are
360 middling, and for Sprint and T-Mobile are very poor as a
361 consequence of aggressive price competition in the wireless
362 market. Neither is satellite broadband a compelling
363 replacement for wired broadband in any but the most rural
364 areas. Costs are high, and it is the nature of satellite
365 connection that it has to travel 22,000 miles and back such
366 that latency is going to be a problem.

367 So the simple economic reality is that overbuilding is
368 necessarily going to be somewhat limited, given relatively
369 poor financial returns that can be expected, and that
370 alternatives are far and few between. That naturally gives
371 rise to the impulse among some to regulate incumbent networks
372 that are already there. That is, it is a not unreasonable
373 assumption that any attempts to foster competition will
374 ultimately be unsuccessful and that regulation of incumbents,
375 in this case, the cable operators, is therefore required.

376 The counterargument, that regulation will only stifle
377 investment among incumbent providers and will therefore make

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378 the problem worse and will in the process generate unwelcome,
379 unintended consequences is equally well intentioned and
380 unfortunately is equally well supported by the historical
381 evidence. That is to say there are no easy answers here.

382 I will conclude only by adding a few additional
383 observations about the cable industry. As everyone
384 understands, the cable video business is facing unprecedented
385 pressure. Cord-cutting has been talked about for years but
386 is finally starting to show up in a meaningful way in the
387 numbers, and soaring programming costs are eating away at
388 video profit margins. From a cable operator's perspective,
389 the video business and the broadband business are opposite
390 sides of the same coin. It is, after all, all one
391 infrastructure. Pressure on the video profit pool will
392 therefore naturally trigger a pricing response in broadband
393 where cable operators have cable leverage. That may sound
394 nefarious but it's not intended to be so. It is simply an
395 observation that cable operators have historically benefited
396 from the fact that their infrastructure can support two
397 separate businesses and each can be delivered at a lower cost
398 than if that were not the case. The ACA, or American Cable

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399 Association, has made this case eloquently in arguing that
400 absent reforms to restrain runaway programming cost growth,
401 video will be unprofitable and broadband will be left to
402 carry the entire burden of incremental deployment. All else
403 being equal, that will mean that even new builds of broadband
404 will become increasingly economically challenged and
405 therefore will become less and less likely, or as I am quick
406 to add, this is my own editorial rather than ACA's point,
407 they will simply have to sharply raise the price of
408 broadband. As an analyst, I would simply observe that the
409 pressures in the video business are relatively broad-based
410 and are attributable to more than just programming cost
411 inflation and that this may therefore be an unavoidable
412 scenario.

413 So I will leave my remarks there. If my remarks sound
414 excessively gloomy, they are not meant to. The U.S.
415 broadband infrastructure is the envy of the world
416 notwithstanding my view that there are politicized and
417 cherry-picked statistics that would suggest otherwise. It is
418 simply the case that broadband is an infrastructure that is
419 very difficult to support two of, and in some cases even one

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420 of, and I would submit that a clear-eyed acknowledgement of
421 the microeconomics of the broadband business deserves or even
422 demands a seat at the policy table.

423 So thank you, Mr. Chairman and subcommittee members, for
424 your time and the opportunity to testify today.

425 [The prepared statement of Mr. Moffett follows:]

426 ***** INSERT C *****

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427 Mr. {Walden.} Thank you very much, Mr. Moffett. We
428 appreciate your analysis.

429 We will go now to Michael Slinger, Director, Google
430 Fiber Cities. We welcome you. Thank you for being here, and
431 the floor is yours.

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432 ^STATEMENT OF MICHAEL SLINGER

433 } Mr. {Slinger.} Chairman Walden, Ranking Member--

434 Mr. {Walden.} You will need to pull the microphone very
435 close and push the little button there until the light stays
436 on.

437 Mr. {Slinger.} Chairman Walden, Ranking Member Eshoo,
438 and members of the committee, thank you for the invitation to
439 testify today about investment in broadband infrastructure.
440 We believe a successful agenda for bandwidth abundance will
441 benefit consumers, small businesses, and the economy.

442 My name is Michael Slinger, and I currently serve as the
443 Director of Google Fiber City Teams. In this role, I oversee
444 the operations, business strategy, and on-the-ground outreach
445 to bring gigabit speeds to cities where we deploy Google
446 Fiber across the United States.

447 We have long believed that the next chapter of the
448 Internet would be built on gigabit speeds. A gig delivers
449 enough bandwidth for everyone in the home or in a small
450 business for all their devices, and we know fast connections

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451 unleash innovation and entrepreneurship. Think about it in
452 these terms: if today we are riding a bike, having a gig
453 means that we could be driving a racecar. It is just that
454 much faster.

455 That is why we launched Google Fiber, which provides
456 download and upload connections of up to 1,000 megabits per
457 second. Our goal is to make the Web faster, more affordable,
458 more relevant and more useful for everyone.

459 We launched the service 5 years ago, and today it is
460 available in Kansas City, Kansas; Kansas City, Missouri;
461 Austin, Texas; and Provo, Utah. In addition, we are in the
462 process of building out our network in six other markets and
463 we are exploring bringing it to another four on top of that.

464 In rolling out Google Fiber, we physically built a
465 network from scratch--one street, one pole, one house at a
466 time. This means reviewing infrastructure and working
467 closely with cities to make sure we are ready to work
468 together to design and build a brand-new network.

469 This experience has given us insight into barriers to
470 deployment. I will outline some thoughts on policy changes
471 that could reduce delays and barriers.

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472 First, policymakers can ease gaining access to existing
473 infrastructure. To construct high-speed networks, broadband
474 providers need access to existing utility infrastructure such
475 as poles, conduits on a consistent, cost-effective and timely
476 basis. While the FCC has taken important steps to improve
477 rules related to infrastructure access, our own experience in
478 building new broadband networks demonstrates that more work
479 needs to be done to reduce delays and barriers.

480 Second, policymakers can ease rights-of-way. The
481 expense and complexity of obtaining access to public rights-
482 of-way in some jurisdictions may increase the cost and slow
483 the pace of broadband deployment. Policies that facilitate
484 partnerships between different entities and companies that
485 are doing local construction can be beneficial. We also see
486 a lot of benefit in instituting ``dig once'' policies, which
487 may involve the installation of an oversized conduit bank by
488 any new network builder within the right-of-way.

489 Third, policymakers can help resolve the challenge of
490 high rates for access to video programming. This would help
491 smaller players in the business negotiate fair terms for
492 access to popular broadcasts and cable content and make it

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493 easier to attract and retain subscribers for broadband
494 networks.

495 Finally, I would be remiss if I failed to mention the
496 importance of balanced spectrum policies that promote
497 innovation in the wireless sector. Federal agencies should
498 pursue a balanced approach to spectrum reallocation that
499 allows for licensed and unlicensed commercial uses at a
500 variety of frequencies.

501 I will note, as we think about deploying gigabit-speed
502 networks, we need to keep in mind that about 30 percent of
503 Americans still don't use the Internet at home. This means
504 they are at a disadvantage when it comes to education, job
505 opportunities, social and civic engagement, so one of our
506 main priorities is building digital inclusion into our
507 deployment plans from the beginning. We are guided by a
508 couple of main principles: Make the Internet more
509 affordable, make access a party of the community, and teach
510 people how to get online.

511 Just last week, as part of the Connect Home Initiative
512 announced by President Obama and HUD Secretary Castro, we
513 committed to bringing our Google Fiber Internet service to

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514 residents in select affordable housing properties across our
515 Fiber cities for zero dollars per month with no installation
516 fee. We are also partnering with community organizations on
517 computer labs and digital literacy programming. We are
518 grateful for the partners we get to work with to get more
519 people connected and for your attention to this important
520 topic.

521 Thank you again for the invitation to speak at this
522 hearing and to share our views on how we can remove barriers,
523 give Americans more choices at higher speeds, and help reach
524 the goal of nationwide broadband abundance.

525 [The prepared statement of Mr. Slinger follows:]

526 ***** INSERT D *****

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|

527 Mr. {Walden.} Thank you, Mr. Slinger. We appreciate
528 your testimony.

529 And now we will go to final witness today, Deb Socia,
530 Executive Director, Next Century Cities. We are delighted to
531 have you here as well. Thank you, and please go ahead with
532 your comments.

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|

533 ^STATEMENT OF DEB SOCIA

534 } Ms. {Socia.} Good afternoon. Thank you for holding
535 this hearing on such an important topic.

536 My name is Deb Socia, and I am the Executive Director of
537 Next Century Cities, a bipartisan city-to-city collaborative
538 formed just last October. We have already grown to over 100
539 member cities, all of whom are dedicated to ensuring access
540 to fast, affordable and reliable broadband.

541 High-speed access is essential to America's economic
542 future. It is as simple as that. What can be complicated is
543 making it happen on the ground. Cities face a range of
544 technical, economic and political challenges including
545 obstacles at the State and federal levels. More and more,
546 providing for this critical need has emerged as a core
547 responsibility for local governments. Many cities and towns
548 from around the country are taking diverse and creative steps
549 to secure their Internet future.

550 When it comes to providing access to high-quality
551 Internet, everyone has a role to play. It is an issue that

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552 spans political party, an issue that crosses the urban-rural
553 divide, and an issue that relies on many sectors of our
554 society.

555 There is no single pathway to next-generation broadband
556 network, and several of the most innovative solutions have
557 emerged in unexpected places. The small towns of Ammon,
558 Idaho, and Mount Vernon, Washington, have each developed a
559 gigabit open access network. These local governments are
560 directly involved in building the physical infrastructure and
561 then leasing access to competing private providers. Just
562 outside of Baltimore, Westminster, Maryland, has initiated a
563 public-private partnership with Ting, a provider of fiber
564 Internet service, and with the introduction of Google Fiber
565 in Kansas City, residents there can now experience giga-level
566 speeds at an affordable rate. Cities like Lafayette,
567 Louisiana, and Chattanooga, Tennessee, have built their own
568 networks and now have some of the fastest, most globally
569 competitive access available.

570 Next Century Cities is dedicated to helping all
571 communities achieve high-quality access regardless of the
572 path they choose to pursue. Our membership represents an

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573 inclusive cross-section of America from small, rural
574 communities such as Winthrop, Minnesota, to large, urban
575 areas like L.A. and Boston.

576 What unites these mayors is a commitment to the
577 imperative of broadband access for continued growth and an
578 understanding that local governments are best situated to
579 understand and provide for the needs of their residents. It
580 is an exciting time, a time for creative local solutions to
581 usher in a new generation of innovation as the Internet
582 continues to transform all aspects of society.

583 Next Century cities recently developed a policy agenda
584 showing how mu stakeholders can help communities develop the
585 crucial infrastructure needed today. Consistent with our
586 mission, this new resource provides guidance that will be
587 useful to communities regardless of how they choose to pursue
588 their broadband goals.

589 Part of the policy agenda looks at steps local and State
590 government can use to ensure high-quality access. Locally,
591 governments can institute ``dig once'' policies that minimize
592 disruption as well as take other steps to ensure their cities
593 are fiber ready.

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594 At the State level, the policy agenda addresses changes
595 such as modernizing state regulations and making investments
596 in the middle mile infrastructure. But we are here on
597 Capitol Hill today, and I wanted to emphasize some
598 recommendations we heard from mayors about steps the Federal
599 Government could take to help empower local communities.
600 First and foremost, Congress can encourage competitive local
601 markets through national legislation and other avenues. In
602 addition, you have the ability to provide a national platform
603 for the issue of broadband as necessary infrastructure.
604 Hearings such as this help to elevate this discussion and
605 attract national attention to this critical issue.

606 And finally, the policy agenda discusses how Congress
607 could better require information about available Internet
608 access including speed of connection, price for consumers,
609 and areas of operation for service providers.

610 As is clear from everything we have heard so far today,
611 the need for fast, affordable and reliable broadband Internet
612 access is undeniable. Innovative leaders in communities
613 across the country recognize this urgent need and are
614 developing the critical broadband infrastructure that will

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615 allow their residents and their cities to thrive. It is
616 evident by the over 100 Next Century Cities I am speaking on
617 behalf of today, communities that represent over 18 million
618 Americans.

619 Thank you for providing this platform for communities to
620 share their experiences and develop opportunities for
621 collaboration with federal policymakers. I look forward to
622 working with members of this committee and your colleagues to
623 ensure that communities across the country have the next-
624 generation access that all Americans need and deserve.

625 Thank you.

626 [The prepared statement of Ms. Socia follows:]

627 ***** INSERT E *****

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|

628 Mr. {Walden.} Ms. Socia, thank you very much for your
629 testimony and your insights.

630 I will start off with questions.

631 Mr. Adelstein, as you probably know, the Middle Class
632 Tax Relief and Job Creation Act directed the GSA--Government
633 Service Agency--to develop a master contract to simplify the
634 placement of wireless antennas on federal buildings and other
635 property. Last year, the Administrator of the GSA told
636 Congress that the master contract was complete and available
637 for use by executive landholding agencies. In your opinion,
638 do you believe the GSA--General Services Administration--has
639 done everything in its power to give life to the siting
640 directives embodied in section 6409, which you referenced in
641 your testimony, of the Middle Class Tax Relief Act? Have
642 they done everything they can?

643 Mr. {Adelstein.} Mr. Chairman, I do not believe they
644 have. As a matter of fact, I am the former Administrator
645 myself of a federal agency, and if I had implemented
646 something so poorly that Congress instructed me to do, I
647 would be embarrassed, frankly. And it is worse than that

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648 because the Executive Branch as well ordered them. There is
649 an Executive Order by the President of the United States
650 directing GSA to move faster to try to get these master
651 contracts together, and to date, nothing has been done, 3
652 years after Congress enacted this legislation. Progress has
653 been slow. GSA hasn't been proactive. The law required
654 standard rates, common forms and applications to provide
655 clarity to agencies in the wireless industry, and I think our
656 members now are having to negotiate for each and every site
657 individually, just as they have in the past. So GSA has not
658 implemented the intent of Congress, and we can't wait 3 more
659 years for what is needed I think today. There is an urgent
660 lack of coverage on federal lands. The Administration has
661 made a priority of this, this committee has made it a
662 priority, and yet GSA I think has been dragging its heels. I
663 think there might be need for further legislation.

664 Mr. {Walden.} Or maybe a hearing with one witness.
665 They always like those.

666 I appreciate that, and for the rest of the panel, if
667 there are issues you are running into with federal siting,
668 let us know because this is one we raised because it is

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669 important and we don't--we concur with what Commissioner
670 Adelstein has said. I don't think they have got it right
671 yet.

672 Ms. Socia, traditionally network operators were given a
673 monopoly exchange for the obligation to serve anyone upon
674 reasonable request. In the models we have been discussing,
675 carriers only deploy to areas where there is an economic case
676 for the build. How do we balance sound network economies
677 with the threat of redlining, a practice of refusing service
678 to areas that are deemed a poor financial risk? And as I
679 heard about the incredible buildout that Google is doing,
680 which I applaud, representing a district that is bigger than
681 any State east of the Mississippi, getting access out into
682 our tribal lands, getting access out into our very remote
683 rural communities, whether it is wired or wireless, remains a
684 big problem. And so I wonder how we can address that better.

685 Ms. {Socia.} I think that the interesting thing about--
686 when you think about profit, I think that is a problem across
687 the board with building out to these more rural locations and
688 therefore requires an influx of capital. There just isn't a
689 way to do this without support. But I think the ways that

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690 our cities are looking at what is a profit are a little bit
691 different than the ways that a company might look at what a
692 profit is, right? So it is about education, it is about
693 public safety, it is about economic development and
694 transportation and all of these opportunities that are
695 presented when you have access. And so what is that worth
696 and how do we ensure that our tribal lands and our rural
697 communities can benefit in the same ways that other
698 communities are able to?

699 Mr. {Walden.} Before I go to Mr. Moffett for his
700 comments, this is also an issue just to get wireless phone
701 coverage out in areas of Montana, upstate New York. Elise
702 Stefanik has made this case to me, our new Member from up
703 there, that just getting access, getting connectivity remains
704 a real issue. The job is not done.

705 And so Mr. Moffett, from your perspective as an analyst,
706 what do we do?

707 Mr. {Moffett.} Well, I would certainly agree with Ms.
708 Socia's comments that it is simply not realistic to think
709 that those projects are going to be entirely self-funding in
710 the more rural areas. That said, I think the targeting of

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711 the funds that are available, the Connect America funds, can
712 be improved such that those funds are more carefully directed
713 to new greenfield projects that really are bringing broadband
714 to places that haven't been served in the past. There is
715 always some controversy around whether an area is either
716 partially served or sufficiently served.

717 Mr. {Walden.} Right.

718 Mr. {Moffett.} And then secondarily, I think it is also
719 important that those Connect America funds be made available
720 to all manner of companies so that there can be more
721 competition of potential providers of those services.

722 Mr. {Walden.} I want to get a quick answer from Mr.
723 Slinger. Does Google have plans to try a model out in sort
724 of rural, remote areas of the country to see if you can make
725 that work?

726 Mr. {Slinger.} Well, as you know, Fiber may not be the
727 right solution technologically--

728 Mr. {Walden.} Correct.

729 Mr. {Slinger.} --for rural areas, and we want to make
730 sure that there is sufficient spectrum available for
731 unlicensed wireless technologies. As well, as you know, we

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732 are experimenting with balloon technology with Project Lune,
733 and as well with fixed-wing aircraft out of New Mexico. So
734 we think that in rural areas, it may be new technologies that
735 are going to affordably bring Internet to those areas.

736 Mr. {Walden.} I hate to cut you off, but I know we are
737 all tight for time, so I will turn to my colleague from
738 California, Ms. Eshoo.

739 Ms. {Eshoo.} Thank you, Mr. Chairman, first of all for
740 having this hearing and for the high level of cooperation
741 relative to witnesses and invitations. We appreciate it.

742 [The prepared statement of Ms. Eshoo follows:]

743 ***** INSERT 2 *****

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744 Ms. {Eshoo.} Jonathan, it is great to see you, former
745 Commissioner at the FCC, and to everyone that accepted our
746 invitation to be here today.

747 To Mr. Slinger and Ms. Socia, first of all, thank you
748 for your important advocacy for the ``dig once'' policy. I
749 wish that the Congress had passed it because I think that we
750 would have more of that policy actually--excuse the
751 expression--embedded in our federal roadways, but how do you
752 think, A, the Executive Order is working? I want to get my
753 questions out first, okay, because the time is very brief,
754 and if you think there are any additional steps that Congress
755 should take to incent that deployment of conduit as part of
756 the federal highway projects and that system, which I don't
757 know, right now it doesn't seem like the highway project
758 system is going anywhere. It looks like it is being driven
759 off the road in Congress. But anyway, here maybe we can
760 concentrate on that.

761 Mr. Moffett, I listened very carefully to what you said,
762 and I think it is really highly pessimistic. It was
763 depressing to listen to your description of every last sector

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764 of the telecommunications marketplace, and my question to you
765 would be, where do you see a bright spot?

766 To Governor Lewis, thank you for being here. You know,
767 there was a report that just came in out of terms of
768 broadband penetration in our country. We are 24th in the
769 world. And I think that a good part of that number is a
770 representation of Native Americans and reservations in our
771 country. It is a shameful record. It is a shameful record.
772 And I think if there is going to be something that moves up
773 to the top of the list here in a bipartisan way is to see
774 that we bring to the parts of the country where there are
775 reservations that you get first-class service for first-class
776 citizenship. You really do. I mean, for students to have to
777 be driven by their parents 65 and 75 miles away to sit in the
778 car in order to get some kind of connection to do their
779 homework, I don't think any Member of Congress who is a
780 parent here would ever put up with that. We shouldn't have
781 that in our country. And I hope that Mr. Slinger and
782 Governor Lewis will form a partnership and then come back and
783 report to us. I would really like to have you meet and see
784 what you can come up with because you both need each other

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785 and we need both of you.

786 To Ms. Socia, do you report--does Next Century Cities
787 support the local municipal--having local municipal systems?

788 Ms. {Socia.} We support whatever it is our local
789 communities need to do in order to get where they are going.

790 So--

791 Ms. {Eshoo.} Well, that doesn't answer my question,
792 though.

793 Ms. {Socia.} Okay.

794 Ms. {Eshoo.} It is too broad. Excuse the--

795 Ms. {Socia.} I understand.

796 Ms. {Eshoo.} --term.

797 Ms. {Socia.} Many, many of our mayors signed on to a
798 letter we sent to the FCC in support of the preemption. The
799 two cities that filed petitions, Chattanooga and Wilson, are
800 two of our cities, and we have--we believe deeply in the idea
801 that competition is important and we believe deeply in the
802 idea that local folks should be able to solve their local
803 problems in a way that makes sense to them.

804 Ms. {Eshoo.} Well, I come from local government so I
805 agree with you, and I think that they should have the

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806 opportunity to do that as well.

807 Jonathan, I regularly hear from constituents who are
808 frustrated with the tower siting process. Now, here is one
809 for you. Everyone wants great service, the best service in
810 the whole wide world, but no one wants a wireless tower in
811 their backyard or where they can see it anywhere near where
812 they live. So how do you respond to this, you know, the
813 people that say that reforms need to be made to take away
814 local jurisdiction, say, over the placement of cell towers.
815 It is really a--it is like trying to get socks on an octopus.
816 I mean, they want it, they don't want it. And yet there are
817 some have-tos in this. So those are my questions, and you
818 have 13 seconds to answer them. Oh, no, you don't have any
819 time because I am over time. But you can respond in writing,
820 and that way I will get more meat on the bones, I think.

821 So thank you for being here, and please, Mr. Slinger and
822 Governor Lewis, come together, and if my office, other
823 offices can help facilitate, let us know.

824 Mr. {Walden.} The gentlelady's time is expired.

825 I will turn to the Vice Chair of the subcommittee, Mr.
826 Latta, for 5 minutes.

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827 Mr. {Latta.} Thanks, Mr. Chairman, and thanks very much
828 to our panel today. It is always a great discussion that we
829 have in subcommittee.

830 Mr. Adelstein, if I could go back to some of the
831 questions that the chairman was posing and also I think you
832 said about the GSA dragging its feet in getting some of these
833 things done, especially when we are talking about
834 streamlining the process for providers to obtain the
835 necessary permitting and other approvals needed to build on
836 federal lands and protected lands. Just out of curiosity, on
837 average, how long does it take for a negotiation process with
838 the Federal Government compared to the private industry? Any
839 idea?

840 Mr. {Adelstein.} It takes about 4 years with the
841 Federal Government, less than half of that with the private
842 sector, and sometimes it can drag on much longer with the
843 Federal Government for many, many years. And so generally
844 private companies will just avoid federal lands because it
845 takes so long. They don't see the return on investment that
846 Craig was talking about and so the Federal Government is
847 actually deprived of that revenue because it will go right

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848 next door if there is non-federal land nearby.

849 Mr. {Latta.} Okay. When you say that then, so you are
850 saying that on average it is four but can drag out even
851 longer?

852 Mr. {Adelstein.} That is right.

853 Mr. {Latta.} And any ideas or examples of how long some
854 of them have taken? Over 4 years?

855 Mr. {Adelstein.} Yeah, I have heard from people that it
856 has taken 10 years and longer. I have heard sometimes they
857 have tried and it never gets done. And there is never even a
858 finality to it. There is on decision-making process that is
859 in place. That is why this committee in its wisdom said that
860 the GSA was supposed to take steps to standardize the
861 process, and yet it hasn't been done.

862 Mr. {Latta.} Let me follow up with that. Because of
863 that, you know, 4 to 10 or who knows or maybe into infinity
864 and beyond, what additional costs are incurred when the
865 Federal Government is unable to streamline its process for
866 the broadband infrastructure buildout?

867 Mr. {Adelstein.} Well, there is lost revenue. There is
868 huge costs trying to go through that process for the

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869 individuals who are trying to get the site acquisition done.
870 It is a shame. Thirty percent of all the land mass in the
871 United States is federal property, especially in rural areas,
872 and a lot of very valuable federal buildings in dense urban
873 which could use a facility as well to deal with the capacity
874 demands. So it is a shame that these negotiations take so
875 long, that they don't lead anywhere. Not only do you lose
876 revenue that you need for deficit reduction, companies lose
877 valuable places and the consumers lose access to service they
878 need.

879 Mr. {Latta.} Thank you.

880 Mr. Slinger, I think in your testimony you were talking
881 about the percentage of the population out there that does
882 not have access to broadband, and what percentage would that
883 be?

884 Mr. {Slinger.} We are seeing now, the stats that we are
885 seeing, is about 60 million Americans. In some of our cities
886 that we are working in right now, 25 to 30 percent of people
887 have never had an Internet connection at home. They may have
888 access through cell phones but they don't have an Internet
889 connection at home.

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890 Mr. {Latta.} Okay. Just two quick follow-ups on that
891 then because again, I represent from urban to very, very
892 rural, and when you look at the numbers then or the
893 percentages, what percentage of that would be urban,
894 suburban, very rural and that percentage when you talk about
895 that? Was it 60 million?

896 Mr. {Slinger.} Yes.

897 Mr. {Latta.} And how would that break down, and also,
898 how many people would that include that would not want to
899 have access to broadband?

900 Mr. {Slinger.} I don't have a breakdown of urban versus
901 rural within the numbers but again, in urban areas, I can say
902 in many cities that 25 percent, 30 percent of these cities,
903 residents don't have anything at home at all, no Internet
904 connection.

905 Mr. {Latta.} Thank you.

906 Governor, if I could turn to you, and again, thanks very
907 much for being here with us today and for your testimony.
908 Because again, you said that you have, you know, a very, very
909 rural population, I think you said that you have 20 persons
910 per square mile, and you know, it is of great concern in your

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911 area along with all the rural areas in the country about
912 having that essential broadband for our constituents, and you
913 talked about the USF and that that would help you, but are
914 there other areas besides the USF that you could see that
915 would be of benefit to you and your community?

916 Mr. {Lewis.} Thank you for that question, and first of
917 all, I would like to recognize that I have two of my council
918 members here, Councilman Devin Redbird and Councilwoman
919 Caroline Williams, and also from our GRTI, Gila River
920 Telecommunications, Belinda Nelson and Pamela Thomas from the
921 Gila River Community.

922 Mr. {Latta.} Thank you.

923 Mr. {Lewis.} Thank you. And I would say that one
924 critical issue is rights-of-way, and you know, rights-of-way
925 is a challenge where it is a complex issue. It has to do
926 with the nature of tribal land. It goes back, as I said, to
927 the allotment policy that has a devastating effect on tribal
928 lands, and so the short answer is that GRTI in regards to
929 rights-of-way, if they do not get rights-of-ways, we have to
930 build around it, and of course, that costs--it is very
931 capital-intensive, and so we either have to move to another

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932 route or where we can in some cases have to build a wireless
933 link to go over the right-of-way, and obviously this is
934 pretty costly as compared to trenching through an established
935 right-of-way, but sometimes this is our only course of
936 action. That is an issue that, you know, we really need to
937 look at.

938 Another is the ETC designation process, which is overly
939 complicated, and so streamlining of that ETC designation
940 process would be welcome to many tribes.

941 Mr. {Latta.} Well, thank you very much, and Mr.
942 Chairman, my time is expired and I yield back.

943 Mr. {Walden.} Thank you.

944 We will now recognize the gentleman from New Jersey, Mr.
945 Pallone, for 5 minutes.

946 Mr. {Pallone.} Thank you, Mr. Chairman.

947 I want to get one question in to Mr. Adelstein about
948 infrastructure during disasters like Hurricane Sandy, but
949 then I want to get a question in to Governor Lewis, so I am
950 trying to split this up.

951 Three years ago, Hurricane Sandy devastated my district.
952 The force of the storm knocked out some communication for

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953 days. Mr. Adelstein, you testified about all the wireless
954 infrastructure that is being deployed and upgraded across the
955 country, and I support all this deployment, but my
956 constituents are also concerned about whether the equipment
957 works in a disaster.

958 So what is your industry doing to make sure people can
959 call for help and reach loved ones in an emergency, and what
960 do you think of the FCC's work to improve resiliency?

961 Mr. {Adelstein.} Well, ensuring--

962 Mr. {Pallone.} Two minutes.

963 Mr. {Adelstein.} Ensuring reliable access to
964 telecommunications is a real top priority for our industry.
965 We want to make sure all of the customers get access when
966 they need it most, which is in a disaster. You know, during
967 Hurricane Sandy, we saw cooperation, for example, between T-
968 Mobile and AT&T that agreed to share each other's network in
969 the region affected by the storm and share their network
970 operations centers. I would say that in terms of the
971 structures themselves, not one of them went down during the
972 storm, not one. The issue was things that were beyond the
973 control--power companies, access to roads, trees that fell.

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974 But what makes it difficult is that sometimes we can't even
975 get generators sited on these things. Going back to the
976 issue of this committee, we find from localities that you
977 can't put a generator there because it violates a noise
978 statute. It is only going to be used in a time of emergency.
979 I don't think anybody in the neighborhood would complain
980 about the noise of a generator when otherwise their wouldn't
981 work, and yet localities will not allow us to put them there
982 and then complain when the system doesn't work in a disaster.
983 We need more proactive thinking about having backup power and
984 facilitating access to it.

985 And one more point to add, which is the best thing you
986 can do for reliability is redundancy. The more these
987 facilities are up, the more likely you are going to have one
988 that works in a time of emergency. So all the work done by
989 this committee to promote deployment is promoting redundancy
990 and ensuring that there will be adequate facilities in case
991 of emergency and more likelihood that they will survive the
992 disaster and be available for use of public safety as well as
993 for the citizens in the community.

994 Mr. {Pallone.} Do you want to comment on the FCC's

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995 work? Because Chairman Wheeler committed to me that the FCC
996 would act by the end of the year to complete its rulemaking
997 on improving wireless network resiliency.

998 Mr. {Adelstein.} We are thrilled with what the FCC is
999 doing. We have worked very closely with Chairman Wheeler and
1000 the other members of the Commission that are looking at a
1001 cooperative arrangement where we can try to provide
1002 incentives for industry to deploy this kind of equipment. I
1003 think industry is doing a lot already, making major
1004 investments in things like backup power, and we are working
1005 together with them in a very cooperative fashion. We believe
1006 that the goals are shared in making sure that these networks
1007 are resilient and redundant.

1008 Mr. {Pallone.} All right. Thank you.

1009 Let me go to Governor Lewis, and I should say that I
1010 love the Gila River Reservation. I haven't been there in a
1011 long time. It is about time I go back.

1012 But you know, on the one hand I was thinking that I
1013 guess relative to many tribes, you might have more ability
1014 than even some of the, you know, more remote, even more
1015 remote or even, you know, poorer tribes, if you will, you

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1016 know, to achieve some of the goals that you mentioned. So I
1017 just wanted to ask about funding. You mentioned the
1018 Universal Service Fund. I guess the gentleman from Google
1019 talked about this Connect Home Initiative. I think the
1020 President was actually at the Choctaw Reservation last week
1021 or so talking about that.

1022 I mean, what are these sources of funding? Is the
1023 Universal Service Fund useful to you now? What would we have
1024 to do to improve it? You know, what could the Federal
1025 Government do in terms of funding for tribal infrastructure,
1026 particularly for those tribes that might even be--have even
1027 more difficulty. I am thinking of like the Pueblos in New
1028 Mexico or the tribes at the Grand Canyon, you know, smaller
1029 than Gila River, less funding available. How are these funds
1030 helpful to you, the ones that we do have, these programs that
1031 we do have, or are they?

1032 Mr. {Lewis.} Thank you, Congressman Pallone, and you
1033 are always welcome at the Gila River Indian Community.

1034 And with USF funding, stable funding mechanisms are
1035 critical to businesses like GRTI and those in Indian Country
1036 where they have to develop deployment plans and rely on

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1037 federal funding sources to be there to begin with. Now, our
1038 U.S. funding is critical as well for providing funding for
1039 infrastructure buildout, and that is critical to the long-
1040 term sustainability of these telecommunications providers in
1041 Indian County.

1042 Mr. {Pallone.} Now, are you able to--are you using
1043 funds from Universal Service now?

1044 Mr. {Lewis.} Yes, we are.

1045 Mr. {Pallone.} And how is that working? What does it
1046 mean? How do you do it?

1047 Mr. {Lewis.} That is critical to the overall business
1048 plan of Gila River Telecommunications. You know, they rely
1049 on that source of income moving forward. It is critical to
1050 the long-term business outlook. And also in regards to long-
1051 term capital buildout as well.

1052 Mr. {Pallone.} All right. Thank you.

1053 Thank you, Mr. Chairman.

1054 Mr. {Walden.} The gentleman's time is expired.

1055 The chair now recognizes the gentleman from Illinois,
1056 Mr. Shimkus, for 5 minutes.

1057 Mr. {Shimkus.} Thank you, Mr. Chairman. It is a great

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1058 panel. I appreciate you all being here.

1059 I want to go to Adelstein, Commissioner, and Governor
1060 Lewis real quick to highlight the challenges because
1061 especially the environmental review process, especially on
1062 federal lands, is a burden. So have you thought through how
1063 local municipalities and they do their zoning outside of
1064 federal lands and how we could marry that with which goes on
1065 there and can you comment on that?

1066 Mr. {Adelstein.} Yes. You know, some localities are
1067 great, and what we heard today from Google, from Ms. Socia,
1068 is that those communities that promote broadband make it
1069 easier to get access, and that is where the investment goes,
1070 and those that throw up roadblocks, not to name any specific
1071 parts of the country represented by folks here but there are
1072 some that aren't seeing investment they would get if they
1073 weren't throwing up roadblocks, and to the question of
1074 Congresswoman Eshoo about, you know, people saying not in my
1075 backyard, they are not going to have service in their
1076 backyard. So we work very cooperatively with local
1077 communities. I mean, we try to--every single facility that
1078 has been sited has been sited in cooperation with local

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1079 government. But to have it to be dragged out, it took the
1080 work of this committee to say you don't have to get another
1081 zoning hearing for something that has already been zoned to
1082 put a 4G antenna up on a tower that is already there. Why
1083 should the committee have to do that? Increasingly,
1084 communities are recognizing this. The smart ones are moving
1085 ahead. Ten States have enacted laws in the last several
1086 years since 2013 to streamline deployment in their States,
1087 and those States are seeing more investment. They are
1088 working with local partners, the National Association of
1089 Counties, the National League of Cities and others to get out
1090 word about the way the FCC is implementing the law that you
1091 passed. Commissioner Cliburn asked us to go out--

1092 Mr. {Shimkus.} Let me get to Governor Lewis on the
1093 federal properties because that is another big challenge
1094 because they have got to get past the government land issue,
1095 and Governor, really, the question is, can't we force a
1096 zoning issue, get you guys the zoning ability like we do
1097 municipalities?

1098 Mr. {Adelstein.} Yes. You know, there is a bill that
1099 was introduced in the other body by Senator Rubio that would

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1100 create a standard fee schedule, fee retention for the agency
1101 that the agency could keep the money they get from that to
1102 pay for the cost of processing it. There would be common
1103 forms and contracts, which you have already tried to get
1104 enacted, but there is a need for more legislation to get them
1105 to do what you asked them to do already. There is an
1106 expectancy of lease renewals, so when somebody invest there,
1107 they are not going to get cut off.

1108 Mr. {Shimkus.} Let me get Governor Lewis to respond.

1109 Mr. {Lewis.} Federal lands in Indian Country, that has
1110 been a long issue in regards to, you know, our unique
1111 situation as Indian tribes and the nature of Indian land in
1112 regards to highly fractionated land interest that, you know,
1113 are just so critical and sometimes are one of the major
1114 obstacles to buildout in regarding to getting right-of-ways.
1115 If we can somehow streamline that process through the Bureau
1116 of Indian Affairs, through the Department of Interior, that
1117 would greatly help out tribal infrastructure buildout in the
1118 future.

1119 Mr. {Shimkus.} Great. Thank you.

1120 Mr. Slinger, let me go to you real quick. My largest

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1121 community in my Congressional district is 33,000 people.

1122 When do you think Google would hit that community on your
1123 timeline?

1124 Mr. {Walden.} Did you want to name that community?

1125 Mr. {Shimkus.} But I am not the chairman of the
1126 committee so I don't have as much power.

1127 Mr. {Slinger.} Well, you know, we published this Fiber
1128 checklist so that we can, as Mr. Adelstein said, get cities
1129 to ready by themselves for Fiber deployment, whether it is
1130 Google Fiber or any other provider, by making sure that they
1131 have smooth permitting processes that allow for a large
1132 volume of permits to go through to make it easy for people to
1133 get onto telephone poles through streamlined make-ready
1134 engineering and construction.

1135 Mr. {Shimkus.} So it is the same type of debate as we
1136 are talking with the rural or the federal lands deployment,
1137 the ease of being able to have access and a timely response.

1138 And let me finish up with Mr. Moffett. It is all about
1139 return on investment--I don't care how people want to marry
1140 it--if you believe in the capital model. So if a rural area
1141 can't make a go based upon the formula, then you have to be

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1142 able to dip into RUS or other forms of low-interest loans to
1143 make the business sense. Is that correct?

1144 Mr. {Moffett.} That is exactly correct.

1145 Mr. {Shimkus.} And also, time is money. So any delay,
1146 as what we have just talked about here, affects the ability
1147 for someone to go to the capital markets to make a pitch that
1148 they are going to get their return on investment that you
1149 propose.

1150 Mr. {Moffett.} That is correct as well, yes.

1151 Mr. {Shimkus.} Thank you, Mr. Chairman. I yield back
1152 my time.

1153 Mr. {Walden.} The gentleman yields back his time.

1154 The chair now goes to the gentleman from Pennsylvania,
1155 Mr. Doyle, for 5 minutes.

1156 Mr. {Doyle.} Thank you, Mr. Chairman. Thank you for
1157 this excellent hearing and this excellent panel.

1158 Jonathan, welcome back.

1159 Mr. {Adelstein.} Thank you.

1160 Mr. {Doyle.} Broadband infrastructure has become a
1161 critical component to almost every facet of our daily lives
1162 from students using Blackboard for school or watching Netflix

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1163 and Amazon to stream movies and TV shows, and by all levels
1164 of government to communicate with citizens and increasingly
1165 leverage the network to improve the delivery and efficiency
1166 of services.

1167 Pittsburgh in partnership with Carnegie Mellon
1168 University and Google is deploying a connected platform that
1169 will integrate road sensors, traffic cameras and information
1170 kiosks to create a living laboratory at a city scale for the
1171 next-generation technologies. This platform will be used to
1172 improve traffic patterns in real time, allowing city
1173 departments to efficiently predict road wear and schedule
1174 maintenance and to allow people to explore and interact with
1175 the city more effectively. Fast, available and ubiquitous
1176 broadband infrastructure provides the basis for these next-
1177 generation solutions.

1178 I for one am a big fan of making every tool in the
1179 toolbox available to local governments to make sure that they
1180 have access to the best networks and the best platforms in
1181 order to improve the lives of the people living there.

1182 Mr. Chairman, I would love to work with you on putting
1183 together some legislation to address some of these

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1184 challenges.

1185 Let me start with Ms. Socia. How can localities
1186 leverage shared infrastructure to expand access and increase
1187 the deployment of broadband? As cities like Pittsburgh build
1188 this infrastructure to address our own municipal needs, how
1189 can we and other municipalities use what we are building to
1190 expand access more broadly and what, if anything, stands in
1191 the way of municipalities leveraging the infrastructure?

1192 Ms. {Socia.} Really interesting work has been done all
1193 over the country, as you suggested. Many of our cities are
1194 using smart infrastructure to do really interesting work,
1195 determine particulates in the air and checking asthma rates
1196 and using streetlights that also have cameras in them for
1197 public safety. We are seeing a lot more of that happen, and
1198 I think there are barriers for cities to doing this work as
1199 well, and some of them are the State regulations that
1200 prohibit their building out their own infrastructure, and in
1201 some case, it is, as was mentioned earlier, issues of how
1202 densely populated, the circumstances of their current
1203 financial situation. All of those things impact the capacity
1204 of a city to actually build out their own.

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1205 Mr. {Doyle.} Thank you.

1206 Mr. Slinger, I am curious. What dividends has Google
1207 Fiber found in communities where you have deployed your
1208 gigabit broadband to? Has it impacted jobs or the local
1209 economy or education or local government? What are you
1210 finding in these communities?

1211 Mr. {Slinger.} Yes, we are seeing a great economic
1212 impact in the cities that we are in. There have been reports
1213 that Kansas City, Missouri, is not working on an economic
1214 impact analysis. Let me start by saying there are certain
1215 categories of employees where there is no unemployment,
1216 because obviously when you build a big network, there is a
1217 lot of demand for jobs for certain types of labor, and I
1218 think last week the Fiber to the Home Council released some
1219 research that showed that GDP growth in cities with a gig
1220 network rises and the average cost per home or, you know,
1221 value of a home goes up 3.1 percent in those cities, and that
1222 is new data from about a week ago.

1223 But we also see, and we have heard from Mayor Holland
1224 and Mayor James in Kansas City that they have seen it as a
1225 draw to regional economic development. Other companies when

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1226 deciding where to locate in the Midwest will now look at
1227 Kansas City and say hey, this place has a gig network, let us
1228 join.

1229 Mr. {Doyle.} I am curious too about the discrepancies
1230 that exist between price and speed. In Pittsburgh, for
1231 instance, I can get 500 megabits a second but it will cost me
1232 about \$400 a month. When we look at cities like Chattanooga
1233 and Kansas City and Austin and other cities, residents can
1234 get a gig for less than \$100. I am curious, maybe Mr.
1235 Moffett and Mr. Slinger and Ms. Socia, you could comment on
1236 why you think these discrepancies exist.

1237 Mr. {Moffett.} Thank you for the question. My
1238 observation would be, you are right, there are a very wide
1239 range of economic models, and it is a challenge because there
1240 is no near-term variable cost that dictates a cost-plus model
1241 and so you see a lot of companies experimenting with
1242 different prices, in part because they are trying to figure
1243 out what the quantity demanded will be at different prices.

1244 The challenge--but obviously you tend to have lower
1245 prices where you have multiple competing networks and then
1246 again it raises the question of whether the providers are

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1247 earning a sufficient return at the market share and the
1248 prices that they are charging. In many cases they are not.
1249 This is a very difficult area to do economic research,
1250 however, because you will find that there are a lot of the
1251 companies who have different motives rather than simply
1252 profitability of the network itself.

1253 Mr. {Doyle.} I want to give Mr. Slinger just a--because
1254 I know our time is up.

1255 Mr. {Walden.} Yes, we have go to--

1256 Mr. {Slinger.} Well, I would say that if you look at
1257 the cities in which we are already operating or cities where
1258 we have announced, we have seen incumbent prices drop
1259 immediately and speeds go up, so I think there is more room
1260 there.

1261 Mr. {Doyle.} Thank you. Thank you, Mr. Chairman.

1262 Mr. {Walden.} We will now go to the gentleman from
1263 Louisiana, the Whip of the House, Mr. Scalise, for 5 minutes.

1264 Mr. {Scalise.} Thank you, Mr. Chairman. I appreciate
1265 you having this hearing.

1266 And Mr. Adelstein, I know you talked in your opening
1267 statement about a lot of the work that has been done to

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1268 expand spectrum, of course, a lot of that within this
1269 committee where we have come together to make more spectrum
1270 available. I know the chairman has been a great leader in
1271 that effort too.

1272 One part of that equation absolutely is expanding more
1273 spectrum, and then of course, the other part of that is your
1274 members where you all come to actually build it out and to
1275 build that infrastructure to take advantage of the new
1276 spectrum. If you could maybe share with us some of the
1277 challenges or hurdles that your members face to make the
1278 investment that they need to make to take advantage of that
1279 spectrum and hopefully even make more spectrum available in
1280 the marketplace?

1281 Mr. {Adelstein.} Yes. You know, spectrum has been
1282 quite a hurdle. You saw that \$41 billion was spent for a
1283 limited amount of spectrum recently, basically 65 megabits.

1284 Mr. {Scalise.} It is a little bit better than the CBO
1285 estimate, Mr. Chairman, wasn't it?

1286 Mr. {Walden.} Which was zero, and it was \$41.9 billion.

1287 Mr. {Scalise.} Hopefully the CBO recognizes the value
1288 of the spectrum that clearly everyone else seems to know

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1289 about.

1290 Mr. {Adelstein.} I think the CBO estimated zero, and it
1291 was \$41.9 billion, so they were off--

1292 Mr. {Scalise.} They were off by a little bit there.

1293 Mr. {Adelstein.} 41.9, yeah. But the fact it, that was
1294 for a 12 percent increase in the available commercial mobile
1295 spectrum. So you just got a 12 percent increase in the
1296 throughput and you have 700 percent you need in the next 5
1297 years. So we are down to 688 percent, a long way to go to
1298 build out to meet the needs of people, and as I said, local
1299 communities often are saying no to these facilities. We
1300 have--the business case has to be made in rural areas as we
1301 have discussed today, and overall investment is very
1302 difficult with those prices for spectrum. We can't afford to
1303 have regulatory drag on these investments, slowing them down,
1304 making it more expensive when there is not enough capital to
1305 build out to meet these needs already. I like to joke, you
1306 know you are in trouble when you quick solution is
1307 infrastructure, but that is kind of where we are at in this
1308 country, and as slow as it is, it is immediately available
1309 when it is built if you take that same spectrum and reuse it.

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1310 So all of these burdens on federal lands, in urban areas, the
1311 FCC has done a great job, this committee has done a great job
1312 of trying to address that, but we need to work with our
1313 partners and State and local governments as well.

1314 Mr. {Scalise.} And clearly on federal lands too, we
1315 have been grappling with that here trying to remove some of
1316 those burdens, not just in the spectrum space but in a whole
1317 lot of other areas, especially as it relates to energy
1318 production where federal lands and even in the local areas,
1319 some of those restrictions make it really hard to experience
1320 a lot of the economic opportunity we can. Thanks for that
1321 answer.

1322 Mr. Moffett, I want to ask you, in some of your
1323 analysis, if you could share with us some of the similar
1324 challenges that, you know, what are some actions maybe that
1325 Congress or the FCC can take to further expand the
1326 opportunities for WiFi, for broadband?

1327 Mr. {Moffett.} Well, as I said earlier, I think there
1328 are opportunities in Connect America Funds and making those
1329 available to a wider range of companies for bringing
1330 broadband to rural areas, but there is an overarching

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1331 question here, and it relates to the question that Ranking
1332 Member Eshoo asked earlier about where are the bright spots.
1333 If you think about this as a larger value chain of
1334 microeconomics from everything from the content companies and
1335 the internet providers to the infrastructure providers, where
1336 the bright spots are is very clearly outside of
1337 infrastructure. The apps developers and the content
1338 companies are actually earning extraordinary returns, and
1339 there is a very knee-jerk and familiar regulatory impulse to
1340 say let's try to protect the companies that are making very
1341 high returns from the ones that are making very low returns.
1342 As an economist, that is a very odd structure.

1343 Mr. {Scalise.} Well, final question as I am running out
1344 of time, Mr. Slinger. When Google Fiber was being deployed,
1345 it has been reported you all were able to work with some
1346 local governments that gave some exemptions, maybe some
1347 expedited approval processes so that not just your but other
1348 new entrants were able to move things a lot quicker. If you
1349 can talk in general about the ability for more local
1350 governments to take more of that deregulatory approach and
1351 how deregulation in a sense of helping expedite the expansion

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1352 of technology has helped you and could help others to develop
1353 even more broadband?

1354 Mr. {Slinger.} Sure. And I am going to go back to the
1355 Fiber checklist which we published in 2014. Some of our
1356 major barriers obviously are getting access to poles and
1357 making it easy to do the make-ready construction and get the
1358 poles ready. One thing that has been suggested, I believe by
1359 the Fiber to Home Council, was if municipalities took a
1360 proactive step in doing pole maintenance, and while they are
1361 doing pole maintenance, if they could do that make ready, get
1362 rid of the old wires that aren't needed and make slots that
1363 would allow new entrants, Google Fiber or any other entrant,
1364 to get in quickly and attach to poles, that is one thing that
1365 would really help.

1366 And again, ``dig once'' policies and access to the
1367 right-of-way, there is more we can do with local communities
1368 and more we could do with federal highways to make sure that
1369 if someone is ripping up a road to do construction or
1370 repaving, that we put in conduit that anyone can use. Those
1371 are just smart things. They allow new market entrants and
1372 ultimately more competition and choice at the local level.

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1373 Mr. {Scalise.} Thanks for your answers. I yield back
1374 the balance of my time.

1375 Mr. {Walden.} The gentleman yields back the balance of
1376 his time.

1377 Unfortunately, we are going to have to pull this to a
1378 close because we are down to about 4 minutes left in the
1379 vote.

1380 This is not the last hearing. We expect to continue
1381 this work going forward. Your testimony has just gotten us
1382 to a really good starting place. We have a lot more work to
1383 do, some follow-up to do.

1384 I know there are members who didn't get a chance to ask
1385 questions. We do have information to submit for the record
1386 including from TIA, Comptel, CCA, Tech Freedom.

1387 [The information follows:]

1388 ***** INSERT 1 *****

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|

1389 Mr. {Walden.} Mr. Olson, I believe you had a document
1390 you wanted to submit, some articles on broadband deployment,
1391 and with that, I am afraid we are going to--unless, Ms.
1392 Matsui, do you want just a minute or two?

1393 Ms. {Matsui.} Yes, just a minute or two.

1394 Mr. {Walden.} Go ahead.

1395 Ms. {Matsui.} I was curious, I wanted to ask Mr.
1396 Slinger some questions. I find what you are talking about
1397 very interesting because I look at this, and what you say is
1398 all very important about deploying broadband infrastructure,
1399 and I am from Sacramento, so we have wonderful areas that are
1400 doing great things. I am looking at a particular area in our
1401 city that is economically deprived, and we have a light-rail
1402 station that is going to be--a light-rail line that is going
1403 to be completed there with fiber and transit-oriented
1404 development stations. But yet we have schools and libraries
1405 that are just deprived and businesspeople there who just have
1406 no access. If we were to do something there, and I don't
1407 know whether we can have a special project, but I'm looking
1408 at this being very, very special for economic development.

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1409 Is that something that we can provide the access, as you say
1410 that you need, is that something that you or somebody else
1411 can take on as a project working with us? Because I am
1412 trying very much to help this area that feels very deprived,
1413 looking at the rest of my district that feel like they are on
1414 the move and they are not on the move, and I want to get them
1415 on the move if there is something we could do there.

1416 Mr. {Slinger.} Yes. There is a lot that we do really
1417 early stage with all the cities that we look at to make sure
1418 that they have the right kind of digital inclusion plans in
1419 place early, to make sure that the cities have a focus on it,
1420 and again, there is no silver bullet with any one company but
1421 we want to make sure that all providers and local community
1422 groups take this on, and as Fiber or any other technology is
1423 built out in those areas to really make sure people
1424 understand the relevancy of the Web, and hopefully get more
1425 people online.

1426 Ms. {Matsui.} Okay. Well, thank you very much, and
1427 thank you, Mr. Chairman.

1428 Mr. {Walden.} Thank you.

1429 We are going to have to call it to a conclusion here.

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

1430 Again, we do have votes on the House Floor followed by the
1431 Iranian briefing. So thank you to all of you for your
1432 testimony, your counsel. We look forward to being back in
1433 touch with you as we move forward and to others who have
1434 ideas for the Congress on how we can expand access to
1435 affordable broadband across the country, on Indian
1436 reservations, rural communities, urban communities, wherever
1437 it is not.

1438 And we have some tribal letters for the record as well
1439 from Mr. Lujan, which we are happy to accept.

1440 [The information follows:]

1441 ***** COMMITTEE INSERT *****

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1442 Mr. {Walden.} And with that, we will adjourn.

1443 [Whereupon, at 1:41 p.m., the subcommittee was

1444 adjourned.]