

Committee on Transportation and Public Utilities
April 26, 2019

COUNCIL OF THE CITY OF PHILADELPHIA
COMMITTEE ON TRANSPORTATION AND PUBLIC UTILITIES

Room 400, City Hall
Philadelphia, Pennsylvania
Friday, April 26, 2019
10:28 a.m.

PRESENT:

COUNCILMAN KENYATTA JOHNSON - CHAIR
COUNCILMAN MARK SQUILLA - VICE
COUNCILMAN DEREK S. GREEN
COUNCILMAN CURTIS JONES, JR.
COUNCILMAN DAVID OH
COUNCILMAN AL TAUBENBERGER

BILLS: 180976

RESOLUTIONS: 181081

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2 COUNCILMAN JOHNSON: Good morning. This
3 hearing is called to order. This is the Public
4 Hearing of the City Council Committee on
5 Transportation and Public Utilities. The
6 purpose of this Public Hearing is to hear
7 testimony on Bill No. 180976 and Resolution
8 181081.

9 Before I open up this hearing, I'm going
10 to ask for Councilman Derek Green to offer his
11 remarks.

12 COUNCILMAN GREEN: Thank you, Mr. Chair.

13 Thank you for the opportunity to be
14 here. Although not a member of the
15 Transportation and Public Utilities Committee,
16 I'm heavily involved in the issue of energy from
17 my position as Chair of Philadelphia Gas
18 Commission.

19 I want to thank all of you for being
20 here and being part of this public dialogue
21 between various stakeholders regarding the
22 future of PGW. I say public dialogue because
23 many of these conversations have been ongoing
24 between advocates and Council, Council and the
25 Administration, the Administration experts and

1 also internally at PGW and also members of
2 labor. As we will hear, particularly toward the
3 end of this hearing, the work that's been going
4 on between PGW and the Office of Sustainability.

5 I want to thank the advocates for doing
6 the hard work of speaking up and speaking out on
7 issues that effect every Philadelphian including
8 our most vulnerable citizens. Even when we
9 don't agree, I respect the work you do and
10 encourage you to continue and keep putting up
11 the pressure.

12 I also want to thank Christine Knapp and
13 her team who have been working tirelessly mostly
14 behind the scenes to address climate change in
15 significant necessary ways here in the City of
16 Philadelphia. Christine, thank you for the
17 work. And also, congratulations on winning the
18 Bloomberg Climate Change Challenge in helping us
19 to move the City of Philadelphia forward.

20 And finally, I want to thank PGW for
21 doing both the tasks that'd been assigned to you
22 and for engaging in this process. And we are
23 publicly beginning -- that we are publicly
24 beginning today. The City of Philadelphia and
25 Council are committed to achieving an equitable,

1 sustainable and ultimately just resolution to
2 climate change.

3 Thank you, Mr. Chair.

4 COUNCILMAN JOHNSON: Thank you very much
5 Councilman Derek Green.

6 Will the clerk, please, read title of
7 the resolution.

8 THE CLERK: Resolution 181081:
9 Resolution authorizing the Committee on
10 Transportation and Public Utilities to hold --
11 to conduct hearings regarding the sustainability
12 of Philadelphia Gas Works.

13 COUNCILMAN JOHNSON: Will the clerk,
14 please, call the first panel.

15 THE CLERK: Reverend Gregory Holston,
16 Mark Clincy, Nicole Karsch.

17 (Panel approaches Witness Table.)

18 COUNCILMAN JOHNSON: Good morning.

19 ("Good morning.")

20 COUNCILMAN JOHNSON: Please, state your
21 name for the record and you can begin.

22 MR. CLINCY: I am Mark Clincy,
23 representing Philly Thrive.

24 COUNCILMAN JOHNSON: Can you speak into
25 the microphone, please, sir.

1 MR. CLINCY: Okay. I am Mark Clincy,
2 representing Philly Thrive.

3 COUNCILMAN JOHNSON: You can begin your
4 testimony, sir.

5 MR. CLINCY: My name is Mark Clincy. I
6 am a member of Philly Thrive, and I am a
7 resident of South Philadelphia.

8 Philly Thrive is an organization that
9 was created because we believe everyone has the
10 right to breathe clean air. Philly Thrive has
11 been fighting the Philadelphia Energy Solutions
12 Refinery, PES, in South Philadelphia. I and
13 others live -- in this room, live very close to
14 PES.

15 The refinery emits toxic chemicals.
16 Pollution causes asthma, cancer and other
17 respiratory illnesses. See my submitted
18 testimony for the data proving this.

19 Philly Thrive conducted a survey in
20 South Philadelphia. 33.7 percent of
21 participants living near the refinery have
22 asthma. I experienced firsthand what it's like
23 to live nearby polluting fossil fuels. I feel
24 sad and angry about this. I am breathing this
25 toxic air, and I don't feel good about it.

1 I also have family members who suffer
2 from asthma. And many people in this room are
3 directly affected by it, as well. This issue
4 affects so many which is why we've been asking
5 you, Councilman Johnson, about attending a
6 public forum in District 2 to discuss it
7 further. We are already so polluted in South
8 Philadelphia, we don't need another plan. We
9 need PGW to make a change from fossil fuels to
10 renewable energy.

11 (Applause.)

12 We want more jobs for the community. A
13 lot of jobs have moved from the City into the
14 suburbs. My community has been left behind.
15 The transition of PGW must include a plan to
16 protect current jobs and create new jobs for
17 people in my community who can't find work. An
18 important piece of this conversation is cost of
19 utilities.

20 I know PGW wants to keep it affordable
21 for rate pairs. But natural gas and fossil
22 fuels is not the solution to this. The cost of
23 having fossil fuels in our neighborhoods is too
24 high. We pay high medical bills, and some pay
25 with their lives.

1 In conclusion, the answer is a just
2 transition away from fossil fuels. Centering
3 labor and centering communities like mine
4 targeted by racism and classism, I am speaking
5 as the voice for those that can't be here or are
6 no longer with us. We want a say in what goes
7 on in our communities. We want to be a part of
8 the decision about the future of PGW.

9 I thank you for your time.

10 (Applause.)

11 COUNCILMAN JOHNSON: Like to acknowledge
12 the presence of Councilman Al Taubenbeger.

13 Please, state your name for the record.
14 You can begin your testimony.

15 MS. KARSCH: My name is Nicole Karsch.
16 I am here today on behalf of the Sunrise
17 Movement. I am 25 years old, and I live in West
18 Philadelphia, but my roots are in Olney. My dad
19 was raised in Olney east of Broad, and my mom
20 was raised in South Philly.

21 And I know we are here to talk about --

22 COUNCILMAN GREEN: Excuse me,
23 Ms. Karsch. I know Mr. Clincy had written
24 testimony. Did you also have written testimony
25 because I wanted to read that along with your

1 presentation?

2 MS. KARSCH: I can send it to you after.

3 COUNCILMAN GREEN: Okay. And Reverend
4 Holston, did you have written testimony? We had
5 Mr. Clincy's testimony but not yours.

6 Okay.

7 REVEREND HOLSTON: It's my only copy.

8 COUNCILMAN JOHNSON: Proceed.

9 MS. KARSCH: We are to here to talk
10 about the sustainability of PGW. But I first
11 want to name in the room what is unsustainable
12 about PGW and about our current environmental
13 and economic systems.

14 So, we know that it's unsustainable to
15 burn coal, oil and gas. We know that if left
16 unchecked, this catastrophe will cause flooding.
17 It will cause increased asthma rates. It will
18 cause increase and exacerbate the housing crisis
19 that we already have in Philadelphia. We know
20 that it's unsustainable to live in a society
21 where a handful of fossil fuel executives
22 continue to have more and more wealth while more
23 and more Philadelphians can't pay their energy
24 bills. We know that it's unsustainable that we
25 have some of the highest rates of asthma in the

1 country in the sixth largest city in our
2 country. And we have no real concrete plan to
3 address it.

4 And I've been fighting and naming these
5 issues of injustice for years. And as a young
6 person, I'm often told that I am young. That I
7 don't understand how the political process
8 works. That I'm naive. And that one day, I
9 will learn that these are just the realities f
10 living in this country. And I am here to tell
11 Council that that is no longer the political
12 reality in this country. That young people will
13 no longer tolerate a system that is unjust with
14 no plan to address it.

15 So according to the latest International
16 Panel on Climate Change, we have eleven years to
17 radically decarbonize our economy to avert the
18 worst effects of climate change. The City of
19 Philadelphia has made a commitment to reduce
20 emissions 80 percent by 2050. I think it's
21 naive that we think a plan to reduce 80 percent
22 by 2050 will get us where we need to go when the
23 International Panel on Climate Change is telling
24 us we need to do it 100 percent by 2030.

25 We also know and will hear a lot that it

1 is unfeasible to pursue the solutions that we
2 need with the current funding and laws that we
3 have around asking for renewables, but we have
4 this opportunity to do this study. And if we
5 are not doing it with the goals of carbon zero
6 heating by 2030 and with the goal of asking for
7 the money and the resources that it will need,
8 if we do that study with the limited resources
9 we have access to now, we know what will happen.

10 We know that it will increase asthma
11 rates. We know it will increase the likelihood
12 of flooding in South Philly and across the City.
13 We know that unless we center the issues that
14 have been the problems for so long and the
15 solutions, that we will just continue to
16 exacerbate inequality, rate poverty and the
17 climate crisis.

18 And so, our demand as young people is
19 that the study that we -- we want you to invest
20 in a study that will consider what we need to do
21 to make PGW a sustainable part of this City. We
22 need it to commit to the goals that PGW be
23 carbon zero by 2030, that it invest in jobs,
24 good paying union jobs for everyone that is
25 involved in the transition. And that it also

1 consider the injustice that the fossil fuel
2 industry has done to the health of our
3 communities in planning for the renewable
4 future.

5 Thanks.

6 COUNCILMAN JOHNSON: Thank you very
7 much.

8 (Applause.)

9 How you doing, Reverend Holston? You
10 can begin

11 REVEREND HOLSTON: Good morning,
12 Councilman Johnson, Councilman Green, Councilman
13 Oh, Councilman Taubenbeger and all the Members
14 of the Committee on Transportation and Public
15 Utilities. Before I read this written
16 testimony, and I thank you for allowing us to
17 testify here today. And you know, preachers
18 sometimes deviate a little bit from the script.

19 So you know, I grew up in South
20 Philadelphia. I went to school at Childs
21 Elementary. I went to Vare Middle School and
22 then Vare Junior High School. I grew up at the
23 Church of Redeemer Baptist at 24th and Dickinson
24 Streets. I lived at 18th and Ellsworth with my
25 mom, and she still lives on that block. And our

1 first house was at 23rd and Morris Streets. I
2 raised three children there until they were in
3 their teens.

4 My youngest daughter -- and I shared
5 this story several times. My youngest daughter
6 who is an incredibly talented young lady grew up
7 with asthma right there on that block of 23rd
8 and Morris Streets. She always was kind of
9 small, kind of skinny, really muscular in some
10 ways. And when she was gasping for air one
11 night, as she had asthma, we can literally see
12 every ripple, every muscle in her body gasping
13 for air.

14 The images in my mind are still very
15 clear of being in her room watching and hoping
16 and praying for the asthma machine to work,
17 whether we should take her to the hospital or
18 not. Whether we should take care -- whether we
19 needed to some extraordinary thing to help her.

20 It is a helpless thing when your child
21 is gasping for air and there is nothing you can
22 do. The recognition that 25 percent of our
23 children in Philadelphia and some places 30 to
24 40 percent of our children are in that condition
25 right now with their mothers and their fathers

1 at their bedside watching them gasp for air.

2 I understand the issue of jobs. My
3 grandfather actually worked at the refinery in
4 South Philadelphia, as well. He came up here in
5 1947 and brought us all up here. Brought my
6 mother up here. His first job and this job that
7 he had for many years was right at that
8 refinery. But if he knew that his grand --
9 great grandchild would be gasping for air
10 because of the very plant that he worked at, he
11 would not want that job.

12 And I say that to you very clearly. It
13 can't be about jobs and health because it has to
14 be about health and jobs for everyone. We got
15 to have a liveable and breathable economy that
16 all can thrive on, that all of our children can
17 be able to breathe air and know at the same time
18 their father has a good and decent paying job.
19 We cannot compromise, cannot compromise that.

20 And so, when I look at my daughter for
21 the first 12 years of her life, she gasped for
22 air as we saw that refinery just a few blocks
23 away from us emit some gas that they told us was
24 steam every day after day after day. And she
25 gasped for air all of that time until we had

1 enough money to move her out of that community
2 and move her to another place. And literally,
3 within one month, she never had an asthma attack
4 again. Literally within one month, we were able
5 to throw the asthma machine away. And now she's
6 26 years of age. She's never had another asthma
7 attack. She's coming back to this City to be a
8 public defender at the Public Defender's Office.
9 And she's lived a wonderful life. But if we
10 could not have moved, will she have had that
11 life?

12 These are the choices that you have to
13 make when you allow these kinds of plants to
14 come into our community. They always seem to
15 find a way to want to put these things near
16 black and brown people. They always seem to
17 find a way whether it's the SEPTA plant in North
18 Philadelphia or the southwest plant or the plant
19 that I lived around. Always seeming to me some
20 poor black and brown people that they put this
21 around. And they say that this is all right and
22 it's safe. And it's never safe. Never safe.
23 They never keep their promises. They never --
24 in short, it's never safe.

25 And I think about all -- as a pastor, as

1 a preacher, as an assistant pastor at Church of
2 Redeemer Baptist for years of -- from 1996 to
3 2000 and grew up in that church. And how many
4 deacons that I loved and people that I loved had
5 these strange cancers. And we were putting them
6 in the ground. And we didn't even understand
7 what was happening to them because later people
8 came and told us about the poisons that had been
9 thrown out in our community year after year that
10 caused all of this pain and harm and hurt.

11 We can do better. So as I read this,
12 the City's go up 80 percent reduction in carbon
13 pollution by 2050 does not address the urgency
14 of this time. Every decision made by each and
15 every leader in this age must consider both
16 people and planet. Transitioning PGW into a
17 renewable energy future is an opportunity to
18 face the great moral issues of the day.

19 How can we build a racial and economic
20 justice on a liveable planet?

21 And I share you some essential points
22 right now to make this journey clear.

23 Number one, that PGW is a public
24 utility. It is ours held collectively by the
25 residents of Philadelphia. This means PGW has a

1 duty to be responsive to the public it serves.

2 It also means that City Council as a governing
3 body is uniquely positioned to transition away
4 from fossil fuels with the interest of
5 residents, the labor force and environment as
6 paramount.

7 We do not have to cater to private
8 shareholders. We can be bold and just. We can
9 create solutions that end energy poverty,
10 protect the health of City residents and build a
11 stronger workforce and with living wage jobs.
12 We cannot let these issues be pitted against
13 each other. The question is not jobs versus
14 health or affordability versus climate
15 stability. A just transition moves us towards a
16 green economy and that prioritizes green jobs,
17 safe, clean energy and stable communities. The
18 transmission must be a public one. If it's
19 private, we lose accountability. And control.

20 Secondly, the City must commit to
21 budgeting resources for a labor and
22 community-led study that transitions PGW off of
23 fossil fuels towards renewable energy.

24 (Applause)

25 It can happen. It's happening all over

1 the world. There's no reason why it can't
2 happen here. This means that labor unions,
3 environmental justice, faith and grass roots
4 community-based organizations serve on a
5 commission and outlines the needs of
6 Philadelphians, inform the process of data
7 collection and participatory research and advise
8 on study findings. The transition must maintain
9 a strong labor force and prioritize that most
10 impacted residents in a transition away from
11 fossil fuels.

12 For example, a transition study should
13 proceed with the following goals in mind.
14 Ensure energy affordability. No one should have
15 to pay more than 6 percent of their income
16 toward energy, heating, hot water, cooling and
17 electricity. Therefore, a transition must find
18 ways for all Philadelphians to have sufficient
19 heat and hot water in their homes with this cap.

20 The poor should not bear the burden of
21 transition. Tenants and low-income residents
22 cannot be unfairly burdened by transition costs
23 due to fuel switching. Labor should shape the
24 transition, not lose out. This means PGW
25 retirees pensions are guaranteed. PGW workers

1 who are displaced by the transition are able to
2 attain employment for the same salary with the
3 same benefits doing work that is needed to
4 provide renewable heat.

5 We do not red line workers. Would-be
6 workers have been excluded from the fossil fuel
7 industry because of poverty, racial bias and
8 lack of education and training are intentionally
9 prepared for an inclusion in the green economy.

10 Workers are public employees. Workers
11 who are employed in all facets of transition to
12 renewable heat and in maintaining the new
13 equipment and infrastructure are public
14 employees, paid a living wage with good benefits
15 and are welcome to join a union and engage in
16 collective bargaining.

17 Number three. The City must put a
18 moratorium on any new fossil fuel
19 infrastructure. The City must put a moratorium
20 on any new fossil fuel infrastructure.

21 (Applause.)

22 Including new gas lines. We should
23 intentionally assess PGW's infrastructure and
24 identify what gas main lines require immediate
25 repair for the health of a neighborhood and

1 where we can begin the transition into
2 renewables. Such as building out infrastructure
3 for district heating or electric heat pump
4 systems. We cannot afford to invest in 50-year
5 gas pipeline vision where we will be stuck with
6 stranded assets on the public dime.

7 Let me say that again.

8 We cannot afford to invest in a 50-year
9 gas pipeline vision where we are stuck with
10 stranded assets on the public dime.

11 (Applause.)

12 We need to be smarter. Some of you
13 Council people I have known and have worked with
14 and I have seen your intelligence on many
15 issues. We can be smarter. We can be smarter.
16 Some of you have great vision for this City.
17 Now is time to open up your vision and see
18 something greater than what -- what exists now.

19 We can do something much better
20 together. And a more strategic energy planning
21 so by 2050, we are thriving in a public utility
22 that continues to safe, clean energy, good green
23 jobs and climate stability.

24 So I urge you today, leaders of our
25 City, to take a bold stand for the great turning

1 toward a renewing -- renewable energy economy
2 that leaves no Philadelphian behind. All the
3 technology we need is now available. We need to
4 commit ourselves to using it. Right now with
5 decisions about PGW's future, we can have the
6 opportunity to turn away from false solutions.

7 It is false solutions to say we can only
8 have jobs if we are willing to settle for a
9 dirty fossil fuel energy system that causes more
10 severe storms, flooding and extreme weather that
11 exacerbates insecurities our residents are
12 already facing in housing, food, health and
13 transportation. It is a false solution to say
14 that we only have jobs -- we can only have jobs
15 if we are willing to endorse dirty fossil fuel
16 energy systems downstream and upstream from our
17 home.

18 We urge you not to settle for these
19 false solutions. We look for further resources.
20 We refer you to our own people's platform forged
21 by POWER and dozens of community and faith and
22 labor partners called the Alliance for a Just
23 Philadelphia. We urge you to be champions of a
24 rapid and just transition towards a green
25 economy. Let's start right now as we plan PGW's

1 future

2 Thank you so much.

3 (Applause.)

4 COUNCILMAN JOHNSON: Before I turn the
5 microphone over to Councilman Derek Green, thank
6 all of you for your testimony.

7 But for the young lady Nicole, I just
8 want to reiterate what you talked about being a
9 young leader. Every major movement in America
10 has started with young people. Whether it's a
11 student non-violent coordinating committee,
12 whether it was the Kent State advocates in
13 California. All started with young people.

14 So, make sure your voice continue to be
15 heard. Keep organizing. Keep speaking truth to
16 power. Just wanted you to hear that from me.
17 Thank you.

18 Councilman Derek Green

19 COUNCILMAN GREEN: Thank you, Mr. Chair.
20 Thank you all for your testimony. I did have a
21 question that's a little beyond the topic of
22 this hearing since, Mr. Clincy, you brought it
23 up regarding Philadelphia Solutions oil
24 refinery.

25 My understanding is that they are either

1 in bankruptcy or going in the process of
2 bankruptcy. Do you have any additional
3 information? I am curious if you have any
4 additional information about what the status of
5 that refinery has been?

6 MR. CLINCY: Not at the moment. You
7 will have to get in touch with Philly Thrive. I
8 believe they have that information.

9 COUNCILMAN GREEN: Thank you so much.
10 Thank you.

11 COUNCILMAN JOHNSON: Any other questions
12 or comments for members of the panel?

13 (No further questions.)

14 Okay. Thank you very much for your
15 testimony.

16 Can the clerk please call the next
17 panel, please

18 THE CLERK: Nathan Phillips and Mark
19 Kresowik.

20 COUNCILMAN JOHNSON: I would also like
21 to acknowledge the presence of Councilman David
22 Oh.

23 - - -

24 (Brief pause for video link.)

25 - - -

1 COUNCILMAN JOHNSON: Can the clerk
2 please call on the next witness, and the witness
3 can begin.

4 THE CLERK: Nathan Phillips.

5 MR. PHILLIPS: Yes. Can you hear me?

6 COUNCILMAN JOHNSON: Yes.

7 MR. PHILLIPS: Excellent.

8 Well, thank you for making an
9 accommodation for me. And I think I have a
10 three-minute period; is that correct?

11 COUNCILMAN JOHNSON: Yes.

12 MR. PHILLIPS: Okay. Thank you.

13 So, I will quickly introduce myself.
14 Nathan Phillips. I'm a professor at Boston
15 University. And I've been involved in research
16 on natural gas systems in urban areas for about
17 the last ten years. And what we found in Boston
18 and we found this in many old aging cities with
19 old infrastructure like Philadelphia, is that we
20 have a large percentage of leak-prone, old,
21 largely cast iron pipe that is leaking.

22 So, we mapped this in Boston and found
23 3356 leaks in Boston. And it's no surprise why
24 there is about -- between about a third or a
25 little bit more than a third of the pipelines in

1 Boston are leak prone. And then when I was
2 looking at Philadelphia's numbers, it looks like
3 the percentages, if anything, even higher. It
4 looked like there are about 50 percent of the
5 pipelines are leak prone in Philadelphia.

6 And so -- so what we did to follow up
7 that study in Boston, we published that in 2013.
8 Was we assessed how much was coming out. And we
9 estimated a little less than 3 percent of the
10 gas delivered into eastern Massachusetts, now
11 this is extending outside of Boston, is leaked
12 to the atmosphere. And that may not sound like
13 a lot of gas. But because of the greenhouse
14 power of methane, it ended up -- our estimate
15 is -- about 10 percent of the entire
16 Commonwealth's greenhouse gas inventory. And
17 for the Commonwealth, about \$90 million in value
18 of lost gas. So, it definitely is a significant
19 loss.

20 And so going forward, we wondered, well,
21 what's the best way to address the situation.
22 And even three years ago, I was thinking, well,
23 we have to replace those pipelines to fix the
24 problems. That's the way to do this permanently
25 and long term, but that always bothered me

1 because I also know we have very aggressive
2 climate action plans. And I know that
3 Philadelphia has very aggressive climate action
4 plans in 2035 and 2050. And so, we did a
5 follow-up study that provided a pathway forward
6 to think about solutions. And that study
7 published in 2016 found that 7 percent of the
8 leaks account for 50 percent of the lost gas.

9 And what that indicated is that we can
10 be very strategic about bandaging the system,
11 triaging the system while we then think about
12 transitioning off to cleaner, safer forms of
13 heating or building vector.

14 And so, the cost of replacing pipelines
15 is very large, 1 to 2 million dollars per mile
16 is the cost of replacing these pipelines. That
17 money reallocated towards electrification can
18 get a lot done in terms of electrifying the
19 housing stock, bringing houses up to code in
20 their electrical capacity, doing swapping of
21 appliances, like, gas heaters with heat pumps
22 that run off of electricity and leverage heat in
23 the environment, whether it be air-source heat
24 pumps, ground-source heat pumps or district
25 energy solutions.

1 And so, we are working on this solution
2 to find and fix those largest leaks and then
3 think about the parts of the City, the blocks
4 that -- the kind of terminal ends of the grid,
5 the gas grid that are leak prone and to really
6 think carefully, do we want to replace that pipe
7 which is going to last another 50, 60, 70 years?
8 Or do we want to think about and compare that
9 with another option or heating.

10 And so, I think in Boston, many cities
11 and Philadelphia, you know, we have these
12 aggressive climate plans by 2035 or 2050. But
13 we are at a fork in the road today because we
14 have to make these decisions about whether we
15 are going to commit to rebuilding the
16 infrastructure that I believe is really 20th
17 century infrastructure. Or are we going to
18 pivot and move to the infrastructure of the
19 future which is cost effective and has been
20 proven. And as more renewables get on grid, we
21 are going to be cleaner and cleaner and safer in
22 these energy solutions. As we have seen up here
23 in north of Boston with the Merrimack Valley gas
24 collapse, that they are inherent safety issues
25 with the gas system as well as the other

1 problems with the leaks.

2 So, I probably have exceeded my three
3 minutes. And I will just stop there. And if
4 there's any questions, I will be happy to answer
5 them. Thank you.

6 (Applause.)

7 COUNCILMAN JOHNSON: Councilman Derek
8 Green.

9 COUNCILMAN GREEN: Professor Phillips,
10 thank you for your testimony.

11 The entity that provides gas in Boston,
12 is that -- I'm assuming that's a private
13 facility? Private corporation?

14 MR. PHILLIPS: Yeah. So, that's an
15 investor-owned utility. It's national grid.
16 They operate well -- including almost all of
17 Boston but well outside of Boston. And so,
18 yeah, that's a different kind of model than I
19 think what you have in Philadelphia. And in
20 your testimony, you talked about how 7 percent
21 of the leaks created 50 percent of the leakage
22 from my understanding?

23 MR. PHILLIPS: Yes.

24 COUNCILMAN GREEN: How the national grid
25 specifically target those areas that have the

1 higher leakage points to really focus on those
2 areas?

3 MR. PHILLIPS: Right. So up here in
4 Boston, I've been working collaboratively with
5 an advocacy group that has engaged with the
6 utilities, the major utilities including Nav --
7 also Columbia Gas and Eversource, which are the
8 two other big investor-owned utilities in the
9 Commonwealth. And to operationalize what we
10 found with the 7 percent of the leak accounting
11 for 50 percent of the loss gap, we did a lot of
12 research, laborious research to determine that.
13 But we needed to -- they need to have
14 operationally efficient ways to quickly locate
15 where are those super emitters and to triage
16 those systems.

17 So, we've actually developed a method
18 working with a non-profit out of Cambridge,
19 Massachusetts called HEET, Home Energy
20 Efficiency, which literally requires a tape
21 measure. It's a surrogate measure that
22 footprints size of the leak, it kind of makes
23 sense it's related to the size of the leak. And
24 you don't need super complicated measurements to
25 determine where are those big gushers.

1 COUNCILMAN GREEN: Okay. Are other
2 utility companies around the country and abroad
3 using similar technology to pinpoint where the
4 maximum indication of leaks are occurring?

5 MR. PHILLIPS: Yeah. This technology is
6 really exploding in terms of car-mounted,
7 high-precision methane analyzers that can map
8 this stuff including really sophisticated plume
9 measurements. So, we can say which way the
10 methane is blowing and those kind of things.
11 That's only going to increase. And the scrutiny
12 and the transparency is -- really, the cats out
13 of the bag in terms of monitoring and knowing
14 where this stuff is coming out.

15 COUNCILMAN GREEN: Okay. And now that
16 National Grid -- I think you also talked what
17 Columbia Gas has been able to pinpoint the areas
18 where the high leakage is occurring.

19 Have they started shift to resources
20 from resources that were going to be used for
21 line replacement to other areas?

22 MR. PHILLIPS: Well, that kind of really
23 the -- the rough and tumble of the debate we are
24 having now. They have agreed in principle, all
25 three of those utilities in Massachusetts have

1 agreed in principle to be using this targeted,
2 strategic way to find and fix those biggest
3 leaks. Some are moving faster. Others are not
4 moving as fast. But there is still the question
5 of -- you know, that's one way to efficiently
6 address the leaks. Then the question of
7 investment and replacing the pipelines of course
8 is just patching the pipelines is still an open
9 question.

10 Right now, the rate payers in
11 Massachusetts are committed to 9 and a half
12 billion dollars over the next 50 years to
13 replace about a third of the 21,000 miles of
14 pipe throughout the Commonwealth, about 7,000 of
15 those are slated for replacement to cost 9 and a
16 half billion dollars. And I think that is the
17 big question that we are facing. Is because if
18 we do that, we are looking at 50 to 60 years of
19 lock in to gas.

20 So, I think that's a really big
21 question. And for a big City like Philadelphia,
22 I think it's, again, like a fork in the road.
23 It's a decision that has to be met.

24 You know, I'm sorry. I'm actually being
25 asked to move off the road into a parking lot.

1 I'm just going to shift here in a second. Thank
2 you. That was the police officer asking me to
3 move along.

4 (Laughter)

5 COUNCILMAN GREEN: Take your time and be
6 safe.

7 MR. PHILLIPS: Thank you.

8 Okay. I'm in a better location now.

9 COUNCILMAN GREEN: I just had one other
10 follow-up question and maybe some other
11 questions from the panel.

12 If they were to make the decision to not
13 use the significant amount of resources for
14 years of main replacement from your observation
15 and analysis, where should those dollars be
16 used?

17 MR. PHILLIPS: Excellent question.

18 So, we've calculated that in
19 Massachusetts if you take that 9 and a half
20 billion dollars that is currently slated by rate
21 payers to replace that 7,000 miles of pipe, that
22 alone at today's cost would cover the cost of
23 all of the appliance replacement in 20 to
24 40 percent of all Massachusetts' households.
25 That's including air source heat pumps,

1 induction cooking, electrical cooktops and water
2 heaters. And so, it is a massive amount of
3 money. That doesn't account for every cost.
4 But it's a very, very big subsidy for a
5 transition to electrification of the heating
6 sector.

7 COUNCILMAN JOHNSON: Councilman Derek
8 Green, you finished?

9 Thank you very much, sir, for your
10 testimony.

11 MR. PHILLIPS: Thank you very much for
12 having me.

13 (Applause.)

14 COUNCILMAN JOHNSON: Will the clerk,
15 please, call the next witness.

16 THE CLERK: Mark Kresowik? Robert --
17 Rob Ballenger and Kelly Flanigan.

18 COUNCILMAN JOHNSON: This is also via --

19 THE CLERK: Oh, sorry.

20 COUNCILMAN JOHNSON: Okay. We have one
21 more testimony via remote location, and then we
22 will be prepared for you, sir.

23 (Video link set up.)

24 MR. KRESOWIK: Hello.

25 COUNCILMAN JOHNSON: Hello. How are you

1 doing, sir. Please, state your name for the
2 record and your title and you can begin.

3 MR. KRESOWIK: All right. Thank you
4 very much. Mark Kresowik, Deputy Regional
5 Director for the Sierra Club.

6 So, thank you for the opportunity Chair
7 Johnson, committee members, thank you for the
8 opportunity to testify remotely today. I am a
9 Deputy Regional Director for the Sierra Club. A
10 national Geographic Environmental organization
11 with nearly 12,000 members in the Philadelphia
12 area alone. My job is supporting our members
13 and supporters, some of whom are in the audience
14 today, on issues like this one.

15 We applaud the City for its climate
16 protection commitments including the goal of
17 limiting warming from climate change to below 2
18 degrees Celsius even as we know we need to be
19 more ambitious. This Committee, the Council and
20 PGW have an opportunity to help the City meet
21 those targets while creating thousands of new
22 family supporting jobs, saving money and
23 improving the safety, comfort and health of
24 residents throughout the community;
25 particularly, those most overburdened and under

1 served by our current energy system.

2 Achieving those objectives requires
3 swift actions supported by robust community
4 engagement, leadership and analysis. On behalf
5 of the Sierra Club, therefore request the
6 Committee and Council require PGW to develop and
7 submit a plan through a comprehensive
8 participatory process to do their part to meet
9 the City's climate protection goals in an
10 equitable manner.

11 As a first step, we encourage the
12 Committee and Council to take any and all
13 actions necessary to ensure new residential and
14 commercial buildings do not use gas or other
15 dirty fuels. The City would not be alone in
16 recognizing the need, opportunities and
17 challenge for a gas company to meet, finer
18 protection commitments.

19 Here in the District of Columbia where I
20 work, the DC has required a similar plan from
21 its gas company by January 1, 2020. The
22 Administration is actively working to stop new
23 gas hookups and is investing in ensuring that
24 any fixes to gas pipelines or leaks are limited
25 to grade one and two. And that we are looking

1 at ways to electrify communities, blocks and
2 neighborhoods and, ultimately, start to replace
3 and shut down entire sections of pipes.

4 Both DC and New York City have enacted
5 new policies to require significant improvements
6 in reducing energy use and climate pollution by
7 large commercial buildings. And four other
8 cities are partnering with them to pilot
9 strategies to scale up the electrification of
10 the building heating and cooling systems through
11 the Building Electrification Initiative. We
12 would encourage Philadelphia to engage at all of
13 these levels.

14 The primary opportunity is through
15 helping customers transition the heat pumps,
16 induction zones, other technologies utilizing
17 clean, renewable electricity as Dr. Phillips
18 just talked about. The easiest place to begin
19 is by not making the problem worse. Every
20 building we hook up to gas today makes it harder
21 and more expensive for families and businesses
22 because the cost of retrofitting to electric
23 from gas is more expensive than just building
24 all electric in the first place.

25 The next step is to make sure those who

1 have been most burdened and over served are
2 first in line with benefits of an investment in
3 safer and healthier buildings, starting with
4 affordable housing. Not only can we get
5 dangerous -- (Applause). Sorry.

6 Not only can we get gas -- dangerous,
7 poisonous gas and fumes out, but we can improve
8 efficiency, save money and get the led, mold,
9 asbestos, dangerous wiring, everything else that
10 threaten our families out at the same time.

11 This requires a coordination, energy housing
12 assistance programs with an efficiency and
13 electrification retrofits that are necessary to
14 meet these goals.

15 Homes and business will need to be
16 rewired, and new appliances installed. That
17 rewiring can also support rooftop solar and
18 electric vehicle charging stations needed to
19 reduce climate pollution from power plants and
20 motor homes. The City will need more
21 experienced construction workers of many times,
22 particularly electrical workers. And there is
23 huge opportunity to work with the members of the
24 North American Building Trades Unions to fund
25 appropriate training and apprenticeship programs

1 to ensure that the jobs that are being created
2 are family supporting and that the work done is
3 quality.

4 The City also needs to create a
5 sustainable -- (Applause). The City also needs
6 to create a sustainable regulatory framework for
7 winding down PGW's gas assets. All gas
8 distribution assets should be depreciated on the
9 schedule needed to meet climate commitments.

10 Families and businesses can be helped off the
11 most dirtiest and dangerous of pipeline network
12 first.

13 As Dr. Phillips was talking about,
14 saving billions of dollars in Massachusetts,
15 millions of the dollars certainly in
16 Philadelphia in maintenance and repair costs to
17 fix new pipes can be invested in PGW's
18 outstanding financial obligations. Taking these
19 steps in equitable way requires mobilization and
20 market transformation. We can put a stop to
21 climate pollution, people being threatened by
22 gas explosions, children being poisoned by
23 leaks, fumes, led, mold and more. We can save
24 money and create thousands of family-supporting
25 jobs by moving our buildings off gas and other

1 dirty fuels to clean, renewable electricity.
2 But we need to start now by requiring PGW to
3 come up with a plan and not making the problem
4 worse by linking any more buildings up to gas
5 right now.

6 Thank you again for the opportunity to
7 testify. Happy to answer any questions. And
8 look further into detail on any of these issues.

9 (Applause.)

10 COUNCILMAN JOHNSON: Thank you for your
11 testimony.

12 Councilman Derek Green.

13 COUNCILMAN GREEN: Thank you, Mr. Chair.
14 Mr. Kresowik, thank you for your patience and
15 your testimony. You made reference to a DC
16 plan. And that was done, assuming by the
17 district, that the Mayor and her Administration
18 towards the private committee that provides gas
19 in DC; is that correct?

20 MR. KRESOWIK: Essentially. So, the
21 Public Service Commission of the district which
22 regulates the gas company did require by
23 January 1 of 2020, so by the end of this year
24 essentially, that they propose a business plan
25 to meet the City's climate commitments, that

1 includes selling services other than gas. So,
2 that plan is currently under away. After they
3 are done with that plan and propose it, there is
4 going to be a series of public hearings at least
5 every six months on how Ultra Gas, which is the
6 gas company here, will be meeting those climate
7 commitments.

8 There is lot of other things that the
9 Administration through the Attorney General's
10 Office is actively opposed a plant by that same
11 company to subsidize gas hookups in multi-family
12 units. In order to reach that goal of adding no
13 new gas capacity while we are undertaking the
14 planning process. And ultimately, figuring out
15 how to move off gas here in the district and
16 meet our climate commitments.

17 COUNCILMAN GREEN: So, the Commission
18 came up with a proposal and a plan. And then in
19 their regulatory process, then said to -- who
20 provides gas in DC? Is that Delmarva or?

21 MR. KRESOWIK: It is actually -- it was
22 Washington Gas. It's all part of a merger. So
23 Ultra Gas bought Washington Gas.

24 COUNCILMAN GREEN: Okay. And so the
25 Regulatory Commission came up with the proposal

1 or plan. They then said to utility company, you
2 now have to come up with a plan that meets these
3 goals? And they have a timetable to put
4 together that initiative?

5 MR. KRESOWIK: Exactly.

6 COUNCILMAN GREEN: And that's available
7 on the DC service public commission's website or
8 other materials?

9 MR. KRESOWIK: Yes. I will send my
10 testimony to include the formal order where the
11 Commission made that decision.

12 COUNCILMAN GREEN: Okay. And what was
13 the timeline where the Commission made for the
14 private utility to come up with a plan?

15 MR. KRESOWIK: So, they required by
16 January 1 of 2020.

17 COUNCILMAN GREEN: Okay. Thank you.

18 COUNCILMAN JOHNSON: Thank you,
19 Councilman Derek Green.

20 Any other questions for our witness?

21 (No further questions.)

22 Thank you very much for your testimony.

23 MR. KRESOWIK: Thank you, Chairman.

24 (Applause.)

25 COUNCILMAN JOHNSON: Will the clerk,

1 please, call the next panel

2 THE CLERK: Rob Ballenger and Kelly
3 Flanigan.

4 (Panel approaches Witness Table.)

5 COUNCILMAN JOHNSON: Please, state your
6 name and begin your testimony.

7 MR. BALLENGER: Robert Ballenger.

8 Good morning, Chairman Johnson,
9 Councilman Taubenbeger and Council --
10 Councilperson green. My name is Robert
11 Ballenger. I'm the Co-Director of the Energy
12 Unit at Community Legal Services here in
13 Philadelphia. And I've been before this
14 committee in the past and before Council on a
15 number of issues relating to the affordability
16 of the utility service for Philadelphians. And
17 that's the primary reason I'm here again today.

18 As I think many, hopefully, everyone
19 realizes, this is the beginning of a long
20 discussion about the future of PGW. And I think
21 at any time we begin that discussion, we need to
22 also take a pretty hard look at the present
23 circumstances of PGW. Take stock of where we
24 are.

25 So, a couple of details about that for

1 the Committee today. PGW has the highest gas
2 rates in the state. Typical residential heating
3 customers' monthly bill from PGW is \$216.48;
4 compared to the other nine large gas utilities
5 in Pennsylvania, where the average charge is
6 \$155.11. At the same time, 30.8 percent of
7 PGW's customers are low income as defined by the
8 Public Utility Commission. That's 150 percent
9 of the federal poverty level. 36.4 percent are
10 estimated to be low income.

11 Tens of thousands of customers even
12 above that low income threshold, obviously, have
13 trouble paying their high PGW bills. And the
14 consequences of high poverty and high gas bills
15 are pretty obvious to take account of.
16 Approximately, 8,000 PGW customers entered this
17 winter without heat due to a shutoff in 2018.
18 Another nearly 33,000 households were terminated
19 in 2018.

20 So without giving too much attention to
21 some of the things that I think need to be
22 suggested for PGW in the future, I have a couple
23 of requests at this time. These aren't business
24 transformation requests. These are practical
25 policy changes.

1 First, the most urgent consideration
2 before you is the unmet need for affordable
3 service from PGW. I call on the City to join in
4 urging the state, Public Utility Commission, to
5 reduce the energy burdens for low income
6 Pennsylvanians. Currently, those energy burdens
7 can require a low income household to pay as
8 much as two months of their pre-tax income per
9 year for electricity and gas service in their
10 homes.

11 Regardless of what action the PUC takes
12 as low income advocates around the state urge
13 for reduced energy burden, the City can take
14 action and require PGW to propose lower energy
15 burdens in its next base rate case and other
16 universal services energy conservation plan
17 proceeding. I further encourage the City to be
18 receptive to other proposals about ways to help
19 PGW low income customers.

20 For example, the City could subordinate
21 PGW liens for homeowners facing foreclosure. It
22 can also adopt policies that enable those
23 homeowners to pay off their debts to PGW in a
24 compromised position on those same debts.
25 People shouldn't lose their homes because of

1 unpaid gas bills. The City should also provide
2 increased funding for hardship grants to help
3 low income customers.

4 Finally, as I think I mentioned last
5 time I was here, the City can and should
6 investigate ways to help low income customers
7 with improved efficiency and home repairs.
8 Customers are not able to access some of the
9 funding that's out there already because of home
10 repair issues that they can't resolve.

11 Finally, because I do anticipate a lot
12 of great ideas, I think we have heard some
13 today. And I look forward to hearing more of
14 them. I submit that it would be really
15 important in structured conversations on the
16 future of PGW in the future to make sure that
17 residential customers have a designated voice,
18 have resources to bring their own expertise to
19 protect their interests in continued service
20 from PGW.

21 That role has been played by CLS for a
22 number of years as public advocate in matters
23 before the Philadelphia Gas Commission. And I
24 think the Gas Commission is an important factor
25 to consider here as we look forward to these

1 discussions and the role of the Gas Commission.
2 And hopefully, leading us to a cleaner future in
3 Philadelphia. And I want to take one second and
4 just acknowledge the Gas Commission's role
5 because I think it's often unsung.

6 I have had the privilege of serving
7 before the Gas Commission for the last nine
8 years. But in the approximately fifteen years,
9 about which I am aware at least from information
10 provided by the commission staff, the Gas
11 Commission has saved PGW customers over
12 \$250 million in prudent budget oversight. I
13 think the City of Philadelphia and all of its
14 residential gas customers need to understand the
15 role of the Gas Commission.

16 We are regulated for rates by the PUC.
17 But it's the Gas Commission that decides how to
18 structure PGW's budget prudently to plan for the
19 future. And I think that really is what, you
20 know, we need to be talking about as we plan for
21 the future of PGW. Because those expenses and
22 the costs of these types of programs are going
23 to need to come from somewhere. And we need a
24 prudent overseer of those costs.

25 So, we look forward to participating in

1 ongoing discussions about the future of PGW and
2 how it can adapt to meet the needs of the City
3 for its green energy future while still
4 providing more affordable bills for low income
5 customers, those with the least capacity to pay.

6 Thank you very much. I'm happy to
7 answer any questions you may have.

8 COUNCILMAN JOHNSON: Thank you.

9 (Applause.)

10 Please state your name for the record
11 and you can begin your testimony

12 MS. FLANIGAN: My name is Kelly
13 Flanigan. I'm the Global Warning Solutions
14 Associate for Penn Environment.

15 Good morning, Councilmembers. And thank
16 you, again, for the opportunity to testify
17 today. As I said, I'm the Global Warming
18 Solutions Associate for the city-based
19 environmental organization Penn Environment.
20 And prior to joining Penn Environment, I worked
21 for the Office of Sustainability in Fort
22 Lauderdale, Florida after completing a Masters
23 degree in Climate and Society at the University
24 of Miami. I believe that experience uniquely
25 qualifies me to comment on the climate crisis

1 and the steps that we can take at the City level
2 to combat it.

3 I am sure we all agree that climate
4 change is a growing threat to our residents and
5 communities right here in Philadelphia. And we
6 all know that if we don't take comprehensive
7 action, we are going to reach a dangerous
8 tipping point that we can't turn back from.
9 Time is running out to take the actions that we
10 need to take in order to avoid the worse effects
11 of climate change. We need to work to implement
12 science-based policies that will get us to and
13 beyond the renewable targets that have been laid
14 out by the City.

15 I first want to make clear that natural
16 gas, the utility that PGW currently delivers to
17 its customers, is not clean. It does not burn
18 completely carbon free. And it does not have a
19 negligible impact on our climate despite
20 previous testimony you may have heard to the
21 contrary. Natural gas does emit 50 to
22 60 percent less carbon dioxide compared with
23 emissions from a typical new coal plant. But
24 again, that number is not zero.

25 Additionally, the drilling and

1 extraction of natural gas from wells and its
2 transportation and pipelines results in the
3 leakage of methane, a primary component of
4 natural gas that's 86 times stronger than CO2 at
5 trapping over a 20-year period.

6 So, it's time for City Council to stop
7 talking about tackling climate change and
8 supporting a hundred percent renewable energy
9 over fossil fuels and instead take action to do
10 something about it. And that starts with
11 opposing any and all new fossil fuel projects.

12 (Applause.)

13 Including the proposed South Philly L&G
14 site. Elected officials cannot say that they
15 want to champion climate change solutions while
16 voting to approve such short-sighted climate
17 altering proposals. So, it's time for Philly to
18 match its words with its action in the fight
19 against climate change.

20 Philadelphia's Clean Energy Vision, the
21 Powering our Future documents says as much.
22 Stating on page 9 that: "In response to the
23 Administration's decision to withdraw from the
24 Paris Climate Agreement, Mayor Kenney committed
25 to moving Philadelphia toward a cleaner energy

1 future and meeting the globally determined, U.S.
2 carbon reduction goal of 28 percent by 2025.
3 But to avoid the worst causes of climate change,
4 scientists are increasingly concluded that
5 global emissions must fall at an even faster
6 trajectory and potentially exceed an 80 percent
7 reduction by 2050."

8 Additionally, last year, City Council
9 passed a resolution to support legislation at
10 the state level to transition to a hundred
11 percent renewable energy by 2050. This
12 legislation includes all sectors of energy
13 generation which includes heating. If the
14 Council truly supports this legislation, you
15 should be taking steps at the City level to
16 achieve the goals that are set out by this bill.
17 That means the City as a whole needs to be at
18 50 percent renewable energy by 2030. Think
19 about that and what you have committed to. We
20 are nowhere near that trajectory unless City
21 Council backs up the words with substantial
22 actions, or just don't make promises that can't
23 be kept in the first place.

24 Philadelphians want and expect bold
25 climate action to solve the climate crisis and

1 promote clean energy. And in the era of the
2 green new deal and other initiatives, Democratic
3 voters have little patience for inaction or
4 rollbacks. As cities across the nation lead in
5 the fight against climate change, Philadelphia
6 is, at best, falling behind; and at worst,
7 throwing fuel onto the climate change fire.

8 This leads us, again, to the topic of
9 PGW. If we all agree, as I earlier stated, that
10 we must do everything in our power to tackle
11 climate change. And that we must transition
12 away from fossil fuels and move to a hundred
13 percent renewable energy by at least 2050. Then
14 there is no place for a strictly gas utility in
15 Philadelphia's future.

16 The Powering Our Future Report states on
17 page 53, that one of the key considerations for
18 PGW is to explore business diversification
19 opportunities, both including and beyond natural
20 gas distribution and sales. While it would
21 likely take policy change in Harrisburg, there
22 are things that Philly must and should do today
23 to move much faster to solve our climate crisis.
24 While it's my understanding that the
25 Commonwealth doesn't allow PGW to sell anything

1 but gas, with a Democratic Governor, the City
2 should be advocating aggressively to him and to
3 PUC to help the City implement policies that
4 will allow it to diversify its energy mix and
5 prioritize clean renewable energy and
6 conservation

7 For nearly six years, I lived on the
8 front lines of climate change. Watching my
9 campus at the University of Miami flood on sunny
10 days at high tide more than 30 days a year, I
11 evacuated for Hurricane Michael in 2016. And
12 since moving back to Philadelphia, the place
13 where I grew up, I have seen worse extreme
14 downpours than ever before causing my backyard
15 to flood to the point where my family had to put
16 in new drainage to protect our basement from
17 flooding. I have seen our air quality degrade
18 to the point where Philly now ranks among the
19 top ten worse air quality in the nation. And I
20 have seen summer temperatures soar with 58 new
21 record highs in Philadelphia since 2000 compared
22 with just 4 record lows

23 We need you to take action to move
24 Philadelphia off of gas, and that starts with
25 choosing to stop investing in any fossil fuel

1 project and working with state officials to
2 allow PGW to diversify its energy mixs.

3 Thank you.

4 COUNCILMAN JOHNSON: Thank you very much
5 for your testimony.

6 Councilman Derek Green.

7 COUNCILMAN GREEN: Thank you, Mr. Chair.

8 Thank you both for your testimony.

9 Mr. Ballenger, thank you for your service on
10 behalf of the citizens of the City of
11 Philadelphia and role at Community Legal
12 Services and also your regular participation in
13 gas emission proceedings.

14 I wanted to ask a few questions based on
15 some of the testimony that's been provided
16 today. You heard from Professor Phillips from
17 Boston University. And he talked about how
18 they've been able to use technology to
19 specifically target the highest problem leak
20 areas in gas mains in the Boston region.

21 I am curious of your thoughts, if that
22 could be done in a similar way, and some of that
23 stuff is being done -- but how resources would
24 be diverted, if possible, to other type of uses
25 if we would not have to invest as much into gas

1 main infrastructure?

2 MR. BALLENGER: Well, that's part of the
3 challenge, I think. And I think that's the
4 reason to have expertise like that available to
5 all of us as we plan for the future of PGW.

6 Councilman, you know, PGW does
7 prioritize among those gas mains and try to
8 prioritize those projects that give it the best
9 bang for its buck. Not only identifying the
10 riskiest mains but those segments of main where
11 it can accomplish a good deal of improvement
12 without having to do a project, you know, at
13 each leak site. Although, PGW has to respond to
14 leak calls, right? We have a lot of leaks every
15 year.

16 So, PGW would probably in the best
17 position to explain what its current project is.
18 But technology always provides us with the
19 opportunities to do new things and to find new
20 ways of solving old problems. Because these are
21 not -- these are not new problems. PGW's gas
22 mains are very old. They've been leaking for a
23 long time. This is a problem we have grappled
24 with for a very long time because for many
25 years, we didn't invest adequately in

1 maintaining the utility. That's changed in the
2 last couple of decades, but it comes at a cost.
3 A great cost for customers.

4 So, we need to balance those costs and
5 we need prudent governance and oversight to make
6 sure the money is going to the best places to
7 maintain the system to benefit all of the
8 customers who rely on it.

9 And furthermore, Councilman, it's my
10 honor to serve both low income customers in
11 Philadelphia and to serve as public advocate for
12 the Commission you Chair.

13 COUNCILMAN GREEN: Thank you.

14 (Applause.)

15 Also, wanted to follow up on -- and I
16 agree with you. PGW has been prioritizing. And
17 I think like the discharge and other things to
18 really get to do as much as we can to reduce and
19 replace cast iron main replacement, especially
20 those areas that are providing leaks.

21 In your testimony, you made reference to
22 one of the fundamental challenges for PGW as a
23 fact that we have such a large monitored low
24 income rate base, 30 percent PGW customers being
25 low income and estimate 36 percent, as well.

1 You talked about that in your testimony. And
2 that causes a challenge for PGW because we have
3 such a low and moderate rate base. And you talk
4 about a little bit in your testimony about
5 sustainability and ways to maybe reduce costs.
6 I know we have had that conversation in the
7 past.

8 Like if you can maybe provide some more
9 information about that because it's kind of a
10 Catch 22. Those who can least afford, end up
11 paying the most amount for gas because of their
12 homes are not the most sustainable. And so,
13 that becomes a very challenging proposition for
14 PGW because we are paying more and more money to
15 subsidize those who are low and moderate income
16 rate payers. And they often have homes who
17 have -- that are less sustainable. And as a
18 result, they are paying more and more gas to
19 heat a home that doesn't have the best
20 sustainability towards it

21 If you can provide some information. I
22 know you touched on it a little bit in your
23 testimony, but provide some more in that regard.

24 MR. BALLENGER: Sure. The main problem
25 I think that we see is that the inefficiency of

1 low income housing stock creates additional
2 costs for all of their customers one way or
3 another.

4 First of all, customers who are enrolled
5 in the current programs from PGW that provide
6 them with some discount on their gas usage, that
7 discount comes from the rest of the customers of
8 PGW. And one strong point about that, of
9 course, is that PGW is allowed to use -- to
10 apply that subsidy across all classes. That is
11 something that we are advocating for statewide
12 because PGW is the only utility in Pennsylvania
13 that can do that. But that is only fair, right?
14 Because businesses that pay substandard wages
15 are effectively getting subsidized by those gas
16 discounts paid for by other customers anyway.
17 So, they should contribute.

18 So, we are advocating for that as a
19 statewide change. But in PGW territory, that
20 cost is still picked up by other customers. The
21 cost that is not subsidized through the
22 universal fund service charge, it can't be paid
23 for. Becomes an uncollectible expense. That
24 gets taken into account when PGW raises rates
25 anyway. PGW is entitled to recover the cost of

1 service under PUC rate making.

2 So in a sense, this is a challenge
3 that's not going to go away without some
4 investment. Because you have to both identify
5 the cost of serving the low income customer
6 that's paid for in part by non-low income
7 customers who are not enrolled in CAP or low
8 income customers who are not enrolled in CAP.
9 And you have to also identify those customers
10 above though arbitrary threshold, that 150
11 percent of federal poverty. That's a totally
12 and purely arbitrary number. That doesn't
13 reflect what is actually sufficient income to
14 afford the day-to-day cost of living in
15 Philadelphia. I think the actual ability to
16 live in Philadelphia without some form of
17 assistance is closer to probably 300 percent of
18 federal poverty.

19 So, we also need to invest in those low
20 income customers households and the ability to
21 weatherize and improve and make their homes more
22 efficient because that's also going to help them
23 avoid additional costs of subsidizing others.
24 There is a lot of investment that needs to be
25 made to do that. And maintaining the system for

1 the benefit f everyone requires that we tackle
2 these leaky pipes for so long as we continue to
3 utilize them.

4 I think some of the proposals here are
5 worth really thinking through. Can we really
6 advance the ball with PGW under the current
7 business model if all we are doing is replacing
8 and repairing the existing infrastructure. I
9 think there has to be more on the table than
10 just that to really move the needle and to
11 really help customers because that presents some
12 opportunity for PGW to defray some of those
13 costs of maintaining the system.

14 But the worst possible outcome is that
15 we have only poor people relying upon this
16 utility. If we get into that kind of a problem
17 in the future where only people with adequate
18 means can get efficient housing, then only
19 people with inadequate means are going to rely
20 upon this system to all of our detriment. And
21 we are not going to be able to afford to
22 maintain it.

23 So, we have to be careful. That's the
24 so-called death expire, right? And we don't
25 want to get into that type of a situation. So,

1 we need to plan now to make sure that we
2 diversify PGW for the benefit of all those who
3 rely upon it, now and in the future.

4 (Applause.)

5 COUNCILMAN GREEN: Thank you for your
6 testimony. I think the point you raise is very
7 important as we continue to look at a lot of
8 these issues. And I also try to think how we
9 coordinate with some of the initiatives that we
10 have done here in City Council from the Council
11 President's proposal where we increased the real
12 estate transfer tax to really reduce the backlog
13 of the Repair Program, and how do we look at
14 that as well as initiatives like the
15 Philadelphia Authority to Solarize Philly.

16 We just had our kickoff the third year
17 this year, I mean, this week, excuse me. And
18 how do we look at all these programs in
19 conjunction to find ways to have as many people
20 as possible, regardless of your income status,
21 to be able to have a more sustainable home and
22 also have energy source that's also sustainable.

23 So, thank you for your testimony.

24 MR. BALLENGER: Thank you, Councilman.

25 COUNCILMAN GREEN: Thank you, Mr. Chair.

1 COUNCILMAN JOHNSON: Thank you very much
2 for your testimony. Any other questions from
3 Members of the Committee?

4 (No further questions.)

5 Thank you very much.

6 Can the clerk please call the next
7 panel.

8 THE CLERK: Mark Hughes and Mark
9 Silberg.

10 (Panel approaches Witness Table.)

11 COUNCILMAN JOHNSON: I want to thank my
12 former professor at the University of
13 Pennsylvania, form of government, Mr. Mark Allen
14 Hughes. It's always a pleasure to see you.

15 MR. HUGHES: Thank you, Mr. Chairman.

16 COUNCILMAN JOHNSON: Thank you for your
17 leadership and for planting the seeds of good
18 government in me as a young man. And so, it's
19 good to see you today in the halls of City Hall.

20 MR. HUGHES: Thank you, Mr. Chairman.

21 Those are very kind words. And let me express
22 my own deep gratitude that you clearly managed
23 to recover from whatever damage I caused in the
24 classroom. So, thank you for your leadership
25 very much. And thank you to the other members

1 of the Committee for the invitation to provide
2 some brief remarks on this very important topic.

3 My name is Mark Allen Hughes. I am a
4 professor at the University of Pennsylvania
5 where I've taught since 1999. I'm also
6 currently the faculty director of Penn's Climate
7 Center for Energy Policy. It was my great
8 privilege to have been the first director of
9 sustainability of this City and to help create
10 and conceive of the Green Works Plan that
11 establishes many of the aspirations we continue
12 to talk about today. So, thank you very much
13 for this opportunity.

14 And I got to begin by congratulating
15 Council and ultimately the City for the amazing
16 testimony that has been delivered to you thus
17 far in the hearing. The experience, the
18 expertise and the enthusiasm on this topic in
19 the City right now is such an opportunity to
20 make important advances. And I would like to
21 state, you will be happy to know that I am not
22 planning on reading my somewhat soul crushingly
23 dense six pages of testimony here. I just want
24 to provide some quick summary so we can begin
25 our conversation, I hope.

1 But I do want to begin with something
2 that I think has been hinted about in much of
3 the testimony thus far. And I would just like
4 to state as clearly as I possibly can. And it's
5 something that I think decision makers in
6 particular do not like to hear. It's a little
7 annoying. But I think that you have highly
8 constrained choices on this subject about what
9 to do. You have a range of options about the
10 how. But ultimately, PGW's current business
11 model will not survive either by regulatory fiat
12 or by carbon taxes and fees. And will
13 effectively be illegal within the decision
14 horizon that I think many of you are facing.

15 So, what do I mean by that? Why is that
16 true?

17 As a number of my colleagues have
18 pointed out, the nexus of claimant change and
19 energy policy is the context that's defining
20 this conversation. Climate change policy right
21 now is being driven by the fact that we must
22 stop adding heat-increasing greenhouses gases
23 into the atmosphere. The science-based targets
24 on the needs for that reduction grow
25 increasingly severe. The Paris Agreement was

1 basically centered on science and said we have
2 to do 80 -- globally, we have to do an 80
3 percent reduction emissions into the atmosphere
4 by the middle of the century, in order to avoid,
5 in order to provide ourselves a 50/50 chance of
6 staying under the threshold for cataclysmic
7 climate impacts by the end of this century. A
8 50/50 chance is what we are hoping for. Those
9 reductions have been tightened up now to where
10 we are indeed looking at the need for a
11 100 percent or net zero reduction of global
12 emissions by mid century in order to avoid those
13 cataclysmic impact by the end of this century.

14 Those are the science-based facts that
15 will constrain the choices that we are talking
16 about here today.

17 The other thing I wanted to simply kind
18 of comment on and introduce is this idea of
19 electrification. Electrify everything is
20 probably the most important policy idea in the
21 world right now. We have successfully
22 decarbonized the way we make electricity more
23 successfully than any other sector in the
24 economy. Every year in the United States since
25 2005, the emissions associated with our

1 generation of electricity has gone down. Now
2 for the first time since 1978, the power sector
3 electricity generates fewer emissions than the
4 transportation sector. So, electrify everything
5 is a pathway to meeting the species and
6 earth-saving targets that we were talking about
7 a minute ago regarding temperature.

8 So, electrify everything is a great
9 idea. Is particularly difficult idea for
10 Philadelphia largely because of the presence of
11 PGW. And I want to talk a little bit about
12 that, all right.

13 So, the policy choices I think are on
14 the table for PGW's future are basically choices
15 along an array of electrify everything, to leave
16 PGW's basic business model intact. So from
17 electrify everything to electrify nothing that
18 PGW currently serves as load and gas.

19 Why is that a choice? Let me lay out
20 the two extremes of this choice. But remember,
21 in case I either forget or run out of time, we
22 lay out the extremes of the choices we face
23 about how to meet the climate goals. Laying out
24 the extremes just to help get the conversation
25 started. Eventually, we can combine these

1 things and use them to help us transition over
2 time. So, the extremes aren't the only path.
3 But they are the easiest to try to begin talking
4 about.

5 To electrify everything, you have heard
6 some of our colleagues talk about this idea. It
7 means swapping out all of the end use, all of
8 the space heating, all of the water heating and
9 all industrial thermal processes, right, that
10 PGW currently serves with its 435,000
11 residential customers and its 25,000 industrial
12 customers on the 75 bcf a year that it supplies
13 through 6,000 pipes, right? So, there is that
14 whole lot of load that would have to be
15 electrified.

16 We begin making some estimates of how
17 much that would be. I actually want to quote
18 Nathan on his testimony around the Boston and
19 Massachusetts condition because I thought it was
20 a very alarming statistic he gave you. He said
21 that taking the entire pipe replacement budget
22 of \$9 billion and thinking about that as a
23 potential asset to use towards electrification
24 would accommodate 20 to 40 percent of the
25 swapouts of the residential units, the heat

1 pumps and so on. That's a shockingly low
2 fraction.

3 There is a huge cost embedded in
4 electrifying everything that is currently being
5 served by PGW. There is also operational risk
6 about how you would actually do that over time
7 on planet earth. Swapping out load and reducing
8 it in a way that was not very carefully managed
9 is going to stress the distribution system in
10 ways that if you are thinking about 475,000
11 accounts, is pretty daunting.

12 They would also have to be to fully --
13 to supply the electric load, that full
14 electrification that all of PGW's load would
15 require, we would have to do something by our
16 early kind of back of the envelope estimates,
17 looking at the amount of additional electricity
18 generating capacity that would be equivalent to
19 25 percent, a quarter of all of PECO's current
20 five county generation. Is a big increase.

21 And you would have to be able to deal
22 with seasonal storage. You would have to --
23 during the winter months when presumably
24 renewable, renewable generation would decline in
25 terms of capacity, you would have to have not

1 just batteries that discharge over time, but
2 seasonal scale storage that would be able to
3 guarantee heat for Philadelphians. It's not
4 impossible, but it is a big challenge, right?

5 Now what's the alternative to such a
6 thing? What's the other end of that spectrum?

7 The alternative to that is to say, let's
8 keep the workforce. Let's keep the end use.
9 Let's keep the distribution system. Let's keep
10 the ownership, but let's make renewable what is
11 going into the pipes.

12 Now how does that happen? There are
13 demonstrations and deployments going on all over
14 the world. In the north of England, they are
15 transitioning their natural gas system to a
16 hydrogen system. In Germany, they are doing --
17 they are looking at synthetic natural gas.

18 Methane, right, CH₄, can be reformed
19 from carbon and hydrogen and made synthetically.
20 And if that carbon doesn't come from the
21 Marcellus Shale but instead comes from the
22 atmosphere where you remove it from the
23 atmosphere, you are making PGW's existing
24 natural gas base system net zero. Because you
25 are not mining the ground and then burning it

1 and putting new carbon CO2 into the atmosphere.
2 You are taking CO2 that already is in the
3 atmosphere, mining that and reforming and so on.
4 I only get into that not because that's what I'm
5 advocating because that's the other extreme.
6 And in between these things, there are lots of
7 combinations. I will stop with one.

8 Which is in California right now, they
9 are demonstrating what is called power to gas.
10 One of the big problems precisely in the places
11 most successful in deploying large scale
12 renewable solar in particular, is there are
13 times of the day and the year when they generate
14 too much solar. And they have to put it
15 somewhere or they have to shut it down, all
16 right. Batteries can accommodate some of that.

17 But a much more stable process is what's
18 called power to gas. Where you use excess solar
19 for -- and electrolysis to get the hydrogen and
20 the spontaneous process or other kinds of
21 biomethanization process which don't require any
22 additional energy to turn it into methane and
23 you store it and it's stable. So, there are
24 lots of ways these things can work together in
25 the middle of the array between the extremes.

1 So, I think that the thinking about that
2 how is where, you know, the energy and the
3 expertise in this room, that kind of commitment
4 to these things together is the game. It is
5 absolutely clear that the current PGW model is
6 simply not sustainable in our world. And not
7 just because the climate is changing and we have
8 to do it. It's because of what's coming down
9 the pike from other governments.

10 Because policies are changing and they
11 have to, but they are changing that is going to
12 be punitive for the current operation of PGW.
13 It's either going to have to pay the full cost
14 of the pollution it causes when it combusts or
15 it's going to be outlawed absolutely between
16 regulatory fiat because that's where the world
17 is going. In the next -- it's not mid century.
18 It's decades, one or two.

19 So, let me just stop at that. I would
20 love to answer questions, talk about this or
21 anything else. It's a pleasure to be here.
22 Thank you very much for the opportunity.

23 COUNCILMAN JOHNSON: Councilman --
24 (Applause.)

25 Please state your name for the record

1 and start your testimony

2 MR. SILBERG: So, I'm Mark Silberg, Mark
3 number four today.

4 So, good morning, Members of City
5 Council, staff and guests. I'd like to echo
6 Mark's remark. I was worried I was going to be
7 alone here today. I appreciate all the
8 enthusiasm in the group.

9 So, my name is Mark Silberg. And I'm an
10 associate with Rocky Mountain Institute. We're
11 a non-partisan, non-profit think tank based in
12 Colorado with offices in New York, DC, Oakland,
13 China and India. And we work around the world
14 with energy transition with both public and
15 private sector partners. I will share some
16 perspective on the risks associated with
17 continued natural gas used in Philadelphia as
18 well as the opportunity to transition PGW in a
19 manner that is consistent with Philadelphia's
20 climate goals and ensuring an equitable and fair
21 reduction of gas use where it is economically
22 feasible to do so.

23 These remarks are some of our early
24 conceptual thinking on the matter. And so, we
25 look forward to the opportunity to discuss them

1 further.

2 We see two major forces driving the need
3 to transition PGW's business model in the
4 future. The first being the City's climate
5 goals, which we have discussed in depth today;
6 and then another point, which is minimizing the
7 stranded cost or stranded asset risk.

8 As mentioned before, PGW delivers about
9 80 billion cubic feet of natural gas per year,
10 which contributes 4 million tons of CO2
11 emissions along with another 1 to 2 million tons
12 associated with extreme methane leakage. And
13 yet in its annual report, PGW celebrates efforts
14 to expand gas service to new customers.

15 So to put this in perspective, PGW is
16 responsible for about 22 percent of the City's
17 greenhouse gas emissions. And we acknowledge
18 that the City's climate goals are in some ways
19 fundamentally at odds with the central elements
20 of PGW's current mission. And expanding access
21 to natural gas safely, reliably and at low costs
22 are also important near term objectives for the
23 utility. And although the City's goals may seem
24 irreconcilable, they are not if proactive
25 planning begins today, which it seems it has.

1 Other cities across the U.S. are showing climate
2 leadership requires planning to move away from
3 gas, including recent announcements from Los
4 Angeles and New York City.

5 So, separate from the stated climate
6 goals, other forces may drive reductions in gas
7 use anyway, which exposes PGW to risks of
8 stranded infrastructure costs. By continuing to
9 operate and expand the gas system, PGW is
10 exacerbating the scale of this risk. These
11 forces may come from federal or state policy, as
12 Mark mentioned, or from economics and
13 transforming market as they have in recent years
14 with coal power.

15 PGW has over a billion dollars in
16 undepreciated utility assets, which has grown in
17 recent years. And each new investment made
18 today in building out the City's gas system
19 compounds the risk by adding costs that may not
20 be recoverable in the future. 73 percent of PGW
21 gas is delivered to residential and commercial
22 buildings. So, reducing its emissions must
23 focus on building's gas use.

24 City carbonized buildings fuel requires
25 reducing demand for energy efficiency first and

1 then meeting the remaining demand with low
2 carbon energy sources to address both the
3 emissions reduction imperative and economic
4 risks would be critical to develop a strategy
5 for decarbonizing buildings that goes
6 hand-in-glove with transitioning the PGW
7 business.

8 So, couple of options for eliminating
9 emissions from Philadelphia's buildings. They
10 include electrification, which has been
11 mentioned before. That's replacing gas for
12 other fossil fuel use in buildings with a
13 decarbonized electricity supply.

14 The second is, district heats which we
15 see as viable and attractive now for new
16 construction. The concept of district heating
17 is you can have zero carbon buildings with
18 geothermal heating and cooling systems utilizing
19 recycled waste heat in a variety of other
20 electrified systems.

21 And then the third option, which was
22 mentioned previously, is this concept of green
23 molecules which includes biomethane, hydrogen
24 and synthetic methane. We believe these will
25 have rich applications in the future when the

1 fuels are available at scale. Despite the
2 appeal of these solutions, since they would
3 continue using existing gas infrastructure with
4 modifications, these fuels have several
5 drawbacks or uncertainties which I am happy to
6 discuss in more detail.

7 In any scenario, transitioning away from
8 the current infrastructure will be required by a
9 phased approach to reduce and then discontinue
10 gas delivery neighborhood by neighborhood or by
11 branch of the gas system. Such a phased
12 approach should, as much as possible, seek to
13 decrease system costs in proportion to declining
14 gas volume in customers such that gas customers
15 still in the system do not bear excessive costs
16 during this period of transition.

17 As sales of fossil gas decline, and
18 underutilized investment in infrastructure is
19 phased out, there are new revenue opportunities
20 for PGW that can supplant gas commodity and
21 capital revenues. The first of these is the
22 role for the utility as a heating service
23 provider.

24 In this model, the utility provides
25 services such as comfort and heat rather than

1 commodities like cubic feet of gas. Under this
2 model, the utility performs some new functions
3 that extend into homes and businesses, such as
4 conducting energy audits and performing building
5 efficiency upgrades, performing routine
6 preventative maintenance on appliances and
7 identifying appliance replacement needs and
8 selecting and installing new devices either
9 through utility workforce or through approved
10 contractors.

11 Another option for PGW may be to focus
12 on developing local heating and cooling district
13 utilities. In this model, the utility would
14 manage the engineering, procurement,
15 construction, operations, management and
16 maintenance of clean district heating and
17 cooling infrastructure. PGW's current expertise
18 is well suited to this role. And the extent to
19 which Philadelphia's buildings and neighborhoods
20 are technically economical and suitable for such
21 solutions will require another study.

22 Another option for PGW is to repurpose
23 existing gas infrastructure for low carbon
24 fuels. As I mentioned before, though, we have
25 some concerns about the cost and availability of

1 those fuels in the future.

2 And lastly, there is a potential role
3 for PGW as what we describe as a distributed
4 resource finance utility. And in this model,
5 the utility would provide on-bill financing to
6 existing utility customers to help them improve
7 energy efficiency and transition their HVAC
8 equipment and other appliances away from fossil
9 fuels. Customers bills and rates can also
10 include incentives for new electric devices to
11 shift the timing of their energy consumption to
12 support the electric grid, minimizing some of
13 the peaking concerns described before. And in
14 addition, the utility could manage a network of
15 qualified contractors to perform this work and
16 help those businesses market their offerings to
17 customers.

18 So, with any of these models or any
19 transition plan for PGW, the City will need to
20 address several crucial challenges, some of
21 which have come up before. One of course, is
22 around equity and access to these benefits.
23 Another is job functions and employment needs of
24 PGW workforce development and training need to
25 be a critical part of this transition in

1 emerging business such as heat pump installation
2 and maintenance. And again, with over a billion
3 dollars in unappreciated utility assets on its
4 balance sheet, PGW will need to deliberately
5 plan for and sequence the transition of the
6 assets. A critical start to a managed
7 transition will include a system-wide assessment
8 of existing infrastructure.

9 So, this is a pretty extraordinary
10 opportunity for the City of Philadelphia as the
11 owner of the nation's largest municipal gas
12 utility. It can align a long-term business plan
13 for PGW with the stated policy objectives
14 mitigating climate change and reducing financial
15 risk to the City. City state and businesses
16 around the country are just beginning to grapple
17 with the challenges of the natural gas
18 transition.

19 In this case, Philadelphia has an
20 opportunity to be a leader and a hub of
21 innovation that will send an example for the
22 rest of the country to follow. In addition, I
23 should mention that RMI through the America
24 Cities Climate Challenge has some opportunity
25 and capacity to support Philadelphia's

1 transition in this matter. And I think we will
2 hear a bit more about the City's involvement in
3 that work later on.

4 So, we wish you the best of luck as you
5 embark on this challenging and exciting
6 endeavor. And I look forward to answering any
7 questions you have.

8 Thank you.

9 (Applause.)

10 COUNCILMAN JOHNSON: Thank you very
11 much.

12 Councilman Derek Green.

13 COUNCILMAN GREEN: Thank you, Mr. Chair.

14 Thank you both for your testimony
15 regarding this topic and providing some of the
16 concepts and opportunities that the City has in
17 front of it.

18 As I listen and reflect on the
19 testimony, it reminds me of when I was much
20 younger, had much more hair. In the beginning
21 of the videotape industry, you had VHS and
22 Betamax. Now technically, Betamax was a better
23 technology, but they only -- Sony only licensed
24 a small number of movies. Whereas, on the VHS
25 side, they licensed everything.

1 And so, when I am listening to the
2 conversation of how do we use CO2 emissions to
3 create gas, other types of gas without creating
4 additional fossil carbon-based products versus
5 electrify everything, and I agree, we are
6 getting to a much better concept of electric
7 capacity, not using as much carbon-based
8 products. Using solar other things. But on
9 both sides, technology is not fully there.

10 On the electric side, we don't have some
11 of the solar storage capacity and other things.
12 And then on the syn gas, the cost is very
13 expensive and we haven't gotten there. So, I am
14 looking at these different technologies. And
15 then us being the City of Philadelphia, being a
16 public entity, we have a limited amount of
17 resources. So, we kind of have to decide --
18 pick VHS or pick Beta, but don't pick the wrong
19 one because we only have a small amount of
20 dollars. Whereas in the private sector, they
21 can decide from a shareholder perspective, we
22 are going to try a little bit over here with the
23 syn and then we will try a little over here with
24 electric. And then, we will tinker and we may
25 lose some money. But we can put additional

1 revenue into it to find out ultimately what
2 works best.

3 I am curious from the perspective both
4 of you have and what you have seen in other
5 jurisdictions around the country, now we are the
6 largest publicly-owned utility in the nation,
7 probably in the world. So, I am curious in
8 reference to what you are seeing even in the
9 private sector, how they are looking at the
10 investment in these two different options. Some
11 entities that are based in California are
12 probably more along on the solar side because
13 they have had a much more robust solar structure
14 than that on east coast. Whereas, east-coast
15 based companies like your Exelon and Coneds have
16 very old infrastructure issue.

17 So, I am curious on what you have been
18 seeing? What investments been occurring? And
19 if you were to make a guess which energy concept
20 would move quicker along. Because my gut would
21 be those private entities who are more east
22 coast because they have a large infrastructure,
23 main utilities would look more on the syn side.
24 And also, the weather not being as good as you
25 have it on the west coast where solar maybe more

1 focused on in reference to getting solar
2 batteries and other things to a higher
3 technology base because they don't have the same
4 level of infrastructure because they were
5 developing as cities and jurisdictions much
6 later than the east coast.

7 So, I am just curious your perspective
8 in that regard.

9 MR. HUGHES: Thank you, Councilman.
10 That's was an extraordinary question. That is
11 great. There is a lot of room to move inside
12 that question.

13 COUNCILMAN GREEN: I am somewhat wonky
14 at times.

15 MR. HUGHES: I think that the first
16 thing I would say in response is that to the
17 extent possible, I think you have framed the
18 challenge exactly right. And I think you have
19 implied part of the answer.

20 To the extent possible, you want to be
21 able to not have to guess, right, until you have
22 to. And there -- there is a whole set of
23 approaches to decision making under deep
24 uncertainty, some of the uncertainty you have
25 talked about that are very deep indeed about

1 technical change that is -- addresses that head
2 on. That says, you know, to pretend like we
3 know what the underlying probability of
4 distributions are of any of these uncertainties
5 that we kind of are facing, you know, is not --
6 even though that's the way a lot of people
7 proceed, is just not the best way to do.

8 Instead, let's figure out what choices
9 that we have to make today survive or are robust
10 against the greatest number of possible futures
11 that we -- that we might end up facing, right?
12 And so, you kind of follow this no regrets kind
13 of logic about that. And what that leads you to
14 start looking at is things that are initial
15 investments and policy formation that are useful
16 under -- in the conversation we are having,
17 under both extremes, right? And there are a
18 couple of examples of that.

19 For example, that power-to-gas, that
20 power -- in fact, it's interesting that you
21 mentioned kind of this coastal difference,
22 right? California, a place with the solar
23 resource that you are talking about, although, I
24 would be remiss and in trouble with Emily in the
25 room if I did not say that we have got

1 substantial solar resources ourselves.

2 COUNCILMAN GREEN: Fifth largest in the
3 country -- fourth largest.

4 MR. HUGHES: That the -- you know, we
5 have got -- even in California, there is some
6 advanced work going on, on power to gas because
7 of some of the problems that that extreme,
8 right, is already beginning to face with how do
9 you store the excess. Kind of thinking about
10 ways. Because while the problem could not be
11 more urgent, we have runway. We have time to
12 stage our decisions. That's why so many of us
13 have been saying, we have to study. We have to
14 inventory. We have to really understand what I
15 am kind of making a plea for is we have to fully
16 understand the cost of electrification here in
17 Philadelphia before we necessarily -- because it
18 has a lot of attractions.

19 But the cost that you rightly point out
20 about syn gas and other kinds of bio gas and
21 other kinds of -- put different kind of fuel,
22 put renewable fuel into the pies, they are
23 expensive. But I'm not convinced that they are
24 more expensive than what the real full cost of
25 electrification would be, right? So we have to

1 understand a little bit more about what that
2 decision landscape is for us as we proceed.
3 That's -- you know, it's kind of a strategic
4 answer, but that's the beginning at least of an
5 answer.

6 MR. SILBERG: I certainly agree with all
7 that. I think what I would add as well is with
8 our experience working with utilities across the
9 country, oftentimes this exact question comes up
10 in various context of we don't have perfect
11 information, so what should we do next. And
12 remember, this isn't we're going to wake up
13 tomorrow and the system is a hundred percent bio
14 gas or the system is a hundred percent solar.
15 There is a transition underway.

16 And so oftentimes, what these utilities
17 do -- and we work with many of them on these
18 projects is -- what is the pilot or program
19 where we can test some hypothesis? See how much
20 does it actually cost to install an electric air
21 source heat pump in Philadelphia with the
22 existing contractors network, and try that in a
23 hundred homes in different places and see how it
24 works out.

25 So, what I would encourage is thinking

1 about what are those -- what are the hypothesis
2 you would like to test, that the utility would
3 like to test to determine which facility is much
4 more viable to them and don't necessarily commit
5 fully to it, but instead try it out in small
6 steps. Pilots and programs, studies and so
7 forth.

8 You know, I think the other thing I
9 would add on this is a lot of the concerns that
10 were raised here around the system-wide impacts
11 of either electrification or use of synthetic
12 gases and so forth, a lot of these are very
13 future oriented issues. I think we can imagine
14 a world in which starting today, a number of new
15 construction and other buildings in Philadelphia
16 can immediately go all electric without having
17 to wait for availability of the fuel supply and
18 so forth.

19 Pilots and programs, managed transition
20 and starting as soon as possible to test
21 hypotheses.

22 MR. HUGHES: One -- following that line,
23 Mark's -- the founder of RMI, Mark's
24 organization, has got this fantastic line,
25 right, that says: People don't care about

1 energy. They care about hot showers and cold
2 beers, right? And so, they care about energy
3 services. And Mark made a very important point
4 that has -- that I would like to emphasize here,
5 which is that we need to think about changing
6 the governing structure -- not the governing
7 structure, but the structure of the organization
8 itself so that it can accommodate a variety of
9 new tasks in the future, right?

10 Some of those are state-imposed
11 regulatory barriers on what they can and cannot
12 sell. But I think a lot of what we are talking
13 about is that PGW becomes something like
14 Philadelphia's sustainable future utility that
15 can adapt to change as it becomes reality and,
16 you know, take on missions as they adapt.

17 COUNCILMAN GREEN: I would agree with
18 both of you. But I just want to add one caveat
19 when you said we have time. But I don't believe
20 we have time. That is a problem that we need to
21 be doing these things. We should have been
22 doing these things a couple years ago because of
23 the greenhouse gas emissions that are impacting
24 our climate and making things warmer.

25 So, we have to do things as of

1 yesterday. But the challenges that as a public
2 entity and a City government, PGE at the end of
3 the day after all its debts are paid has a
4 limited amount of resources. So then, you are
5 then at the next point of do you take resources
6 out of the General Fund to do these things? But
7 then what about issues people raise in reference
8 to public safety, parks, recreation centers, our
9 libraries?

10 You have those who are for and against
11 soda tax, all those other things, which puts
12 strains on our General Fund. Plus, we need to
13 have a significant -- well, we need to have a
14 cushion in our General Fund to make sure that
15 our bond rates don't get challenged where we
16 actually pay more when we borrow money.

17 We got to look at all these issues. I
18 think that puts us in a challenging perspective
19 of we got to move quickly, make sure you pick
20 the right technology, but you only have a little
21 amount of money to do it. So, those are some of
22 the challenges that we are dealing with.

23 And so, thank for your input. I think
24 from my perspective, a very engaging
25 conversation. It has brought a lot of different

1 ideas and suggestions that we can move forward
2 on. Thank you, Mr. Chair.

3 COUNCILMAN JOHNSON: Thank you,
4 Councilman Derek Green.

5 Councilman Al Taubenberger.

6 COUNCILMAN TAUBENBERGER: Thank you very
7 much, Mr. Chairman.

8 Professor Hughes and is it Dr. Silberg,
9 is it or also professor?

10 MR. SILBERG: Just Mister is fine.

11 MR. HUGHES: Works for me, too.

12 COUNCILMAN TAUBENBERGER: All right.

13 The question actually is really more
14 directed at Professor Hughes, but feel free to
15 answer.

16 The electric conversion seems to be a
17 radical choice, but sometimes you need radical
18 decisions to get things resolved. I mean, I
19 understand that.

20 Are there any cities in the world that
21 have gone through this and cut off their natural
22 gas allocations and gone completely electric?

23 MR. HUGHES: Not at the scale that we
24 are contemplating here.

25 COUNCILMAN TAUBENBERGER: Okay. Smaller

1 cities?

2 MR. HUGHES: No. I mean, there are
3 cities that start. It's the transition, right,
4 that is the real challenge. There are cities
5 that don't have natural gas, for example. And
6 that as their energy systems, which might have
7 been based on somebody even older than natural
8 gas, have been modernized over the last century
9 or so, they been -- started off as essentially
10 all electric.

11 And so, it's absolutely possible. But
12 even in a context, it's kind of like Hawaii.

13 COUNCILMAN TAUBENBERGER: What was it?

14 MR. HUGHES: It's kind of, like, Hawaii.

15 COUNCILMAN TAUBENBERGER: Wine?

16 MR. HUGHES: Hawaii. The island of
17 Hawaii.

18 COUNCILMAN TAUBENBERGER: Oh, Hawaii.
19 I'm sorry. My mind on something else

20 MR. HUGHES: You know, Hawaii can do a
21 lot of things because energy on Hawaii is
22 already so expensive that they have got room to
23 experiment. They -- a place that is already all
24 electric is probably a place that is isolated
25 and has been forced to do that thing with that

1 experience. The scale that we are talking about
2 transitioning, especially in a climate like ours
3 is largely unprecedented. Is unprecedented,
4 sorry.

5 Let me be clear. It's unprecedented.

6 COUNCILMAN TAUBENBERGER: The nation of
7 Iceland has done a lot of work from thermo
8 energy from the ground as far as --

9 MR. HUGHES: Absolutely. And once
10 again, interestingly, an island, right? Islands
11 when they have these characteristics of
12 isolation that drives up their prices, also not
13 just any old island but a volcanic island.

14 COUNCILMAN TAUBENBERGER: Yes. Hawaii
15 fits that need, as well. Iceland, certainly,
16 has a lot of volcanos, as well.

17 MR. HUGHES: I'm not sure I would hope
18 for a volcano under Philadelphia that we can --

19 COUNCILMAN TAUBENBERGER: Okay.

20 My question -- okay. I have -- thank
21 you for that.

22 Where does PECO get most of its
23 electric? If we are going to talk about
24 electric, they would be the provider.

25 MR. HUGHES: So, the grid portfolio in

1 that -- from which PECO draws its electricity,
2 right, as part of PGM system, is a mix of
3 nuclear. Pennsylvania has a relatively high
4 kind of contribution of nuclear generation --

5 COUNCILMAN TAUBENBERGER: It does.

6 MR. HUGHES: -- in its electricity mix.
7 Natural gas and coal, coal going down. So, a
8 little hydro and growing number of --

9 COUNCILMAN TAUBENBERGER: Hydro, I
10 think, from the Susquehanna. You have a dam
11 there.

12 MR. HUGHES: Yes.

13 COUNCILMAN TAUBENBERGER: It's pretty.

14 MR. HUGHES: Yeah. But those are
15 relatively small. At the larger components of
16 that are nuclear.

17 COUNCILMAN TAUBENBERGER: How much
18 nuclear would you estimate?

19 MR. HUGHES: I learned over the last few
20 years to not answer a question that anyone with
21 a cell phone can answer in 15 seconds.

22 COUNCILMAN TAUBENBERGER: I am not going
23 to hold your feet to the fire here. We're
24 having a conversation.

25 MR. HUGHES: No. It's in the high 30s.

1 COUNCILMAN TAUBENBERGER: The high 30s,
2 okay.

3 MR. HUGHES: Mid to high 30s, I think.
4 And I left my phone on my seat.

5 COUNCILMAN TAUBENBERGER: Didn't at one
6 time -- this is my last question -- Philadelphia
7 actually make synthetic natural gas or gas?
8 Wasn't natural gas, it was gas.

9 MR. HUGHES: We have had --

10 COUNCILMAN TAUBENBERGER: Years ago. I
11 am talking about 50, 60, 70 years ago.

12 MR. HUGHES: Right. Well, actually, in
13 the '70s, many people will remember the kind
14 of -- the word construction synth gas that was
15 in the '70s and the Carter Administration.
16 There was a lot of experimentation around that.
17 Some of those facilities were in this region.

18 So, yeah.

19 Plus, there is also City gas, which is a
20 very different thing from natural gas. But --

21 COUNCILMAN TAUBENBERGER: What was that?

22 MR. HUGHES: City gas.

23 COUNCILMAN TAUBENBERGER: City gas.

24 MR. HUGHES: It's an early form of the
25 street lighting. And that was used commonly in

1 Pennsylvania.

2 COUNCILMAN TAUBENBERGER: But it was
3 actually synthetic in the sense it was made?

4 MR. HUGHES: From coal, yeah.

5 COUNCILMAN TAUBENBERGER: Okay. Well,
6 and synthetic gas today, where would that come
7 from?

8 MR. HUGHES: So, there are a variety of
9 sources. There is a bunch of ways to make kind
10 of synthetic gas. You can do things like as
11 long as you have carbon from somewhere and
12 hydrogen, H₂, from somewhere. You can use
13 what's called the symbiotia process, which is
14 about a hundred year old chemical process that
15 requires very high heat. That high heat will
16 reform those two elements into CH₄, which is
17 methane, the chemical name for natural gas.

18 One of the reasons why there is a little
19 more optimism around processes like that is
20 there is some new discovery recently in the last
21 ten years where it's called biomethanization
22 that uses an organic process. Basically, little
23 microbes that without additional heat, will
24 reform carbon and H₂ into methane without
25 additional heat. Which cuts out a huge part of

1 the cost of synthesizing new methane, of making
2 natural gas out of these more fundamental
3 elements. It's a shockingly powerful discovery
4 that is --

5 COUNCILMAN TAUBENBERGER: Methane gas
6 can be produced from a lot of agricultural
7 byproducts.

8 MR. HUGHES: Absolutely.

9 COUNCILMAN TAUBENBERGER: All you have
10 to do is take a look at bunch of grass
11 clippings, and you'll get all the methane you
12 can ever imagine.

13 MR. HUGHES: Absolutely.

14 COUNCILMAN TAUBENBERGER: Cow manure, as
15 well, produces methane.

16 MR. HUGHES: Landfill gas is another
17 source. There is also -- well, there is lots of
18 sources and lots of technology developments that
19 are improving each of those sources.

20 MR. SILBERG: Yeah. And just to that
21 point, I mean, SoCal Gas is really an example of
22 a utility going heavy on biomethane. The
23 challenge is that in California, which is a
24 large agricultural state, they can probably only
25 cover about 20 percent of their natural gas

1 demand with that fuel stock. And the concern
2 would be creating a market around biomethane,
3 what sort of perverse incentives would that
4 create, for example, for agriculture?

5 So, part of the next step things need to
6 be understood train of thought is what is
7 actually the bio methane potential in the State
8 of Pennsylvania or the surrounding areas. And
9 at least the studies that we have seen from
10 other parts of the country suggest that it's
11 inadequate.

12 COUNCILMAN TAUBENBERGER: It's what?

13 MR. SILBERG: Inadequate.

14 COUNCILMAN TAUBENBERGER: Inadequate.

15 MR. SILBERG: To meet the need

16 MR. HUGHES: I just want to be clear
17 that we are all following that there is a
18 distinction between biomethane that would come
19 out of, say, the agricultural sector and
20 biomethanization that I was talking about that
21 uses a different process other than heat to --
22 it's an organic process rather than a thermal
23 process to make methane.

24 So, those are two different things. And
25 my colleague, Mark, here is exactly right about

1 the agriculture capacity and some of the --

2 COUNCILMAN TAUBENBERGER: I have an
3 interest in knowing more about the agricultural
4 process as I have a degree from Penn State
5 University in Agronomy. I'm an agronomist, so I
6 find that fascinating. Also, I was always aware
7 there is some controversy around it. But thank
8 you, actually, for your expert testimony. It
9 certainly has been eye opening. And I think we
10 all learned by it, as well.

11 And thank you for taking the time to be
12 here. It's very important.

13 Mr. Chairman, thank you.

14 COUNCILMAN JOHNSON: Thank you. Any
15 other questions for members of the panel?

16 (No further questions.)

17 Thank you both for your testimony. And
18 again, as always it's good to see you Professor
19 Mark Allen Hughes. Thank you very much.

20 Please, call the next panel.

21 (Applause.)

22 THE CLERK: Christine Knapp and Barry
23 O'Sullivan.

24 (Panel approaches Witness Table.)

25 COUNCILMAN JOHNSON: Hey, Christine.

1 MS. KNAPP: Hello.

2 COUNCILMAN JOHNSON: Please, state your
3 name for the record and begin your testimony.

4 MS. KNAPP: I'm Christine Knapp. I'm
5 Director of the Office of Sustainability. Thank
6 you, Chair Johnson and members of the Committee
7 for the opportunity to provide testimony on
8 Resolution 181081.

9 Philadelphia Gas Works is the nation's
10 largest municipally owned gas utility
11 maintaining over 6,000 miles of gas mains and
12 service pipes that deliver 78 billion cubic feet
13 of gas to 500,000 customers each year. PGW has
14 been suffering from a decrease in customers and
15 in usage for decades.

16 In 2017, PGW filed for an 11.3 rate
17 increase, citing warmer weather patterns caused
18 by climate change as the cause. As a gas only
19 utility, PGW and the City of Philadelphia need
20 to understand how the utility can thrive
21 financially to retain its 1600 person workforce
22 and provide necessary services to residents in
23 the lower carbon future.

24 PGW and the City have agreed to
25 undertake a business diversification study which

1 would provide a roadmap toward an
2 environmentally and economically sustainable
3 future for PGW that can be a model for other gas
4 utilities around the country. The study will
5 not only establish the feasibility for
6 diversification recommendations, but also
7 calculate the cost of carbon reduction for each
8 recommendation, life cycle cost and cost impacts
9 for both customers and PGW; and show how each
10 recommendation will generate sustainable
11 revenues that identify whether the Philadelphia
12 market place can support and sustain each
13 recommendation.

14 This study will be part of
15 Philadelphia's involvement in the Bloomberg
16 American City's Climate Challenge, which aims to
17 support cities as they scale up climate
18 mitigation efforts in the building and
19 transportation sectors. While we are still in
20 the early stages of drafting the scope of the
21 study, we believe there should be several
22 components.

23 First, the study should review
24 opportunities to pursue new energy sources.
25 These sources may include renewable and natural

1 gas, hydrogen, solar and geothermal among
2 others. Next, the study should review new
3 services and business models. Examples of these
4 would be energy storage, micro grids, smart City
5 technology services and increase weatherization
6 services.

7 Additionally, there should be a review
8 of the necessary regulatory or legal barriers
9 that need to be addressed to enable PGW to
10 pursue any of the identified options. And given
11 PGW's role as a publicly owned utility, we
12 believe there should be a community engagement
13 component to the study to allow PGW rate payers
14 to have a voice in the future of their utility.

15 Through the Bloomberg challenge, PGW has
16 not only committed to partnering on the study,
17 but also agreed to pilot one of the identified
18 strategies. We thank PGW for their pilot thus
19 far, and we look forward to continuing this work
20 with them in the near future.

21 And thank you, again, for this
22 opportunity. And I'll be happy to answer
23 questions.

24 COUNCILMAN JOHNSON: Thank you very much
25 for your testimony.

1 Please, state your name for the record
2 and begin.

3 MR. O'SULLIVAN: My name is Barry
4 O'Sullivan. I'm Director of Corporate
5 Communications at Philadelphia Gas Works.

6 Thank you, Councilman Johnson, members
7 of the Committee and Councilman Green for having
8 this here today. And thank you, also, I think
9 to the people who have come here to be part of
10 this conversation, those here like me in
11 official capacity and those who have traveled
12 here because they believe this discussion is
13 part of a larger debate about the world we leave
14 to future generations.

15 That is the underlying impetus right
16 here. And I think most of us are on the same
17 page, generally speaking about where we are and
18 about how we got here. And there is clearly no
19 shortage of ideas about when we need to do next.

20 The biggest questions after today may be
21 about what mix of ideas is the best mechanism
22 for change, and how will that impact the lives
23 and lifestyles of the residents of Philadelphia?
24 And that personal impact is a legitimate
25 concern.

1 PGW is a municipal not-for-profit
2 utility. Which means, every dollar we invest in
3 new projects must come directly from our rate
4 payers. More than half of whom either live
5 below or are within stumbling distance of the
6 federal poverty level. So as PGW considers how
7 to make our energy even cleaner, and as we dive
8 deeper into possibilities for diversification,
9 we must also make sure that the dollars we
10 invest don't undermine system for liability and
11 safety or energy affordability and access.

12 We never can relinquish our commitment
13 to energy justice. Making sure that low income
14 customers can take advantage of lower cost
15 energy including natural gas. Still, as the
16 hometown utility, we are energetic supporters of
17 the emissions reduction goals that Philadelphia
18 has adopted. And we are engaged with the
19 Philadelphia Energy Authority and the Office of
20 Sustainability and others so we can help achieve
21 them.

22 For example, as Christine mentioned, PGW
23 and the City have agreed to work in tandem on a
24 PGW business diversification study, which we
25 believe could be a model for other gas utilities

1 around the U.S. We are involved and open
2 because PGW is ideally situated to play a
3 starring role in Philadelphia's next chapter,
4 because coordinated action is the only way
5 forward and because we recognize that each of us
6 must do their part.

7 Our scientists and engineers and
8 regulatory specialists had studied issues of
9 environmental impact, sustainability and
10 emission reduction for many years. PGW is an
11 incubator for excellence in energy and
12 efficiency. I can deliver vital, local, real
13 world expertise. And that's important. Because
14 as a municipal entity in a heavy regulated
15 industry, PGW is often limited in how fast we
16 can change and how far beyond our core mission
17 we can go.

18 In many instances, layers of local,
19 state and federal regulations have to be
20 navigated. Approvals from the Philadelphia
21 facilities management corporation, from the PGC
22 and City Council must be solved, understandings
23 need to be reached with our human leadership,
24 and agreements need to be put in place with any
25 number of City agencies. So, there is a

1 multitude of considerations that we need to work
2 through in assessing the feasibility of an idea
3 no matter how worthy. And the process may
4 appear frustrating or ponderous or limiting, but
5 it has not stopped us from reducing PGW's
6 corporate carbon footprint by around one million
7 metric tons or from launching what is the
8 longest running, voluntary natural gas
9 conservation program in Pennsylvania. And it
10 won't stop us from exploring bringing RNG,
11 renewable natural gas to Philly.

12 Research indicates that if less than 20
13 percent of the gas supply was RNG, it could
14 achieve the same greenhouse gas reductions as
15 converting every building to electric only by
16 2030. And then you avoid the extreme cost and
17 upheaval of mandated electrification. So, we
18 have been asking our natural gas suppliers to
19 include the cost of RNG in their pricing, but it
20 remains too expensive. Our legal framework
21 mandates that we purchase the lowest cost
22 natural gas on behalf of our customers. And
23 that's a part of the energy justice commitment.

24 But we think we still can bring RNG to
25 Philadelphia in a way that gives choice to

1 customers. We are working with an RNG supplier
2 right now, so that in the future consumers can
3 choose natural gas from an RNG choice in much
4 the same way people can choose electricity from
5 wind or solar company even if it is more
6 expensive. Customers can then choose whether
7 price or source is more important. And either
8 way PGW is happy to safely and reliably bring
9 that gas to your home or your business.

10 So that innovation, that innovation is
11 why when we look to the future, we see a
12 Philadelphia where PGW continues to benefit our
13 region John, building on achievements,
14 implementing pragmatic options for
15 diversification and becoming more involved in
16 helping to shape Philadelphia's energy mix. A
17 mix that in the foreseeable future, has to
18 include natural gas.

19 Our perspective is clear on this. PGW's
20 primary role is to continue to improve its own
21 environmental impact and help our customers do
22 the same without compromising our mission. On a
23 parallel track, we must deepen our relationships
24 with positive change agents such as the Office
25 of Sustainability so we can better support their

1 work. Because at PGW, we are fans of renewable
2 energy. And while there is a lot more work to
3 do, our region's air is cleaner today than it's
4 been in a generation. And that's largely thanks
5 to natural gas and renewables and new policies
6 and better practices.

7 That's why we were so excited when the
8 City announced its large solar power procurement
9 deal. Not only does it make sense and directly
10 curb emissions, it can also show the way forward
11 for other municipalities and help increase
12 renewables energy share of the power generation
13 market. And when you consider how much of
14 Philadelphia's electricity comes from coal and
15 oil, the growth potential there is enormous and
16 the benefits are significant.

17 Members of the Committee, PGW is here
18 today because we do get it. As a society, we
19 need to make more progress. And people are
20 losing patience. That much is clear. That Much
21 is understandable. And even though the entire
22 natural gas industry from its rigs and its wells
23 and interstate pipelines to the service lines
24 beneath our streets contributed less than 6
25 percent of our nation's greenhouse gases, there

1 are still much more we can do and much more we
2 must do. That is why local natural gas
3 utilities like PGW invest \$4 million a day on
4 energy efficiency programs that are reducing
5 consumption now and why manufacturers are
6 targeting a 50 percent boost in appliance
7 efficiency over the coming decade.

8 So when you combine all this, all the
9 local natural gas enhancements with market-based
10 energy planning, a continued reduction fusion of
11 emissions, more renewables, targeted policies
12 and incentives, I think it's clear we can
13 achieve our climate goals. And that's a very
14 excited project to pursue. And one that we are
15 very excited to be a part of. Because despite
16 some claims to the contrary, PGW's absolutely
17 committed to improving the environment we all
18 share and which our children would inherit. We
19 breathe the same air you breathe.

20 The people I work with at PGW see what's
21 going on. We want to continue to make a
22 positive difference. We are not
23 anti-environment or pro-dirty air. Quite the
24 opposite. The 1600 men and women of PGW support
25 this community. They do it professionally and

1 they do it personally. They are part of its
2 fabric. Proud Philadelphians who believe that
3 PGW's vital to building an even cleaner
4 Philadelphia.

5 So with that, we thank you for convening
6 this hearing and for allowing us to share our
7 perspective and for giving us the opportunity to
8 hear from those who have different perspectives.

9 COUNCILMAN JOHNSON: Thank you very much
10 for your testimony.

11 Councilman Derek Green.

12 COUNCILMAN GREEN: Thank you, Mr. Chair.

13 Thank you both for your testimony. Just
14 have a couple of questions I wanted to follow up
15 on. Ms. Knapp, in your first page of your
16 testimony, you made refer sense to a pilot -- to
17 pilot one of the identified strategies.

18 Can you provide some more background on
19 what that identified strategy is?

20 MS. KNAPP: Yeah. We have not
21 identified that yet. When we applied to the
22 Bloomberg America Cities Climate Challenge in
23 partnership with the PGW around this business
24 diversification study, the challenge is really
25 focused on reduction of emissions in the next

1 two-year period. And so, them sort of
2 supporting us on a study was not really in their
3 mission. They don't want to see more studies.
4 They want to see action.

5 So, the way we were able to kind of work
6 it out is that we would do the study. We also
7 do an action, a pilot of something identified in
8 that study. We don't know what that is yet,
9 right? If we have to get into the study and
10 figure out what the range of possibilities are.
11 So, it could be something like an RNG pilot. It
12 could be something like a workforce retraining
13 program and deploying some of the workforce on
14 energy efficiency and weatherization projects
15 and homes. There could be a variety of things.

16 We will work together to figure out what
17 that is.

18 COUNCILMAN GREEN: When you say
19 workforce retraining, you're talking about PGW
20 employees. I remember the 686 doing
21 sustainability. I know you already have the
22 parts and labor plan with PGW. But doing the
23 sustainability projects in people's homes and
24 the retraining process.

25 MS. KNAPP: Right. So, could be

1 anything like those two things or anything else
2 identified in the study. So we, I think, have
3 to get much more substantially into that before
4 we can decide what the pilot is.

5 COUNCILMAN GREEN: And can you talk more
6 about the study that's part of the Bloomberg
7 American Cities Climate Change Challenge in
8 reference to the timeline perspectives? What
9 does entail?

10 MS. KNAPP: Yeah. The Climate Challenge
11 has come together a little bit more slowly than,
12 I think, everybody involved had hoped. We just
13 hired this staff person that would be -- that's
14 dedicated to working with us from the challenge
15 last week. We just started. So, things are a
16 little bit slower starting than we had hoped.
17 We did just get confirmation of the funding that
18 will help support this study yesterday. They
19 are working on getting us a timeline for when we
20 can actually expect to see those dollars get
21 here.

22 We have been working with PGW on scoping
23 the study. And so, I think we will get clarity
24 on that scope and be able to move to an RFP for
25 a consultant to come in and do that in the next,

1 you know, six weeks or so.

2 COUNCILMAN GREEN: And so, the goal of
3 that consultant to come in and help the
4 Administration and PGW put together what would
5 be the diversification study?

6 MS. KNAPP: Yeah. What I would envision
7 as sort of referenced in here, is that I think
8 it needs to take on a number of different
9 opportunities for PGW. And what I really want
10 to see is the full universe of opportunities.
11 And they can evaluate that opportunity and say,
12 this doesn't really look like a good opportunity
13 for Philadelphia, but here it is just so we have
14 the full universe, you know, documented in a
15 place. And then again, evaluation of each of
16 those opportunities based on environmental
17 outcomes, based on economic outcomes, based on
18 market viability in Philadelphia.

19 So, there will be a real evaluation of
20 each piece and recommendations for how to move
21 that ahead.

22 COUNCILMAN GREEN: And then what's
23 the ultimate time -- I mean, is there a
24 requirement from Bloomberg for a specific
25 timeline of completion of study and actions?

1 MS. KNAPP: Yeah. The Bloomberg
2 challenge is intended to wrap up in two year
3 effort. We are already four months in, but
4 we're still sort of behind the curve. Let's say
5 twenty months or so is when everything should be
6 completed. I would hope that we would have the
7 study completed faster than that because we also
8 want to move into that pilot implementation
9 piece during that same twenty-month period.

10 COUNCILMAN GREEN: So, what I am hearing
11 is that a two-year timeline for both the study
12 and also the action.

13 MS. KNAPP: Right.

14 COUNCILMAN GREEN: What would be the --
15 outside of the Office of Sustainability as well
16 as PGW, what entity will help to move the study
17 forward in reference to gathering input from the
18 public and input from others to be part of that
19 diversification conversation?

20 MS. KNAPP: Yeah. I referenced I
21 believe that there should be a community engaged
22 component to that. I think we have not yet
23 decided if that is something we are going to put
24 into the RFP and have the consultant carry out
25 that community engagement or something we think

1 we can do through PGW's own, you know, teams
2 that already do public engagement, public
3 affairs work or using some other resources to do
4 that engagement work. So, it will happen. We
5 are just not exactly sure who will lead it yet.

6 COUNCILMAN GREEN: Okay. Okay.

7 Mr. O'Sullivan, you talked about some of
8 the legal restrictions and frameworks that
9 impact PGW. And in one of the issues that my
10 staff has done some research on is that the -- I
11 believe it's state law that restricts PGW from
12 only purchasing the cheapest amount of gas. I
13 know we are working on some legislation that we
14 hope to work with some of the partners at the
15 general assembly to change that.

16 Are those some of the things you are
17 talking about? If those changes were both to
18 occur at the state level and PUC level or local
19 level, that will give PGW more flexibility to do
20 some of the things like RNG and others concepts?

21 MR. O'SULLIVAN: I think that's exactly
22 part of it. It's a little more to it. I am
23 actually joined by Ray Snyder who is the Senior
24 Vice President of Gas Planning here. One of the
25 things you don't want to have happen, you don't

1 want your Director of Communications answering
2 substantiative questions. Because I'm a mile
3 wide, but an inch deep.

4 When I can tell you is when we looked to
5 our suppliers and we asked them to price out RNG
6 for us, on average right now that price has come
7 back between 400 percent and 1000 percent more
8 expensive. On one hand, there is a legal
9 ramification that requires us to purchase the
10 lowest cost gas. On the other hand, there is
11 local market conditions that mitigate that
12 purchase.

13 And that is why we think we found a
14 solution in offering that choice to consumers.
15 If you are a consumer for whom price is the only
16 driver of your choice, then yeah, you can
17 certainly buy your natural gas from PGW as you
18 do now. But in the same way with electricity,
19 you can sign up for a solar power company or a
20 wind power company. It still comes through the
21 PECO. You pay a little bit more for that. But
22 if that is something that is important to you,
23 then we can certainly work on a plan to
24 facilitate that.

25 COUNCILMAN GREEN: How would you execute

1 that concept? You're basically saying that a
2 customer, assuming arguing all the issues and in
3 legal dynamics have been resolved, you are
4 basically saying to a customer, you have the
5 ability to choose this type of energy source for
6 your home versus that type.

7 MR. O'SULLIVAN: And so that answer to
8 that question is, we're still working that out.
9 There is a model on the electric side that
10 allows you to do that.

11 COUNCILMAN GREEN: Right.

12 MR. O'SULLIVAN: So, you can sign up
13 for one of those a hundred percent renewable
14 electricity companies. And they will then be
15 your provider initially. But you still get the
16 electricity via PECO's infrastructure. They
17 still manage your account to a certain degree.

18 COUNCILMAN GREEN: And that could
19 possibly be, you know, one of the actions that
20 is required under the Bloomberg challenge?

21 MS. KNAPP: So, we have discussed that
22 there needs to be a review of all of the sort of
23 legal and regulatory barriers that would
24 currently exist and understanding how those
25 would connect to each potential opportunity or

1 recommendation. So, if the sort of lowest cost
2 requirement needs to be looked at, the City
3 charter needs to be looked at. All of those --

4 MR. O'SULLIVAN: Right.

5 MS. KNAPP: No, no. He knows it better
6 than I do. I think we have to understand that
7 anything we do differently or anything we want
8 PGW to do differently will require some sort of
9 change in that scope.

10 MR. O'SULLIVAN: Yes. Exactly right.
11 What I would say is that the framework within we
12 operate, which we operate, is developed over 183
13 years. So, that's how old PGW is. So when you
14 make a change somewhere, there are often
15 unintended consequence somewhere else. And in
16 some respects then, that requires us to be so
17 carefully and deliberative and just considered
18 of all the decisions we make that sometimes it
19 can kind of extend the time horizon you're
20 making the changes. The commitment to getting
21 involved in this is what hasn't changed.

22 COUNCILMAN GREEN: Okay. Thank you,
23 Mr. Chair.

24 COUNCILMAN JOHNSON: Thank you very
25 much. Any other questions from the members of

1 the Committee to the panel?

2 (No further questions.)

3 Thank you very much for your testimony.

4 Under Public Comment, is there anyone
5 else here to testify on this resolution? Can
6 the clerk, please, read their names.

7 THE CLERK: Mike Ewall, Matt Walker and
8 Mitch Chanin.

9 (Panel approaches Witness Table.)

10 COUNCILMAN JOHNSON: Please state your
11 name for the record. Please begin.

12 MR. CHANIN: Great. Thanks very much.
13 My name is Mitch Chanin, 350 Philadelphia.
14 Thanks very much for the opportunity to testify.

15 I hadn't planned to speak today, and so
16 I didn't submit written testimony. I just
17 wanted to respond briefly to the testimonies --
18 the last two testimonies because I'm very
19 concerned that the proposed diversification
20 study does not match the scope of what had been
21 discussed by earlier witnesses.

22 I think that those of us who came today
23 aren't just looking for a diversification study,
24 but for planning for a transformation of our
25 building heat system and of PGW. So, I am just

1 a little bit concerned about the framework of
2 business diversification and of some of the
3 testimony from the representative of PGW
4 indicating that there is an assumption that
5 providing natural gas will remain the core
6 function of PGW for the indefinite future. I
7 would really like to see a commitment to doing a
8 transformation study based on all of the
9 criteria that Reverend Holston and others spoke
10 about earlier.

11 If the City doesn't have -- if the
12 Office of Sustainability doesn't have sufficient
13 resources to do a study of the scale and scope
14 that is required with its existing budget and
15 funding from Bloomberg, then I hope Council will
16 consider allocating sufficient funds to do the
17 type of study that is really necessary for a
18 transformation of our -- of PGW to protective
19 livable climate and assure everyone can afford
20 to heat their homes and protect and create good
21 jobs.

22 And the one other thing I wanted to add
23 really briefly is that I think that there is
24 a -- it appears that there is an assumption that
25 Philadelphia will kind of be on its own to enact

1 the transition to renewable heat. I think it's
2 very wise to consider what the City can
3 accomplish with existing resources. But there
4 is a growing call for a green new deal at the
5 federal level. And I think we should be
6 considering options that may require federal
7 investment as well as options that can be
8 accomplished with existing City resources.
9 There is, you know, a really -- a large call
10 that's growing by the day from massive public
11 investment, from the Federal Government in
12 creating the transformation in our energy system
13 that's needed.

14 And one function that I think could be
15 accomplished by the kind of PGW transformation
16 study that's needed is to identify what
17 resources would be needed from federal or state
18 government in order to accomplish that. I think
19 it's good to consider what we can do on our own,
20 but if -- we should not be constrained to only
21 those options that could be accomplished without
22 additional resources.

23 So, that's what I wanted to say. Thank
24 you.

25 COUNCILMAN JOHNSON: Thank you very much

1 for your testimony. Please, state your name for
2 the record and begin.

3 MR. EWALL: My name is Mike Ewall with
4 Energy Justice Network in Northeast
5 Philadelphia. Fifteen years ago, I was involved
6 with fighting a liquified natural gas import
7 terminal that was proposed in Northeast that was
8 proposed by PGW. And we warned against the
9 wisdom of this for a variety of reasons. Around
10 the same time, there were 400 gas via power
11 plants that got built around the country.

12 Shortly after the building binge, gas
13 prices spiked also related to the hurricanes in
14 the Gulf of Mexico, but increased demand did
15 that, as well. A lot of those power plants
16 ended up barely being used because the price of
17 gas were so high. Something we are not used to
18 at the moment because we find ourselves now in a
19 shale bubble. We are temporarily in a short
20 window of time where gas is cheap. And we are
21 acting as if that is going to keep going
22 indefinitely into the future.

23 Production of gas is not going to be
24 able to keep up with the demands that we are
25 creating right now with many more power plants

1 also trying to be built and other gas industries
2 also coming on line. And there have been signs
3 that Marcellus Shale formation has actually been
4 reaching peak production in recent years. They
5 are not there yet. We won't know until the rear
6 view mirror. The number started going down.
7 But we are hitting that point where that is
8 going to be relatively soon. And so, we can't
9 expect we are going to make investments in
10 infrastructure that are going to be 30-year
11 payoff periods when we might be seeing gas be
12 unaffordable in soon as five to ten years.

13 Now, we are already starting to see
14 trends shift where wind and solar are even
15 starting to beat gas on price. They are already
16 beating out the other things that are out there
17 in terms of electricity generation. It was over
18 six years ago that the University of Delaware
19 did a study looking at our grid, the PGM grid
20 that we are sitting in, and found that wind,
21 solar and energy storage alone can meet our
22 electricity needs with 99.9 percent reliability
23 with -- by 2030 with no government subsidies
24 cheaper than the status quo. And this study has
25 been sitting out there for six years, and we are

1 not acting on it.

2 (Scattered applause.)

3 So, there is no need to view gas as a
4 bridge fuel. It's not a bridge fuel. There is
5 no such thing as a transition fuel because a
6 true transition gets us from A to C by going
7 through B. And there is nothing in this that
8 does that. What we are talking about is putting
9 money into an investment dead end where we are
10 going to end up with infrastructure we need to
11 pay off over certain time frame. And it doesn't
12 help us get to conservation efficiency wind or
13 solar. Actually, it is a barrier to that
14 because there is only so much money to work
15 with.

16 So, the clean solutions we need to
17 working toward, we need to recognize there are
18 hierarchies for this. It starts with
19 conservation, just like with waste. Reduce,
20 reuse, recycle, right? With energy, the
21 conservation, then efficiency. And then
22 depending on which sector you are talking about,
23 the different solutions which for electricity is
24 solar, wind and energy storage. For heating,
25 it's similar solar. Hot water, it's geo thermal

1 and air source heat pumps. And Electrification,
2 just like with transportation, we want to
3 electricity things.

4 Conservation comes first. And if we
5 want to find the money that we need to do the
6 investments that we are all talking about today
7 to do this transition, that money is in
8 conservation. That money is in efficiency.

9 There are whole companies out there called
10 energy service companies that will go to
11 people's homes and say I will install things in
12 your home, and you give me a share of the
13 savings to pay me back for that over time.

14 The City could be doing that. PGW could
15 be doing that. They can be an energy service
16 company that could be knocking on every door in
17 Philadelphia creating a massive amount of jobs
18 saving money by using less energy and also
19 helping them transition. That savings will help
20 finance the transition.

21 Now, methane's global warming potential,
22 as some of you may have -- this may have come up
23 already. Eighty-six times that of CO2 over 20
24 years period. That's the latest science
25 internationally that is accepted on this. And

1 leakage is systemic. I talked to one of top
2 researchers in a big oil and gas company, they
3 won't let me tell you which company. I met them
4 at a conference, sat down next to them. And I
5 said, yeah, they were concerned about this
6 increase in gas use even though that's their
7 business. And they were -- in researching this
8 for close to 30 years

9 I said, yeah, I understand that if we
10 have this much leakage in the gas system about
11 three percent, that's worse than coal for the
12 climate. And they said, yes, that's right. And
13 we would never get the levels lower than that.
14 This is the industry itself. They know that.
15 We can't make this acceptable for the climate.

16 And that same problem applies to
17 renewable and natural gas It's still methane.
18 It's still bad for the climate. The only place
19 it makes sense to use so-called renewable
20 natural gas is where we want things to go
21 anaerobic anyway like sewage sludge, trash,
22 things that will end up in a landfill and
23 generate methane regardless. Where it's harder
24 to capture, we want to capture that in an
25 enclosed system. Not things like what they are

1 proposing by the oil refinery right now where
2 they are going to take food scraps and yard
3 waste and make methane off of something that
4 should be anaerobically composted. That makes
5 no sense especially right across the street from
6 a black community, low income community where
7 they have big storage tanks that can have
8 explosions. We don't want to see that.

9 The only place it make sense to create
10 this kind of bio methane where it would make
11 sense with sewage sludge is to use it in parts
12 of the economy where we have no non-burn
13 solutions. This is like planes and boats and
14 certain industrial heating applications.
15 Everything else -- electricity, normal heating
16 needs, transportation needs, other
17 transportation needs but except for the planes
18 and boats -- there are non-burning solutions for
19 all that. So, we don't need to be going there.

20 So, I will just wrap this up by saying
21 that gas produces the fewest jobs of any sector.
22 There are several studies on this. And it's the
23 bottom of the list on every single study no
24 matter how you measure how many jobs are being
25 created by the energy system. So, let's have

1 PGW help us transition, create more jobs and do
2 it the right way.

3 Thank you.

4 (Applause.)

5 COUNCILMAN JOHNSON: Thank you very
6 much.

7 MR. WALKER: Hi, Chairman Johnson and
8 members of the Committee. Thanks for the
9 opportunity to speak here today. My name is
10 Matt Walker. I'm the Advocacy Director for the
11 Clean Air Council. I will spare you our blurb
12 as I normally give.

13 And you know, I probably sound like a
14 broken record. But we all know the
15 intergovernmental panel on climate change
16 reported recently that we have eleventy years to
17 substantiality slash greenhouse gas emissions if
18 you want to avoid catastrophic climate change.
19 That is sort of the backdrop in which Council is
20 viewing a lot of the work we are doing right
21 now. I think transitioning Philadelphia Gas
22 Works to a sustainable energy utility that no
23 longer uses fossil fuel natural gas and
24 contributes zero greenhouse emissions must be a
25 critical piece of meeting and actually

1 surpassing the City's climate goals.

2 The Council is happy that the Committee
3 on Transportation and Public Utilities is
4 holding this hearing today. The issue of how to
5 transition PGW into an environmentally
6 sustainable utility is a complex topic and a
7 robust and inclusive planning process is
8 required for analyzing the options and holding
9 PGW accountable to the plan. While I think this
10 hearing is a useful kickoff for the discussion,
11 the public needs full transparency about what
12 the plan for the the entire public planning
13 process is and how this hearing fits into that
14 vision.

15 In order to fulfill the City's vision
16 and climate goals, the City must commission a
17 study of how PGW can rapidly transition fully
18 off fossil fuel based natural gas to renewable
19 energy with net zero greenhouse gas emissions.
20 I'm happy to hear that the Office of
21 Sustainability is looking into a transition
22 study. I agree with what Mitch said about, you
23 know, that not being adequate enough. We need
24 to really look at how to get them off of fossil
25 fuel based natural gas, like I said. But I do

1 recommend that the committee here works with the
2 Office of Sustainability to try to establish a
3 public engagement planning process to solicit
4 feedback, hire a consultant to perform an
5 analysis about all the options of transitioning
6 PGW off of fossil fuel natural gas, and then
7 create a specific-time bound transition plan.

8 This process should include the
9 following type of elements. I have a couple
10 recommendations about what this planning process
11 could look like here.

12 First, solicit feedback maybe through a
13 survey or something like that in labor, consumer
14 protection groups, environmental and volunteer
15 advocacy groups, affordable housing groups, low
16 income rate payer advocates, environmental
17 justice groups, civil and social associations
18 and any other relevant stakeholder to determines
19 the scope of the PGW transition study.

20 Two, recruit experts in energy
21 efficiency, renewable energy, transition
22 utilities off of fossil fuels to provide initial
23 concepts about the scope of the study.

24 Three, hire consultants to analyze the
25 various options for transitioning PGW off of

1 fossil fuel natural gas and issue a report with
2 recommendations. The study should include the
3 economic environmental health and safety costs
4 and benefits, including details about how the
5 different options would reduce greenhouse gas
6 emission and harmful pollutions, how many jobs
7 would be created, lost or transitioned, and how
8 the options would be financed.

9 Four, hold a public hearing to present
10 the report and solicit public and written
11 comment about the most preferred options.
12 Recruit experts to provide written comments.

13 Five, hold stakeholders meeting with the
14 above mentioned groups to solicit additional
15 feedback about the most preferred options from
16 the report.

17 Six, facilitate discussions with the
18 representatives from the above mentioned groups
19 to work through any potential disagreements
20 about the most preferred options from the
21 report.

22 Seven, hire consultant to develop a
23 draft plan that fully transitions PGW away from
24 fossil fuels.

25 Eight, hold a public hearing, another

1 one to present the draft plan, solitic
2 additional public comments. Again, recruit
3 experts to submit comments.

4 Nine, incorporate comments and issue the
5 final PGW transition plan.

6 Ten, require PGW to submit annual public
7 status reports to compare progress to
8 anticipated milestones in the final transition
9 plan.

10 And lastly, take appropriate actions as
11 necessary to ensure PGW stays on track to meet
12 the goals of the transition plan.

13 Since the Council does not know what the
14 public transition process for this transition
15 plan might look like, I do want to offer
16 recommendations about potential areas for which
17 to recruit experts to look at or to further
18 explore in a study.

19 First, how PGW can greatly accelerate
20 its energy efficiency programs and incentives
21 for low income households including subsidizing
22 home repair and weatherization.

23 Second, the feasibility of hydrogen
24 producing by renewable energy or synthetic gas
25 in PGW's existing pipeline network, the study

1 should determine the potential markets and
2 business opportunities of producing these fuels
3 at the industrial scale required for meeting
4 PGW's needs. It should also identify how much
5 hydrogen could effectively be blended into the
6 the gas.

7 The feasibility of PGW developing into
8 an entity that could sell or lease a variety of
9 renewable energy or energy-saving technologies
10 related to heating, water heating and
11 electricity generation. A non-exhaustive list
12 of potential technologies would include a
13 feasibility study for heating and water heating
14 could include passive solar units for heating
15 water, demand water heating, geo thermal systems
16 and fifth generations district heat networks as
17 referenced in earlier testimony.

18 And four, help PGW to overcome legal and
19 regulatory obstacles to become entity or form
20 one that could sell or lease rooftop floatable
21 tank systems to its customers. The study should
22 calculate how much of PGW's business model could
23 be based on PGW renewable energy technology as
24 opposed to delivering a mix of hydrogen or other
25 types of gas.

1 The council urges the Committee on
2 Transportation and Public Utilities to advance a
3 public engagement process to analyze how to
4 transition PGW to sustainable energy utility
5 that can play a vital role in Philadelphia's
6 renewable energy future. We also urge you to
7 delay a decision on PGW's proposed LNG plant
8 until after this entire planning analysis and a
9 long term PGW plan is completed.

10 Thank you for your time and
11 consideration.

12 COUNCILMAN JOHNSON: Thank you very
13 much. Councilman Al Taubenberger.

14 COUNCILMAN TAUBENBERGER: Thank you,
15 Mr. Chairman.

16 Mr. Walker, the plan you just read from,
17 did you submit that in written testimony, as
18 well?

19 MR. WALKER: I have not, but I have
20 copies.

21 COUNCILMAN TAUBENBERGER: I would like a
22 copy of that at your convenience.

23 Thank you.

24 COUNCILMAN JOHNSON: Thank you.

25 Councilman Derek Green.

1 COUNCILMAN GREEN: Thank you, Mr. Chair.

2 Thank you for your testimony. And
3 reflecting on the testimony and also reflecting
4 on what Ms. Knapp stated regarding the climate
5 change initiative f Bloomberg which has a
6 specific timeline. I'm also trying to think
7 about how do we have a broader conversation
8 regarding diversification of PGW that I think
9 would entail some of the things that have been
10 talked about at the panel. Trying to figure out
11 what is the right entity that can do that, that
12 can allow public engagement to kind of roll up
13 our sleeves and work through some of these
14 issues and concepts.

15 My thought is, we will probably need
16 additional resources for some of the help
17 participate and help lead that conversation.
18 So, those are the conversation would need to
19 have and what's the right vehicle and entity
20 that can allow a participatory process. We are
21 engaging with various parties from a whole wide
22 range of perspectives, while at the same point
23 allowing the Administration and PGW during
24 initiative they are doing with Bloomberg. I
25 anticipate this being a longer conversation,

1 although they have a specific timeline for what
2 they have to do in reference to that initiative.

3 So, thank you.

4 COUNCILMAN JOHNSON: Thank you very
5 much. Thank all of you for your testimony.
6 Thank everyone who came down and contributed to
7 this very important discussion.

8 We need to give our stenographer a
9 break. And we will turn for a hearing on our
10 second item which is on this agenda shortly. We
11 will take a quick ten-minute break.

12 (Brief break taken.)

13 COUNCILMAN JOHNSON: For Bill No.
14 180976, will the clerk please read the title of
15 the bill.

16 THE CLERK: 180976: An Ordinance
17 authorizing the Procurement Commissioner to
18 enter into agreements to purchase electricity,
19 natural gas and motor fuel for use by the City
20 in City facilities and vehicles, including
21 agreements that obligate payment for delivery of
22 such energy supplies in future fiscal years, all
23 under certain terms and conditions.

24 COUNCILMAN JOHNSON: Will the clerk,
25 please, call the first witness.

1 THE CLERK: Chritsine Knapp.

2 COUNCILMAN JOHNSON: Can you please
3 state your name.

4 MS. KNAPP: I'm Christine Knapp. I'm
5 the Director of the Office of Sustainability.
6 Thank you Chair Johnson and members of the
7 Committee. I have submitted testimony that I
8 will summarize in short to keep things moving.

9 I am here to support Bill 180976, which
10 authorizes the purchase of electricity and
11 natural gas and vehicle fuel for the City for
12 its facilities to be delivered through Fiscal
13 Year 2023. In 2010, Council authorized the City
14 to make electricity purchases for FY2011 through
15 FY2014. In 2012, council extended that
16 authorization to FY2015 and has continued
17 granting additional authorizations in subsequent
18 years.

19 The Mayor issued an executive order
20 creating an Electricity Supply Advisory
21 Committee. The City Council Committee chairs
22 for transportation and utilities, public works
23 and the environment or their representatives
24 serve on this committee. The Electricity Supply
25 Advisory Committee reviewed the electricity

1 purchasing strategy and has been kept abreast of
2 the purchases. The City's Energy Office serves
3 as the primary manager of the procurement of
4 electricity, natural gas and vehicle fuel for
5 the general aviation and water funds.

6 The offices energy procurement work is
7 guided by the City's municipal energy master
8 plan. And through conversations with the City's
9 Finance Department, Water Department and the
10 Philadelphia International Airport. The Energy
11 Office strives for the City's energy recruitment
12 to be low cost, to provide budget certainty and
13 to have transparent pricing and to do so by
14 increasingly using clean and renewable energy.

15 The electricity supply portion of the
16 total bill is about two-thirds of the total
17 electricity cost. The City is successfully
18 managed our supply cost by producing in the
19 wholesale electricity market and staggering our
20 purchases to limit the risk of paying a premium
21 for electricity. The proposed ordinance would
22 authorize the City to make agreements for
23 delivery of electricity in FY23 through a state
24 regulated licensed service provider.

25 The City's licensed service provider

1 with was selected through a competitive process
2 and acts as the City's agent in making purchases
3 in the regional electricity market place. The
4 City's licensed service provider will serve as a
5 key partner in the recently approved contract
6 between the City, the Philadelphia Energy
7 Authority and Adam Solar, LLC.

8 Building on a strong and growing
9 relationship with the Philadelphia Energy
10 Authority, the ordinance includes a provision
11 that requires the Administration to inform a
12 designated representative of the PEA of the
13 City's intent to make the purchases and consider
14 a timely advice provided by the PEA on
15 purchases.

16 In closing, I anticipate that this
17 procurement approach will continue to lower the
18 City's electric and natural gas and motor fuel
19 bills while protecting the City from potential
20 escalation in energy prices over the next
21 several years. It will contribute to
22 competitive prices and budget certainty for the
23 City's utilities. It will also allow the City
24 to continue to seek opportunities to increase
25 its purchase of clean renewable energy through

1 projects such as the Adam Solar Project.

2 Thank you for the opportunity to
3 testify. I'd be happy to answer any questions
4 you have.

5 COUNCILMAN JOHNSON: Thank you very
6 much. Any questions for members of the
7 Committee?

8 (No further questions.)

9 Thank you. Is anyone else here to
10 testify on this bill?

11 Seeing no further witnesses, this
12 concludes the Public Hearing on Bill No. 180976.

13 (Public Hearing Adjourns.)

14 - - -

15 (Public Meeting Commences.)

16 COUNCILMAN JOHNSON: We will now go into
17 a Public Meeting to consider the action to be
18 taken on this bill. At present, we have a
19 quorum of Councilman Mark Squilla, Councilman
20 David Oh, Councilman Al Taubenberger, myself
21 Councilman Kenyatta Johnson.

22 The Chair recognizes Councilman Mark
23 Squilla for a motion on the bill we just heard.

24 COUNCILMAN SQUILLA: Thank you,
25 Mr. Chairman.

1 I move that Bill No. 180976 be reported
2 from this Committee with a favorable
3 recommendation; and further move, that the Rules
4 of Council be suspended to permit first reading
5 of this bill at the next session of Council.

6 COUNCILMAN TAUBENBERGER: Second.

7 COUNCILMAN JOHNSON: It has been moved
8 and properly seconded that Bill No. 180976 be
9 reported from this Committee with a favorable
10 recommendation; and further move, that the Rules
11 of Council be suspended to permit first reading
12 of this bill at the next session of Council.

13 All those in favor of the motion will
14 signify by saying aye.

15 (Ayes.)

16 COUNCILMAN JOHNSON: Those opposed?

17 (No opposition.)

18 COUNCILMAN JOHNSON: The ayes have it.
19 And the motion carries. Those bills -- this
20 bill will be reported from this Committee with a
21 favorable recommendation with a request that the
22 Rules of Council be suspended to permit first
23 reading at the next session of Council.

24 This concludes the business of this
25 Committee. This hearing will stand at recess to

1 the call of the Chair. Thank you very much,
2 everyone.

3 (Public Meeting adjourned at 1:20 p.m.)
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C E R T I F I C A T I O N

I, hereby certify that the proceedings and evidence noted are contained fully and accurately in the stenographic notes taken by me in the foregoing matter, and that this is a correct transcript of the same.

ANGELA M. KING, RPR,
Court Reporter, Notary Public

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Committee on Transportation and Public Utilities
April 26, 2019

Page 1

A	140:4	134:17	21:12 43:12	94:6,24	61:15	78:6 113:1	4:17 41:4
a.m 1:6	achieve 49:16	Additionally	127:16	95:19 96:3	ambitious	anti-enviro...	60:10 81:23
ability 57:15	101:20	47:25 49:8	advocating	agriculture	33:19	106:23	96:24 116:9
57:20 114:5	103:14	99:7	51:2 56:11	95:4 96:1	America 21:9	anticipate	appropriate
able 13:17	106:13	address 3:14	56:18 68:5	agronomist	77:23	44:11	36:25
14:4 18:1	achievements	9:3,14	affairs 112:3	96:5	107:22	132:25	129:10
29:17 44:8	104:13	15:13 24:21	afford 19:4,8	Agronomy	American	136:16	Approvals
52:18 58:21	achieving	30:6 73:2	55:10 57:14	96:5	36:24 98:16	anticipated	102:20
59:21 66:21	3:25 34:2	76:20	58:21	ahead 110:21	109:7	129:8	approve
67:2 81:21	acknowledge	addressed	117:19	aims 98:16	amount 31:13	anyway 56:16	48:16
108:5	7:11 22:21	99:9	affordability	air 5:10,25	32:2 55:11	56:25 72:7	approved
109:24	45:4 71:17	addresses	16:14 17:14	12:10,13,21	66:17 79:16	123:21	75:9 136:5
119:24	acting 119:21	82:1	41:15	13:1,9,17	79:19 87:4	appeal 74:2	approximat...
abreast 135:1	121:1	adequate	101:11	13:22,25	87:21	appear 103:4	42:16 45:8
abroad 29:2	action 25:2,3	58:17	affordable	31:25 51:17	112:12	appears	April 1:6
absolutely	43:11,14	126:23	6:20 36:4	51:19 84:20	122:17	117:24	arbitrary
69:5,15	47:7 48:9	adequately	43:2 46:4	105:3	anaerobic	applaud	57:10,12
89:11 90:9	48:18 49:25	53:25	127:15	106:19,23	123:21	33:15	area 33:12
94:8,13	51:23 102:4	adjourned	age 14:6	122:1	anaerobically	applause 6:11	areas 23:16
106:16	108:4,7	139:3	15:15	125:11	124:4	7:10 11:8	27:25 28:2
accelerate	111:12	Adjourns	agencies	air-source	analysis	16:24 18:21	29:17,21
129:19	137:17	137:13	102:25	25:23	31:15 34:4	19:11 21:3	52:20 54:20
acceptable	actions 34:3	Administra...	agenda	Airport	127:5 131:8	27:6 32:13	95:8 129:16
123:15	34:13 47:9	2:25,25	133:10	135:10	analyze	36:5 37:5	arguing
accepted	49:22	34:22 38:17	agent 136:2	Al 1:12 7:12	127:24	38:9 40:24	114:2
122:25	110:25	39:9 92:15	agents 104:24	88:5 131:13	131:3	46:9 48:12	array 64:15
access 10:9	114:19	110:4	aggressive	137:20	analyzers	54:14 59:4	68:25
44:8 71:20	129:10	132:23	25:1,3	alarming	29:7	69:24 78:9	asbestos 36:9
76:22	actively 34:22	136:11	26:12	65:20	analyzing	96:21 121:2	asked 30:25
101:11	39:10	Administra...	aggressively	align 77:12	126:8	125:4	113:5
accommoda...	acts 136:2	48:23	51:2	Allen 60:13	and/or	appliance	asking 6:4
65:24 68:16	actual 57:15	adopt 43:22	aging 23:18	61:3 96:19	140:18	31:23 75:7	10:3,6 31:2
86:8	Adam 136:7	adopted	ago 24:22	Alliance	ANGELA	106:6	103:18
accommoda...	137:1	101:18	64:7 86:22	20:22	140:11	appliances	aspirations
23:9	adapt 46:2	advance 58:6	92:10,11	allocating	Angeles 72:4	25:21 36:16	61:11
accomplish	86:15,16	131:2	119:5	117:16	angry 5:24	75:6 76:8	assembly
53:11 118:3	add 84:7 85:9	advanced	120:18	allocations	announced	applications	112:15
118:18	86:18	83:6	agree 3:9	88:22	105:8	73:25	assess 18:23
accomplished	117:22	advances	47:3 50:9	allow 14:13	announcem...	124:14	assessed 24:8
118:8,15,21	adding 39:12	61:20	54:16 79:5	50:25 51:4	72:3	applied	assessing
account 25:8	62:22 72:19	advantage	84:6 86:17	52:2 99:13	annoying	107:21	103:2
32:3 42:15	addition	101:14	126:22	132:12,20	62:7	applies	assessment
56:24	76:14 77:22	advice 136:14	agreed 29:24	136:23	annual 71:13	123:16	77:7
114:17	additional	advise 17:7	30:1 97:24	allowed 56:9	129:6	apply 56:10	asset 65:23
accountabil...	22:2,4 56:1	Advisory	99:17	allowing	answer 7:1	140:15	71:7
16:19	57:23 66:17	134:20,25	101:23	11:16 107:6	27:4 38:7	appreciate	assets 19:6,10
accountable	68:22 79:4	advocacy	Agreement	132:23	46:7 69:20	70:7	37:7,8
126:9	79:25 93:23	28:5 125:10	48:24 62:25	allows 114:10	81:19 84:4	apprentices...	72:16 77:3
accounting	93:25	127:15	agreements	altering	84:5 88:15	36:25	77:6
28:10	118:22	advocate	102:24	48:17	91:20,21	approach	assigned 3:21
accounts	128:14	44:22 54:11	133:18,21	alternative	99:22 114:7	74:9,12	assistance
66:11	129:2	advocates	135:22	67:5,7	137:3	136:17	36:12 57:17
accurately	132:16	2:24 3:5	agricultural	amazing	answering	approaches	assistant 15:1

Committee on Transportation and Public Utilities
April 26, 2019

Page 2

associate 46:14,18 70:10	authorizing 4:9 133:17	barely 119:16	100:12	97:12	bond 87:15	45:18 65:21	130:2,22
associated 63:25 70:16 71:12	availability 75:25 85:17	bargaining 18:16	101:25	billions 37:14	boost 106:6	117:14	138:24
associations 127:17	available 20:3 40:6	barrier 121:13	107:2	bills 1:17 6:24	borrow 87:16	135:12	businesses 35:21 37:10
assuming 27:12 38:16 114:2	average 42:5	barriers 86:11 99:8	111:21	8:24 42:13	Boston 23:14	136:22	56:14 75:3
assumption 117:4,24	avert 9:17	112:11	beneath 105:24	42:14 44:1	23:17,22,23	budgeting 16:21	76:16 77:15
assure 117:19	aviation 135:5	Barry 96:22	benefit 54:7	46:4 76:9	24:1,7,11	build 15:19	buy 113:17
asthma 5:16	avoid 47:10	114:23	58:1 59:2	136:19	26:10,23	16:10	byproducts 94:7
5:22 6:2	average 42:5	base 43:15	104:12	138:19	27:11,17,17	building 19:2	
8:17,25	aware 45:9	54:24 55:3	benefits 18:3	binge 119:12	28:4 52:17	25:13 35:10	C
10:10 12:7	aye 138:14	67:24 81:3	18:14 36:2	bio 83:20	52:20 65:18	35:11,20,23	C 121:6 140:1
12:11,16	ayes 138:15	based 52:14	76:22	biomethane 73:23 94:22	bothered 24:25	36:24 72:18	140:1
14:3,5,6	atmosphere 24:12 62:23 63:3 67:22 67:23 68:1 68:3	70:11 80:11	105:16	95:2,18	bottom 124:23	75:4 98:18	calculate 98:7
attack 14:3,7	back 14:7	80:15 89:7	128:4	biomethani... 68:21 93:21	bought 39:23	103:15	130:22
attain 18:2	backdrop 125:19	110:16,17	best 24:21	95:20	bound 127:7	107:3	calculated 31:18
attending 6:5	background 107:18	110:17	50:6 53:8	bit 11:18	branch 74:11	116:25	California 21:13 68:8
attention 42:20	backlog 59:12	117:8	53:16 54:6	23:25 55:4	break 133:9	119:12	80:11 82:22
Attorney 39:9	backyard 51:14	126:18,25	55:19 78:4	55:22 64:11	133:11,12	136:8	83:5 94:23
attractions 83:18	bad 123:18	130:23	80:2 82:7	78:2 79:22	breathable 13:15	building's 72:23	call 4:14
attractive 73:15	bag 29:13	basement 51:16	100:21	84:1 109:11	breathe 5:10	buildings 34:14 35:7	22:16 23:2
audience 33:13	balance 54:4	basic 64:16	Beta 79:18	109:16	13:17	36:3 37:25	32:15 41:1
audits 75:4	ball 58:6	basically 63:1	Betamax 78:22,22	113:21	106:19,19	38:4 72:22	43:3 60:6
Authority 59:15	Ballenger 32:17 41:2	64:14 93:22	better 15:11	117:1	breathing 5:24	72:24 73:5	96:20 118:4
101:19	backdrop 125:19	114:1,4	19:19 31:8	black 14:16	bridge 121:4	73:9,12,17	118:9
136:7,10	backlog 59:12	batteries 67:1	78:22 79:6	14:20 124:6	121:4	75:19 85:15	133:25
authorization 134:16	background 107:18	68:16 81:2	104:25	blended 130:5	brief 22:24	built 119:11	139:1
authorizati... 134:17	beat 120:15	bcf 65:12	105:6 115:5	block 11:25	61:2 133:12	120:1	called 2:3
authorize 135:22	beating 120:16	bear 17:20	beyond 21:21	12:7	briefly 116:17	bunch 93:9	20:22 28:19
authorized 134:13	becoming 104:15	74:15	47:13 50:19	blocks 13:22	117:23	94:10	68:9,18
authorizes 134:10	bedside 13:1	beat 120:15	102:16	26:3 35:1	bring 44:18	burden 17:20	93:13,21
	beers 86:2	beating 120:16	bias 18:7	Bloomberg 3:18 98:15	103:24	43:13	122:9
	beginning 3:23,24	becoming 104:15	big 28:8,25	99:15	104:8	burdened 17:22 36:1	calls 53:14
	beginning 3:23,24	bedside 13:1	30:17,20,21	107:22	bringing 25:19	burdens 43:5	Cambridge 28:18
	bill 2:7 42:3	beers 86:2	32:4 66:20	109:6	103:10	burn 8:15	campus 51:9
	49:16	beginning 3:23,24	67:4 68:10	110:24	Broad 7:19	47:17	cancer 5:16
	133:13,15	41:19 77:16	123:2 124:7	111:1	broaden 132:7	burning 67:25	cancers 15:5
	134:9	78:20 83:8	biggest 30:2	114:20	broken 125:14	business 36:15 38:24	cap 17:19
	135:16	84:4	100:20	117:15	brought 13:5	42:23 50:18	57:7,8
	137:10,12	begins 71:25	bill 2:7 42:3	132:5,24	13:5 21:22	58:7 62:10	capacity 25:20 39:13
	137:18,23	behalf 7:16	49:16	blowing 29:10	87:25	64:16 71:3	46:5 66:18
	138:1,5,8	34:4 52:10	133:13,15	blurb 125:11	brown 14:16	73:7 77:1	66:25 77:25
	138:12,20	103:22	134:9	boats 124:13	14:20	77:12 97:25	79:7,11
	billion 30:12	believe 5:9	135:16	124:18	bubble 119:19	99:3 101:24	96:1 100:11
	30:16 31:20	22:8 26:16	137:10,12	body 12:12	buck 53:9	104:9	capital 74:21
	65:22 71:9	46:24 73:24	137:18,23	16:3	budget 45:12	107:23	capture 123:24,24
	72:15 77:2	86:19 98:21	138:1,5,8	bold 16:8		117:2 123:7	car-mounted 29:6
		99:12	138:12,20	19:25 49:24			carbon 10:5

Committee on Transportation and Public Utilities
April 26, 2019

Page 3

10:23 15:12 47:18,22 49:2 62:12 67:19,20 68:1 73:2 73:17 75:23 93:11,24 97:23 98:7 103:6 carbon-based 79:4,7 carbonized 72:24 care 12:18 85:25 86:1 86:2 careful 58:23 carefully 26:6 66:8 115:17 carries 138:19 carry 111:24 Carter 92:15 case 43:15 64:21 77:19 cast 23:21 54:19 cataclysmic 63:6,13 catastrophe 8:16 catastrophic 125:18 Catch 55:10 cater 16:7 cats 29:12 cause 8:16,17 8:18 97:18 caused 15:10 60:23 97:17 causes 5:16 20:9 49:3 55:2 69:14 causing 51:14 caveat 86:18 celebrates 71:13 cell 91:21 Celsius 33:18 center 10:13 61:7 centered 63:1 centering 7:2	7:3 centers 87:8 central 71:19 century 26:17 63:4,7,12 63:13 69:17 89:8 certain 114:17 121:11 124:14 133:23 certainly 37:15 84:6 90:15 96:9 113:17,23 certainty 135:12 136:22 certification 140:13 certify 140:3 certifying 140:19 CH4 67:18 93:16 Chair 1:10 2:12,17 4:3 21:19 33:6 38:13 52:7 54:12 59:25 78:13 88:2 97:6 107:12 115:23 132:1 134:6 137:22 139:1 Chairman 40:23 41:8 60:15,20 88:7 96:13 125:7 131:15 137:25 chairs 134:21 challenge 3:18 34:17 53:3 55:2 57:2 67:4 77:24 81:18 89:4 94:23 98:16 99:15 107:22,24	109:7,10,14 111:2 114:20 challenged 87:15 challenges 54:22 76:20 77:17 87:1 87:22 challenging 55:13 78:5 87:18 champion 48:15 champions 20:23 chance 63:5,8 change 3:14 3:18 4:2 6:9 9:16,18,23 33:17 47:4 47:11 48:7 48:15,19 49:3 50:5,7 50:11,21 51:8 56:19 62:18,20 77:14 82:1 86:15 97:18 100:22 102:16 104:24 109:7 112:15 115:9,14 125:15,18 132:5 changed 54:1 115:21 changes 42:25 112:17 115:20 changing 69:7,10,11 86:5 Chanin 116:8 116:12,13 chapter 102:3 characteris... 90:11 charge 42:5 56:22	charging 36:18 charter 115:3 cheap 119:20 cheaper 120:24 cheapest 112:12 chemical 93:14,17 chemicals 5:15 child 12:20 children 12:2 12:23,24 13:16 37:22 106:18 Childs 11:20 China 70:13 choice 64:19 64:20 88:17 103:25 104:3 113:14,16 choices 14:12 62:8 63:15 64:13,14,22 82:8 choose 104:3 104:4,6 114:5 choosing 51:25 Christine 3:12,16 96:22,25 97:4 101:22 134:4 Christsine 134:1 church 11:23 15:1,3 circumstan... 41:23 cities 23:18 26:10 35:8 50:4 72:1 77:24 81:5 88:20 89:1 89:3,4 98:17 107:22 109:7	citizens 3:8 52:10 citting 97:17 city 1:1,5 2:4 3:15,19,24 6:13 9:1,18 10:12,21 14:7 16:2 16:10,20 18:17,19 19:16,25 26:3 30:21 33:15,20 34:15 35:4 36:20 37:4 37:5 43:3 43:13,17,20 44:1,5 45:13 46:2 47:1,14 48:6 49:8 49:15,17,20 51:1,3 52:10 59:10 60:19 61:9 61:15,19 70:4 72:4 72:24 76:19 77:10,15,15 78:16 79:15 87:2 92:19 92:22,23 97:19,24 99:4 101:23 102:22,25 105:8 115:2 117:11 118:2,8 122:14 126:16 133:19,20 134:11,13 134:21 135:17,22 136:6,19,23 City's 15:12 34:9 38:25 71:4,16,18 71:23 72:18 78:2 98:16 126:1,15 135:2,7,8 135:11,25	136:2,4,13 136:18,23 city-based 46:18 civil 127:17 claimant 62:18 97:18 claims 106:16 clarity 109:23 classes 56:10 classism 7:4 classroom 60:24 clean 5:10 16:17 19:22 35:17 38:1 47:17 48:20 50:1 51:5 75:16 121:16 125:11 135:14 136:25 cleaner 25:12 26:21,21 45:2 48:25 101:7 105:3 107:3 clear 12:15 15:22 47:15 69:5 90:5 95:16 104:19 105:20 106:12 clearly 13:12 60:22 62:4 100:18 clerk 4:6,8,13 4:15 22:16 22:18 23:1 23:4 32:14 32:16,19 40:25 41:2 60:6,8 96:22 116:6 116:7 133:14,16 133:24 134:1 climate 3:14 3:18 4:2 9:16,18,23	10:17 16:14 19:23 25:2 25:3 26:12 33:15,17 34:9 35:6 36:19 37:9 37:21 38:25 39:6,16 46:23,25 47:3,11,19 48:7,15,16 48:19,24 49:3,25,25 50:5,7,11 50:23 51:8 61:6 62:20 63:7 64:23 69:7 70:20 71:4,18 72:1,5 77:14,24 86:24 90:2 98:16,17 106:13 107:22 109:7,10 117:19 123:12,15 123:18 125:15,18 126:1,16 132:4 Clincy 4:16 4:22,22 5:1 5:1,5,5 7:23 21:22 22:6 Clincy's 8:5 clippings 94:11 close 5:13 123:8 closer 57:17 closing 136:16 CLS 44:21 Club 33:5,9 34:5 Co-Director 41:11 CO2 48:4 68:1,2 71:10 79:2 122:23	coal 8:15 47:23 72:14 91:7,7 93:4 105:14 123:11 coast 80:14 80:22,25 81:6 coastal 82:21 code 25:19 cold 86:1 collaborativ... 28:4 collapse 26:24 colleague 95:25 colleagues 62:17 65:6 collection 17:7 collective 18:16 collectively 15:24 Colorado 70:12 Columbia 28:7 29:17 34:19 combat 47:2 combinations 68:7 combine 64:25 106:8 combusts 69:14 come 14:14 38:3 40:2 40:14 45:23 67:20 72:11 76:21 93:6 95:18 100:9 101:3 109:11,25 110:3 113:6 122:22 comes 54:2 56:7 67:21 84:9 105:14 113:20 122:4 comfort
--	--	--	--	---	---	---	---

Committee on Transportation and Public Utilities
April 26, 2019

Page 4

33:23 74:25 coming 14:7 24:8 29:14 69:8 106:7 120:2 Commences 137:15 comment 46:25 63:18 116:4 128:11 comments 22:12 128:12 129:2,3,4 commercial 34:14 35:7 72:21 commission 2:18 17:5 38:21 39:17 39:25 40:11 40:13 42:8 43:4 44:23 44:24 45:1 45:7,10,11 45:15,17 54:12 126:16 commission's 40:7 45:4 Commisio... 133:17 commit 10:22 16:20 20:4 26:15 85:4 commitment 9:19 69:3 103:23 117:7 commitments 33:16 37:9 38:25 39:7 39:16 committed 3:25 30:11 48:24 49:19 99:16 106:17 committee 1:2 2:4,15 4:9 11:14 21:11 33:7	33:19 34:6 34:12 38:18 41:14 42:1 60:3 61:1 97:6 100:7 105:17 116:1 125:8 126:2 127:1 131:1 134:7 134:21,21 134:24,25 137:7 138:2 138:9,20,25 101:12 115:20 committment committme... 34:18 commodities 75:1 commodity 74:20 commonly 92:25 Commonwe... 24:17 28:9 30:14 50:25 Commonwe... 24:16 Communic... 100:5 113:1 communities 7:3,7 11:3 16:17 35:1 47:5 community 6:12,14,17 14:1,14 15:9 20:21 33:24 34:3 41:12 52:11 99:12 106:25 111:21,25 124:6,6 community... 17:4 community... 16:22 companies 29:2 80:15 114:14 122:9,10	company 34:17,21 38:22 39:6 39:11 40:1 104:5 113:19,20 122:16 123:2,3 compare 26:8 129:7 compared 42:4 47:22 51:21 competitive 136:1,22 completed 111:6,7 131:9 completely 47:18 88:22 completing 46:22 completion 110:25 complex 126:6 complicated 28:24 component 48:3 99:13 111:22 components 91:15 98:22 composted 124:4 compounds 72:19 comprehen... 34:7 47:6 compromise 13:19,19 compromised 43:24 compromisi... 104:22 conceive 61:10 concept 73:16 73:22 79:6 80:19 114:1 concepts 78:16 112:20	127:23 132:14 conceptual 70:24 concern 95:1 100:25 concerned 116:19 117:1 123:5 concerns 75:25 76:13 85:9 concluded 49:4 concludes 137:12 138:24 conclusion 7:1 concrete 9:2 condition 12:24 65:19 conditions 113:11 133:23 conduct 4:11 conducted 5:19 conducting 75:4 Coneds 80:15 conference 123:4 confirmation 109:17 congratulat... 61:14 congratulat... 3:17 conjunction 59:19 connect 114:25 consequence 115:15 consequences 42:14 conservation 43:16 51:6 103:9 121:12,19 121:21 122:4,8	consider 10:20 11:1 15:15 44:25 105:13 117:16 118:2,19 136:13 137:17 considerated 115:17 consideration 43:1 131:11 considerati... 50:17 103:1 considering 118:6 considers 101:6 consistent 70:19 constrain 63:15 constrained 62:8 118:20 construction 36:21 73:16 75:15 85:15 92:14 consultant 109:25 110:3 111:24 127:4 128:22 consultants 127:24 consumer 113:15 127:13 consumers 104:2 113:14 consumption 76:11 106:5 contained 140:4 contemplati... 88:24 context 62:19 84:10 89:12 continue 3:10 8:22 10:15 21:14 58:2	59:7 61:11 74:3 104:20 106:21 136:17,24 continued 44:19 70:17 106:10 134:16 continues 19:22 104:12 continuing 72:8 99:19 contract 136:5 contractors 75:10 76:15 84:22 contrary 47:21 106:16 contribute 56:17 136:21 contributed 105:24 133:6 contributes 71:10 125:24 contribution 91:4 control 16:19 140:17 controversy 96:7 convenience 131:22 convening 107:5 conversation 6:18 55:6 61:25 62:20 64:24 79:2 82:16 87:25 91:24 100:10 111:19 132:7,17,18 132:25 conversations 2:23 44:15 135:8	conversion 88:16 converting 103:15 convinced 83:23 cooking 32:1 cooktops 32:1 cooling 17:16 35:10 73:18 75:12,17 coordinate 59:9 coordinated 102:4 coordinating 21:11 coordination 36:11 copies 131:20 copy 8:7 131:22 core 102:16 117:5 corporate 100:4 103:6 corporation 27:13 102:21 correct 23:10 38:19 140:6 cost 6:18,22 25:14,16 26:19 30:15 31:22,22 32:3 35:22 54:2,3 56:20,21,25 57:5,14 66:3 69:13 71:7 75:25 79:12 83:16 83:19,24 84:20 94:1 98:7,8,8 101:14 103:16,19 103:21 113:10 115:1 135:12,17 135:18 costs 17:22	37:16 45:22 45:24 54:4 55:5 56:2 57:23 58:13 71:21 72:8 72:19 74:13 74:15 128:3 council 1:1 2:4,24,24 3:25 9:11 16:2 19:13 33:19 34:6 34:12 41:9 41:14 48:6 49:8,14,21 59:10,10 61:15 70:5 102:22 117:15 125:11,19 126:2 129:13 131:1 134:13,15 134:21 138:4,5,11 138:12,22 138:23 Councilman 1:10,10,11 1:11,12,12 2:2,10,12 4:4,5,13,18 4:20,24 5:3 6:5 7:11,12 7:22 8:3,8 11:6,12,12 11:12,13 21:4,5,18 21:19 22:9 22:11,20,21 23:1,6,11 27:7,7,9,24 29:1,15 31:5,9 32:7 32:7,14,18 32:20,25 38:10,12,13 39:17,24 40:6,12,17 40:18,19,25 41:5,9 46:8 52:4,6,7
--	---	---	---	--	--	---	--

Committee on Transportation and Public Utilities
April 26, 2019

Page 5

54:13 59:5	83:3 84:9	34:1 53:17	17:6	decisions 20:5	Delmarva	determined	dirtiest 37:11
59:24,25	95:10 98:4	56:5 58:6	daughter	26:14 83:12	39:20	49:1	dirty 20:9,15
60:1,11,16	119:11	62:10 66:19	12:4,5	88:18	demand	determines	34:15 38:1
69:23,23	county 66:20	69:5,12	13:20	115:18	10:18 72:25	127:18	disagreeme...
78:10,12,13	couple 41:25	71:20 74:8	daunting	decline 66:24	73:1 95:1	detriment	128:19
81:9,13	42:22 54:2	75:17	66:11	74:17	119:14	58:20	discharge
83:2 86:17	73:8 82:18	currently	David 1:12	declining	130:15	develop 34:6	54:17 67:1
88:3,4,5,6	86:22	31:20 39:2	22:21	74:13	demands	73:4 128:22	discontinue
88:12,25	107:14	43:6 47:16	137:20	decrease	119:24	developed	74:9
89:13,15,18	127:9	61:6 64:18	day 9:8 13:24	74:13 97:14	Democratic	28:17	discount 56:6
90:6,14,19	course 30:7	65:10 66:4	13:24,24	dedicated	50:2 51:1	115:12	56:7
91:5,9,13	56:9 76:21	114:24	15:18 68:13	deep 60:22	demonstrat...	developing	discounts
91:17,22	Court 140:11	CURTIS 1:11	87:3 106:3	81:23,25	68:9	75:12 81:5	56:16
92:1,5,10	cover 31:22	curve 111:4	118:10	113:3	demonstrat...	130:7	discovery
92:21,23	94:25	cushion 87:14	day-to-day	deepen	67:13	development	93:20 94:3
93:2,5 94:5	Cow 94:14	customer	57:14	104:23	dense 61:23	76:24	discuss 6:6
94:9,14	create 6:16	57:5 114:2	days 51:10,10	deeper 101:8	Department	developments	70:25 74:6
95:12,14	16:9 37:4,6	114:4	DC 34:20	defender 14:8	135:9,9	94:18	discussed
96:2,14,25	37:24 61:9	customers	35:4 38:15	Defender's	depending	deviate 11:18	71:5 114:21
97:2 99:24	79:3 95:4	35:15 42:7	38:19 39:20	14:8	121:22	devices 75:8	116:21
100:6,7	117:20	42:11,16	40:7 70:12	defined 42:7	deploying	76:10	discussion
107:9,11,12	124:9 125:1	43:19 44:3	deacons 15:4	defining	68:11	dialogue 2:20	41:20,21
108:18	127:7	44:6,8,17	dead 121:9	62:19	108:13	2:22	100:12
109:5 110:2	created 5:9	45:11,14	deal 50:2	definitely	deployments	Dickinson	126:10
110:22	27:21 37:1	46:5 47:17	53:11 66:21	24:18	67:13	11:23	133:7
111:10,14	124:25	54:3,8,10	105:9 118:4	defray 58:12	depreciated	difference	discussions
112:6	128:7	54:24 56:2	dealing 87:22	degrade	37:8	82:21	45:1 46:1
113:25	creates 56:1	56:4,7,16	death 58:24	51:17	depth 71:5	106:22	128:17
114:11,18	creating	56:20 57:7	debate 29:23	degree 46:23	Deputy 33:4	different	displaced
115:22,24	33:21 79:3	57:8,9,20	100:13	96:4 114:17	33:9	27:18 79:14	18:1
116:10	95:2 118:12	58:11 65:11	debts 43:23	degrees 33:18	Derek 1:11	80:10 83:21	distance
118:25	119:25	65:12 71:14	43:24 87:3	Delaware	2:10 4:5	84:23 87:25	101:5
125:5	122:17	74:14,14	decade 106:7	120:18	21:5,18	92:20 95:21	distinction
131:12,13	134:20	76:6,9,17	decades 54:2	delay 131:7	27:7 32:7	95:24 107:8	95:18
131:14,21	crisis 8:18	97:13,14	69:18 97:15	deliberately	38:12 40:19	110:8	distributed
131:24,25	10:17 46:25	98:9 101:14	decarbonize	77:4	52:6 78:12	121:23	76:3
132:1 133:4	49:25 50:23	103:22	9:17	deliberative	88:4 107:11	128:5	distribution
133:13,24	criteria 117:9	104:1,6,21	decarbonized	115:17	131:25	differently	37:8 50:20
134:2 137:5	critical 73:4	130:21	63:22 73:13	deliver 97:12	describe 76:3	115:7,8	66:9 67:9
137:16,19	76:25 77:6	customers'	decarbonizi...	102:12	described	difficult 64:9	distributions
137:19,20	125:25	42:3	73:5	delivered	76:13	dime 19:6,10	82:4
137:21,22	crucial 76:20	cut 88:21	decent 13:18	24:10 61:16	designated	dioxide 47:22	district 6:6
137:24	crushingly	cuts 93:25	decide 79:17	72:21	44:17	direct 140:17	19:3 25:24
138:6,7,16	61:22	cycle 98:8	79:21 109:4	134:12	136:12	directed	34:19 38:17
138:18	cubic 71:9		decided	delivering	despite 47:19	88:14	38:21 39:15
Councilme...	75:1 97:12		111:23	130:24	74:1 106:15	directly 6:3	73:14,16
46:15	curb 105:10	dad 7:18	decides 45:17	delivers	detail 38:8	101:3 105:9	75:12,16
Councilper...	curious 22:3	dam 91:10	decision 7:8	47:16 71:8	74:6	director 33:5	130:16
41:10	52:21 80:3	damage	15:14 30:23	delivery	details 41:25	33:9 61:6,8	dive 101:7
country 9:1,2	80:7,17	60:23	31:12 40:11	74:10	128:4	97:5 100:4	diversificati...
9:10,12	81:7	dangerous	48:23 62:5	133:21	determine	113:1	50:18 97:25
29:2 77:16	current 6:16	36:5,6,9	62:13 81:23	135:23	28:12,25	125:10	98:6 101:8
77:22 80:5	8:12 10:2	37:11 47:7	84:2 131:7		85:3 130:1	134:5	101:24
		data 5:18					

Committee on Transportation and Public Utilities
April 26, 2019

Page 6

104:15	driver 113:16	47:10	113:18	emission	8:23 15:17	130:9	66:16
107:24	drives 90:12	efficiency	114:14,16	52:13	16:9,17,23	engage 18:15	environment
110:5	driving 71:2	28:20 36:8	120:17,22	102:10	17:14,16	35:12	16:5 25:23
111:19	due 17:23	36:12 44:7	121:23	128:6	19:20,22	engaged 28:5	46:14,19,20
116:19,23	42:17	72:25 75:5	122:3	emissions	20:1,9,16	101:18	106:17
117:2 132:8	duty 16:1	76:7 102:12	124:15	9:20 47:23	25:25 26:22	111:21	134:23
diversify 51:4	dynamics	106:4,7	130:11	49:5 63:3	28:19 34:1	engagement	environmen...
52:2 59:2	114:3	108:14	133:18	63:12,25	35:6 36:11	34:4 99:12	8:12 17:3
diverted		121:12,21	134:10,14	64:3 71:11	41:11 43:5	111:25	33:10 46:19
52:24	E	122:8	134:20,24	71:17 72:22	43:6,13,14	112:2,4	102:9
documented	E 140:1	127:21	134:25	73:3,9 79:2	43:16 46:3	127:3 131:3	104:21
110:14	earlier 50:9	129:20	135:4,15,17	86:23	48:8,20,25	132:12	110:16
documents	116:21	efficient	135:19,21	101:17	49:11,12,18	engaging	127:14,16
48:21	117:10	28:14 57:22	135:23	105:10	50:1,13	3:22 87:24	128:3
doing 3:5,21	130:17	58:18	136:3	106:11	51:4,5 52:2	132:21	environmen...
10:5 11:9	early 66:16	efficiently	electrification	107:25	59:22 61:7	engineering	98:2 126:5
18:3 25:20	70:23 92:24	30:5	25:17 32:5	125:17,24	62:19 68:22	75:14	envision
33:1 58:7	98:20	effort 111:3	35:9,11	126:19	69:2 70:14	engineers	110:6
67:16 86:21	earth 66:7	efforts 71:13	36:13 63:19	emit 13:23	72:25 73:2	102:7	equipment
86:22	earth-saving	98:18	65:23 66:14	47:21	75:4 76:7	England	18:13 76:8
108:20,22	64:6	Eight 128:25	73:10 83:16	emits 5:15	76:11 80:19	67:14	equitable
117:7	easiest 35:18	Eighty-six	83:25 85:11	emitters	86:1,2 89:6	enhanceme...	3:25 34:10
122:14,15	65:3	122:23	103:17	28:15	89:21 90:8	106:9	37:19 70:20
125:20	east 7:19	either 21:25	122:1	emphasize	98:24 99:4	enormous	equity 76:22
132:24	80:14,21	62:11 64:21	electrified	86:4	101:7,11,13	105:15	equivalent
dollar 101:2	81:6	69:13 75:8	65:15 73:20	employed	101:15,19	enrolled 56:4	66:18
dollars 25:15	east-coast	85:11 101:4	electrify 35:1	18:11	102:11	57:7,8	era 50:1
30:12,16	80:14	104:7	63:19 64:4	employees	103:23	ensure 17:14	escalation
31:15,20	eastern 24:10	Elected 48:14	64:8,15,17	18:10,14	104:16	34:13 37:1	136:20
37:14,15	echo 70:5	electric 19:3	64:17 65:5	108:20	105:2,12	129:11	especially
72:15 77:3	economic	35:22,24	79:5	employment	106:4,10	ensuring	54:19 90:2
79:20 101:9	8:13 15:19	36:18 66:13	electrifying	18:2 76:23	108:14	34:23 70:20	124:5
109:20	73:3 110:17	76:10,12	25:18 66:4	enable 43:22	114:5	entail 109:9	essential
door 122:16	128:3	79:6,10,24	electrolysis	99:9	118:12	132:9	15:21
downpours	economical	84:20 85:16	68:19	enact 117:25	119:4	enter 133:18	essentially
51:14	75:20	88:16,22	Elementary	enacted 35:4	120:21	entered 42:16	38:20,24
downstream	economically	89:10,24	11:21	enclosed	121:20,24	enthusiasm	89:9
20:16	70:21 98:2	90:23,24	elements	123:25	122:10,15	61:18 70:8	establish 98:5
dozens 20:21	economics	103:15	71:19 93:16	encourage	122:18	entire 24:15	127:2
Dr 35:17	72:12	114:9	94:3 127:9	3:10 34:11	124:25	35:3 65:21	establishes
37:13 88:8	economy 9:17	136:18	eleven 9:16	35:12 43:17	125:22	105:21	61:11
draft 128:23	13:15 16:16	electrical	elevens	84:25	126:19	126:12	estate 59:12
129:1	18:9 20:1	25:20 32:1	125:16	endeavor	127:20,21	131:8	estimate
drafting	20:25 63:24	36:22	eliminating	78:6	129:20,24	entities 80:11	24:14 54:25
98:20	124:12	electricity	73:8	ended 24:14	130:9,23	80:21	91:18
drainage	education	17:17 25:22	Ellsworth	119:16	131:4,6	entitled 56:25	estimated
51:16	18:8	35:17 38:1	11:24	endorse	133:22	entity 27:11	24:9 42:10
drawbacks	effect 3:7	43:9 63:22	embark 78:5	20:15	135:2,6,7	79:16 87:2	estimates
74:5	effective	64:1,3	embedded	ends 26:4	135:10,11	102:14	65:16 66:16
draws 91:1	26:19	66:17 73:13	66:3	energetic	135:14	111:16	evacuated
drilling 47:25	effectively	91:1,6	emerging	101:16	136:6,9,20	130:8,19	51:11
drive 72:6	56:15 62:13	104:4	77:1	energy 2:16	136:25	132:11,19	evaluate
driven 62:21	130:5	105:14	Emily 82:24	5:11 6:10	energy-savi...	envelope	110:11
	effects 9:18						

Committee on Transportation and Public Utilities
April 26, 2019

Page 7

evaluation 110:15,19	exist 114:24	explosions 37:22 124:8	fair 56:13	fewer 64:3	72:25 74:21	forced 89:25	founder 85:23
Eventually 64:25	existing 58:8	exposes 72:7	faith 17:3	fewest 124:21	81:15 98:23	forces 71:2	four 35:7
Eversource 28:7	67:23 74:3	express 60:21	20:21	fiat 62:11	107:15	72:6,11	70:3 111:3
everybody 109:12	75:23 76:6	extend 75:3	fall 49:5	69:16	122:4	foreclosure 43:21	128:9
evidence 140:4	77:8 84:22	115:19	falling 50:6	fifteen 45:8	127:12	foregoing 140:5,13	130:18
Ewall 116:7	117:14	extended 134:15	false 20:6,7	119:5	129:19	foreseeable 104:17	fourth 83:3
119:3,3	118:3,8	extending 24:11	20:13,19	fifth 83:2	133:25	for 20:20	fraction 66:2
exacerbate 8:18 10:16	129:25	extent 75:18	families 35:21	fight 48:18	138:4,11,22	forget 64:21	frame 121:11
exacerbates 20:11	exists 19:18	81:17,20	36:10 37:10	50:5	5:22	fork 26:13	framed 81:17
exacerbating 72:10	expand 71:14	extraction 48:1	family 6:1	fighting 5:11	fiscal 133:22	30:22	framework 37:6 103:20
exact 84:9	expanding 71:20	extraordina... 12:19 77:9	family-sup... 37:24	9:4 119:6	fits 90:15	form 57:16	115:11
exactly 40:5	expect 49:24	81:10	fans 105:1	figure 82:8	126:13	60:13 92:24	frameworks 112:8
81:18 95:25	expense 56:23	extreme 20:10 51:13	fantastic 85:24	figuring 39:14	five 66:20	130:19	free 47:18
112:5,21	expenses 45:21	68:5 71:12	far 61:17	filed 97:16	120:12	formation 82:15 120:3	88:14
115:10	expensive 35:21,23	83:7 103:16	62:3 90:8	final 129:5,8	128:13	former 60:12	Friday 1:6
example 17:12 43:20	79:13 83:23	extremes 64:20,22,24	99:19	finally 3:20	fix 24:23 26:2	forms 25:12	front 51:8
77:21 82:19	83:24 89:22	65:2 68:25	102:16	44:4,11	30:2 37:17	Fort 46:21	78:17
89:5 94:21	103:20	82:17	fascinating 96:6	finance 76:4	Flanigan 32:17 41:3	forth 85:7,12	frustrating 103:4
95:4 101:22	104:6 113:8	eye 96:9	fast 30:4	122:20	46:12,13	85:18	fuel 8:21 11:1
examples 82:18 99:3	experience 46:24 61:17	F	102:15	135:9	flexibility 112:19	forum 6:6	17:23 18:6
exceed 49:6	84:8 90:1	f 9:9 10:12	faster 30:3	financed 128:8	floatable 130:20	forward 3:19	18:18,20
exceeded 27:2	experienced 5:22 36:21	58:1 132:5	49:5 50:23	financial 37:18 77:14	flood 51:9,15	24:20 25:5	20:9,15
excellence 102:11	140:1	140:1	111:7	financially 97:21	flooding 8:16	44:13,25	48:11 50:7
Excellent 23:7 31:17	experiment 89:23	fabric 107:2	father 13:18	financing 76:5	10:12 20:10	45:25 70:25	51:25 72:24
excess 68:18	experiment... 92:16	face 15:18	fathers 12:25	find 6:17	51:17	78:6 88:1	73:12 83:21
83:9	expert 96:8	64:22 83:8	favor 138:13	14:15,17	Florida 46:22	99:19 102:5	83:22 85:17
excessive 74:15	expertise 44:18 53:4	facets 18:11	favorable 138:2,9,21	17:17 26:2	focus 28:1	105:10	95:1 121:4
excited 105:7	61:18 69:3	facilitate 113:24	feasibility 98:5 103:2	30:2 53:19	72:23 75:11	111:17	121:4,5
106:14,15	75:17	128:17	129:23	59:19 80:1	focused 81:1	6:21,23 7:2	125:23
exciting 78:5	102:13	facilities 92:17	130:7,13	96:6 119:18	107:25	8:21 11:1	126:18,25
excluded 18:6	experts 2:25	102:21	feasible 70:22	122:5	follow 24:6	16:4,23	127:6 128:1
excuse 7:22	127:20	133:20	federal 42:9	findings 17:8	54:15 77:22	17:11 18:6	133:19
59:17	128:12	134:12	57:11,18	fine 88:10	82:12	18:18,20	134:11
execute 113:25	129:3,17	facility 27:13	72:11 101:6	finer 34:17	107:14	20:9,15	135:4
executive 134:19	expire 58:24	85:3	102:19	finished 32:8	follow-up 25:5 31:10	48:9,11	136:18
executives 8:21	explain 53:17	facing 20:12	118:5,6,11	fire 50:7	following 17:13 85:22	50:12 51:25	fuels 5:23 6:9
Exelon 80:15	exploding 29:6	30:17 43:21	118:17	91:23	95:17 127:9	73:12 74:17	6:22,23 7:2
	explore 50:18	62:14 82:5	feedback 127:4,12	first 4:14 8:10	food 20:12	76:8 79:4	16:4,23
	129:18	82:11	128:15	12:1 13:6	124:2	125:23	17:11 34:15
	exploring 103:10	fact 54:23	feel 5:23,25	13:21 34:11	footprint 103:6	126:18,24	38:1 48:9
		62:21 82:20	88:14	35:24 36:2	footprints 28:22	127:6,22	50:12 74:1
		factor 44:24	fees 62:12	37:12 43:1	force 16:5	128:1,24	74:4 75:24
		facts 63:14	feet 71:9 75:1	47:15 49:23	17:9	127:22	76:1,9
		faculty 61:6	91:23 97:12	56:4 61:8		128:24	127:22
				64:2 71:4		130:2	128:24
						113:13	130:2
						120:20	fulfill 126:15
							full 66:13

Committee on Transportation and Public Utilities
April 26, 2019

Page 8

69:13 83:24 110:10,14 126:11 fully 66:12 79:9 83:15 85:5 126:17 128:23 140:4 fumes 36:7 37:23 function 117:6 118:14 functions 75:2 76:23 fund 36:24 56:22 87:6 87:12,14 fundamental 54:22 94:2 fundament... 71:19 funding 10:2 44:2,9 109:17 117:15 funds 117:16 135:5 further 6:7 20:19 22:13 38:8 40:21 43:17 60:4 71:1 96:16 116:2 129:17 137:8,11 138:3,10 furthermore 54:9 fusion 106:10 future 2:22 7:8 11:4 15:17 20:5 21:1 26:19 41:20 42:22 44:16,16 45:2,19,21 46:1,3 48:21 49:1 50:15,16 53:5 58:17 59:3 64:14 71:4 72:20	73:25 76:1 85:13 86:9 86:14 97:23 98:3 99:14 99:20 100:14 104:2,11,17 117:6 119:22 131:6 133:22 futures 82:10 FY2011 134:14 FY2014 134:15 FY2015 134:16 FY23 135:23 G game 69:4 gap 28:11 gas 2:17 4:12 6:21 8:15 13:23 18:22 18:24 19:5 19:9 23:16 24:10,13,16 24:18 25:8 25:21 26:5 26:23,25 27:11 28:7 29:17 30:19 34:14,17,21 34:23,24 35:20,23 36:6,7 37:7 37:7,22,25 38:4,18,22 39:1,5,6,11 39:13,15,20 39:22,23,23 42:1,4,14 43:9 44:1 44:23,24 45:1,4,7,10 45:14,15,17 47:16,21 48:1,4 50:14,20 51:1,24 52:13,20,25 53:7,21	55:11,18 56:6,15 64:18 67:15 67:17,24 68:9,18 70:17,21 71:9,14,17 71:21 72:3 72:6,9,18 72:21,23 73:11 74:3 74:10,11,14 74:14,17,20 75:1,23 77:11,17 79:3,3,12 83:6,20,20 84:14 86:23 88:22 89:5 89:8 91:7 92:7,7,8,8 92:14,19,20 92:22,23 93:6,10,17 94:2,5,16 94:21,25 97:9,10,11 97:13,18 98:3 99:1 100:5 101:15,25 103:8,11,13 103:14,18 103:22 104:3,9,18 105:5,22 106:2,9 112:12,24 113:10,17 117:5 119:6 119:10,12 119:17,20 119:23 120:1,11,15 121:3 123:2 123:6,10,17 123:20 124:21 125:17,21 125:23 126:18,19 126:25 127:6 128:1	128:5 129:24 130:6,25 133:19 134:11 135:4 136:18 gases 62:22 85:12 105:25 gasp 13:1 gasped 13:21 13:25 gaspings 12:10,12,21 13:9 gathering 111:17 general 87:6 87:12,14 112:15 135:5 General's 39:9 generally 100:17 generate 68:13 98:10 123:23 generates 64:3 generating 66:18 generation 49:13 64:1 66:20,24 91:4 105:4 105:12 120:17 130:11 generations 100:14 130:16 geo 121:25 130:15 Geographic 33:10 geothermal 73:18 99:1 Germany 67:16 getting 56:15 79:6 81:1	109:19 115:20 give 53:8 112:19 122:12 125:12 133:8 given 99:10 gives 103:25 giving 42:20 107:7 global 46:13 46:17 49:5 63:11 122:21 globally 49:1 63:2 go 9:22 15:12 57:3 85:16 102:17 122:10 123:20 137:16 goal 10:6 33:16 39:12 49:2 110:2 goals 10:5,22 17:13 34:9 36:14 40:3 49:16 64:23 70:20 71:5 71:18,23 72:6 101:17 106:13 126:1,16 129:12 goes 7:6 73:5 going 2:9 3:3 22:1 24:20 26:7,15,17 26:21 29:11 29:20 31:1 39:4 45:22 47:7 54:6 57:3,22 58:19,21 66:9 67:11 67:13 69:11 69:13,15,17 70:6 79:22 83:6 84:12 90:23 91:7 91:22 94:22	106:21 111:23 119:21,21 119:23 120:6,8,9 120:10 121:6,10 124:2,19 good 2:2 4:18 4:19 5:25 10:24 11:11 13:18 18:14 19:22 41:8 46:15 53:11 60:17,19 70:4 80:24 96:18 110:12 117:20 118:19 gotten 79:13 governance 54:5 governing 16:2 86:6,6 government 60:13,18 87:2 118:11 118:18 120:23 governments 69:9 Governor 51:1 grade 34:25 grand 13:8 grandchild 13:9 grandfather 13:3 granting 134:17 grants 44:2 grapple 77:16 grappled 53:23 grass 17:3 94:10 gratitude 60:22 great 13:9 15:18 19:16 19:25 44:12	54:3 61:7 64:8 81:11 116:12 greater 19:18 greatest 82:10 greatly 129:19 green 1:11 2:10,12 4:5 7:22 8:3 11:12 16:16 16:16 18:9 19:22 20:24 21:5,18,19 22:9 27:8,9 27:24 29:1 29:15 31:5 31:9 32:8 38:12,13 39:17,24 40:6,12,17 40:19 41:10 46:3 50:2 52:6,7 54:13 59:5 59:25 61:10 73:22 78:12 78:13 81:13 83:2 86:17 88:4 100:7 107:11,12 108:18 109:5 110:2 110:22 111:10,14 112:6 113:25 114:11,18 115:22 118:4 131:25 132:1 greenhouse 24:13,16 71:17 86:23 103:14 105:25 125:17,24 126:19 128:5 greenhouses 62:22	Gregory 4:15 grew 11:19 11:22 12:6 15:3 28:5 51:13 grid 26:4,5,20 27:15,24 29:16 76:12 90:25 120:19,19 grids 99:4 ground 15:6 67:25 90:8 ground-sou... 25:24 group 70:8 groups 127:14,15 127:15,17 128:14,18 grow 62:24 growing 47:4 91:8 118:4 118:10 136:8 grown 72:16 growth 105:15 guarantee 67:3 guaranteed 17:25 guess 80:19 81:21 guests 70:5 guided 135:7 Gulf 119:14 gushers 28:25 gut 80:20 H H2 93:12,24 hair 78:20 half 30:11,16 31:19 101:4 Hall 1:5 60:19 halls 60:19 hand 113:8 113:10 hand-in-glo... 73:6 handful 8:21 happen 10:9
---	---	---	--	---	--	--	---

Committee on Transportation and Public Utilities
April 26, 2019

Page 9

16:25 17:2 67:12 112:4 112:25 happening 15:7 16:25 happy 27:4 38:7 46:6 61:21 74:5 99:22 104:8 126:2,20 137:3 hard 3:6 41:22 harder 35:20 123:23 hardship 44:2 harm 15:10 harmful 128:6 Harrisburg 50:21 Hawaii 89:12 89:14,16,17 89:18,20,21 90:14 head 82:1 health 11:2 13:13,14 16:10,14 18:25 20:12 33:23 128:3 healthier 36:3 hear 2:6 3:2 9:25 21:16 23:5 62:6 78:2 107:8 126:20 heard 21:15 44:12 47:20 52:16 65:5 137:23 hearing 2:3,4 2:6,9 3:3 21:22 44:13 61:17 107:6 111:10 126:4,10,13 128:9,25 133:9 137:12,13 138:25	hearings 4:11 39:4 heat 17:19 18:4,12 19:3 25:21 25:22,23,24 31:25 35:15 42:17 55:19 65:25 67:3 73:19 74:25 77:1 84:21 93:15,15,23 93:25 95:21 116:25 117:20 118:1 122:1 130:16 heat-increa... 62:22 heaters 25:21 32:2 heating 10:6 17:16 19:3 25:13 26:9 32:5 35:10 42:2 49:13 65:8,8 73:16,18 74:22 75:12 75:16 121:24 124:14,15 130:10,10 130:13,13 130:14,15 heats 73:14 heavily 2:16 heavy 94:22 102:14 HEET 28:19 held 15:24 Hello 32:24 32:25 97:1 help 12:19 33:20 43:18 44:2,6 51:3 57:22 58:11 61:9 64:24 65:1 76:6 76:16 101:20 104:21 105:11	109:18 110:3 111:16 121:12 122:19 125:1 130:18 132:16,17 helped 37:10 helping 3:18 35:15 104:16 122:19 helpless 12:20 Hey 96:25 Hi 125:7 hierarchies 121:18 high 6:24,24 11:22 29:18 42:13,14,14 51:10 91:3 91:25 92:1 92:3 93:15 93:15 119:17 high-precisi... 29:7 higher 24:3 28:1 81:2 highest 8:25 42:1 52:19 highly 62:7 highs 51:21 hinted 62:2 hire 127:4,24 128:22 hired 109:13 hitting 120:7 hold 4:10 91:23 128:9 128:13,25 holding 126:4 126:8 Holston 4:15 8:4,7 11:9 11:11 117:9 home 20:17 28:19 44:7 44:9 55:19 59:21 104:9 114:6	122:12 129:22 homeowners 43:21,23 homes 17:19 36:15,20 43:10,25 55:12,16 57:21 75:3 84:23 108:15,23 117:20 122:11 hometown 101:16 honor 54:10 hook 35:20 hookups 34:23 39:11 hope 61:25 90:17 111:6 112:14 117:15 hoped 109:12 109:16 hopefully 41:18 45:2 hoping 12:15 63:8 horizon 62:14 115:19 hospital 12:17 hot 17:16,19 86:1 121:25 house 12:1 household 43:7 households 31:24 42:18 57:20 129:21 houses 25:19 housing 8:18 20:12 25:19 36:4,11 56:1 58:18 127:15 hub 77:20 huge 36:23 66:3 93:25 Hughes 60:8 60:14,15,20	61:3 81:9 81:15 83:4 85:22 88:8 88:11,14,23 89:2,14,16 89:20 90:9 90:17,25 91:6,12,14 91:19,25 92:3,9,12 92:22,24 93:4,8 94:8 94:13,16 95:16 96:19 human 102:23 hundred 48:8 49:10 50:12 84:13,14,23 93:14 114:13 Hurricane 51:11 hurricanes 119:13 hurt 15:10 HVAC 76:7 hydro 91:8,9 hydrogen 67:16,19 68:19 73:23 93:12 99:1 129:23 130:5,24 hypotheses 85:21 hypothesis 84:19 85:1	identify 18:24 57:4,9 98:11 118:16 130:4 identifying 53:9 75:7 illegal 62:13 illnesses 5:17 images 12:14 imagine 85:13 94:12 immediate 18:24 immediately 85:16 impact 47:19 63:13 100:22,24 102:9 104:21 112:9 impacted 17:10 impacting 86:23 impacts 63:7 85:10 98:8 imperative 73:3 impetus 100:15 implement 47:11 51:3 implementa... 111:8 implementi... 104:14 implied 81:19 import 119:6 important 6:18 44:15 44:24 59:7 61:2,20 63:20 71:22 86:3 96:12 102:13 104:7 113:22 133:7 impossible 67:4 improve 36:7	57:21 76:6 104:20 improved 44:7 improvement 53:11 improveme... 35:5 improving 33:23 94:19 106:17 inaction 50:3 inadequate 58:19 95:11 95:13,14 incentives 76:10 95:3 106:12 129:20 inch 113:3 include 6:15 40:10 73:10 76:10 77:7 98:25 103:19 104:18 127:8 128:2 130:12,14 includes 39:1 49:12,13 73:23 136:10 including 3:7 18:22 27:16 28:6 29:8 31:25 33:16 48:13 50:19 72:3 101:15 128:4 129:21 133:20 inclusion 18:9 inclusive 126:7 income 17:15 42:7,10,12 43:5,7,8,12 43:19 44:3 44:6 46:4 54:10,24,25 55:15 56:1 57:5,6,8,13 57:20 59:20	101:13 124:6 127:16 129:21 incorporate 129:4 increase 8:18 10:10,11 29:11 66:20 97:17 99:5 105:11 123:6 136:24 increased 8:17 44:2 59:11 119:14 increasingly 49:4 62:25 135:14 incredibly 12:6 incubator 102:11 indefinite 117:6 indefinitely 119:22 India 70:13 indicated 25:9 indicates 103:12 indicating 117:4 indication 29:4 induction 32:1 35:16 industrial 65:9,11 124:14 130:3 industries 120:1 industry 11:2 18:7 78:21 102:15 105:22 123:14 inefficiency 55:25 inequality
--	---	--	--	--	---	--	--

Committee on Transportation and Public Utilities
April 26, 2019

Page 10

10:16	instances	118:11	10:23,24	justice 15:20	97:4,4	16:5,21	60:24 72:2
inform 17:6	102:18	121:9	13:2,13,14	17:3 101:13	107:15,20	17:2,9,23	102:23
136:11	Institute	investments	16:11,13,16	103:23	108:25	20:22	leading 45:2
information	70:10	80:18 82:15	19:23 20:8	119:4	109:10	108:22	leads 50:8
22:3,4,8	intact 64:16	120:9 122:6	20:14,14	127:17	110:6 111:1	127:13	82:13
45:9 55:9	intelligence	investor-ow...	33:22 37:1		111:13,20	laborious	leak 24:1,5
55:21 84:11	19:14	28:8	37:25	K	114:21	28:12	26:5 28:10
infrastruct...	intended	invitation	117:21	Karsch 4:16	115:5 132:4	lack 18:8	28:22,23
18:13,19,20	111:2	61:1	122:17	7:15,15,23	134:1,4,4	lady 12:6	52:19 53:13
18:23 19:2	intent 136:13	involved 2:16	124:21,24	8:2,9	knew 13:8	21:7	53:14
23:19 26:16	intentionally	10:25 23:15	125:1 128:6	keep 3:10	knocking	laid 47:13	leak-prone
26:17,18	18:8,23	102:1	John 104:13	6:20 14:23	122:16	landfill 94:16	23:20
53:1 58:8	interest 16:4	104:15	Johnson 1:10	21:15,15	know 6:20	123:22	leakage 27:21
72:8 74:3,8	96:3	109:12	2:2 4:4,13	67:8,8,9,9	7:21,23	landscape	28:1 29:18
74:18 75:17	interesting	115:21	4:18,20,24	119:21,24	8:14,15,19	84:2	48:3 71:12
75:23 77:8	82:20	119:5	5:3 6:5 7:11	134:8	8:24 9:25	large 23:20	123:1,10
80:16,22	interestingly	involvement	8:8 11:6,12	Kelly 32:17	10:9,10,11	25:15 35:7	leaked 24:11
81:4 114:16	90:10	78:2 98:15	21:4 22:11	41:2 46:12	10:13 11:17	42:4 54:23	leaking 23:21
120:10	interests	iron 23:21	22:20 23:1	Kenney	11:19 13:17	68:11 80:22	53:22
121:10	44:19	54:19	23:6,11	48:24	25:1,2	94:24 105:8	leaks 23:23
inherent	intergovern...	irreconcilable	27:7 32:7	Kent 21:12	26:11 30:5	118:9	25:8 26:2
26:24	125:15	71:24	32:14,18,20	Kenyatta	30:24 33:18	largely 23:21	27:1,21
inherit	internally 3:1	island 89:16	32:25 33:7	1:10 137:21	45:20 47:6	64:10 90:3	29:4 30:3,6
106:18	International	90:10,13,13	38:10 40:18	kept 49:23	53:6,12	105:4	34:24 37:23
initial 82:14	9:15,23	Islands 90:10	40:25 41:5	135:1	55:6,22	larger 91:15	53:14 54:20
127:22	135:10	isolated 89:24	41:8 46:8	key 50:17	61:21 69:2	100:13	leaky 58:2
initially	internation...	isolation	52:4 60:1	136:5	82:2,3,5	largest 9:1	learn 9:9
114:15	122:25	90:12	60:11,16	kickoff 59:16	83:4 84:3	26:2 77:11	learned 91:19
initiative	interstate	issue 2:16 6:3	69:23 78:10	126:10	85:8 86:16	80:6 83:2,3	96:10
35:11 40:4	105:23	13:2 80:16	88:3 96:14	kind 12:8,9	89:20 108:8	97:10	lease 130:8
132:5,24	introduce	126:4 128:1	96:25 97:2	26:4 27:18	108:21	lastly 76:2	130:20
133:2	23:13 63:18	129:4	97:6 99:24	28:22 29:10	110:1,14	129:10	leave 64:15
initiatives	inventory	issued 134:19	100:6 107:9	29:22 55:9	112:1,13	latest 9:15	100:13
50:2 59:9	24:16 83:14	issues 3:7 9:5	115:24	58:16 60:21	114:19	122:24	leaves 20:2
59:14	invest 10:19	10:13 15:18	116:10	63:17 66:16	118:9 120:5	Lauderdale	led 36:8
injustice 9:5	10:23 19:4	16:12 19:15	118:25	69:3 79:17	123:14	46:22	37:23
11:1	19:8 52:25	26:24 33:14	125:5,7	82:5,12,12	125:13,14	Laughter	left 6:14 8:15
innovation	53:25 57:19	38:8 41:15	131:12,24	82:21 83:9	126:23	31:4	92:4
77:21	101:2,10	44:10 59:8	133:4,13,24	83:15,21	129:13	launching	legal 41:12
104:10,10	106:3	85:13 87:7	134:2,6	84:3 89:12	knowing	103:7	52:11 99:8
input 87:23	invested	87:17 102:8	137:5,16,21	89:14 91:4	29:13 96:3	law 112:11	103:20
111:17,18	37:17	112:9 114:2	138:7,16,18	92:13 93:9	known 19:13	laws 10:2	112:8 113:8
insecurities	investor-ow...	132:14	join 18:15	108:5	knows 115:5	lay 64:19,22	114:3,23
20:11	27:15	item 133:10	43:3	115:19	Kresowik	layers 102:18	130:18
inside 81:11	investigate		joined 112:23	117:25	22:19 32:16	Laying 64:23	legislation
install 84:20	44:6	J	joining 46:20	118:15	32:24 33:3	lead 50:4	49:9,12,14
122:11	investing	January	JONES 1:11	124:10	33:4 38:14	112:5	112:13
installation	34:23 51:25	34:21 38:23	journey	132:12	38:20 39:21	132:17	legitimate
77:1	investment	40:16	15:22	kinds 14:13	40:5,9,15	leader 15:15	100:24
installed	30:7 36:2	job 13:6,6,11	JR 1:11	68:20 83:20	40:23	21:9 77:20	let's 20:25
36:16	57:4,24	13:18 33:12	Junior 11:22	83:21		leaders 19:24	67:7,8,9,9
installing	72:17 74:18	76:23	jurisdictions	KING 140:11	L	leadership	67:10 82:8
75:8	80:10 118:7	jobs 6:12,13	80:5 81:5	Knapp 3:12	L&G 48:13	34:4 60:17	111:4
		6:16,16		96:22 97:1	labor 3:2 7:3		

Committee on Transportation and Public Utilities
April 26, 2019

Page 11

level 42:9 47:1 49:10 49:15 81:4 101:6 112:18,18 112:19 118:5 levels 35:13 123:13 leverage 25:22 liability 101:10 libraries 87:9 licensed 78:23,25 135:24,25 136:4 liens 43:21 life 13:21 14:9,11 98:8 lifestyles 100:23 lighting 92:25 likelihood 10:11 limit 135:20 limited 10:8 34:24 79:16 87:4 102:15 limiting 33:17 103:4 line 18:5 29:21 36:2 85:22,24 120:2 lines 18:22,24 51:8 105:23 link 22:24 32:23 linking 38:4 liquified 119:6 list 124:23 130:11 listen 78:18 listening 79:1 literally 12:11 14:2 14:4 28:20 little 11:18 21:21 23:25	24:9 50:3 55:4,22 62:6 64:11 79:22,23 84:1 87:20 91:8 93:18 93:22 109:11,16 112:22 113:21 117:1 livable 117:19 live 5:13,13 5:23 7:17 8:20 57:16 101:4 liveable 13:15 15:20 lived 11:24 14:9,19 51:7 lives 6:25 11:25 100:22 living 5:21 9:10 16:11 18:14 57:14 LLC 136:7 LNG 131:7 load 64:18 65:14 66:7 66:13,14 local 75:12 102:12,18 106:2,9 112:18 113:11 locate 28:14 location 31:8 32:21 lock 30:19 logic 82:13 long 10:14 24:25 41:19 53:23,24 58:2 93:11 131:9 long-term 77:12 longer 7:6 9:11,13 125:23	132:25 longest 103:8 look 13:20 20:19 38:8 41:22 44:13 44:25 45:25 59:7,13,18 70:25 78:6 80:23 87:17 94:10 99:19 104:11 110:12 126:24 127:11 129:15,17 looked 24:4 113:4 115:2 115:3 looking 24:2 30:18 34:25 63:10 66:17 67:17 79:14 80:9 82:14 116:23 120:19 126:21 looks 24:2 Los 72:3 lose 16:19 17:24 43:25 79:25 losing 105:20 loss 24:19 28:11 lost 24:18 25:8 128:7 lot 6:13 9:25 24:13 25:18 28:11 30:25 39:8 44:11 53:14 57:24 59:7 65:14 81:11 82:6 83:18 85:9 85:12 86:12 87:25 89:21 90:7,16 92:16 94:6 105:2 119:15 125:20 lots 68:6,24 94:17,18	love 69:20 loved 15:4,4 low 42:7,10 42:12 43:5 43:7,12,19 44:3,6 46:4 54:10,23,25 55:3,15 56:1 57:5,7 57:19 66:1 71:21 73:1 75:23 101:13 124:6 127:15 129:21 135:12 low-income 17:21 lower 43:14 97:23 101:14 123:13 136:17 lowest 103:21 113:10 115:1 lows 51:22 luck 78:4 M M 140:11 machine 12:16 14:5 main 18:24 31:14 53:1 53:10 54:19 55:24 80:23 mains 52:20 53:7,10,22 97:11 maintain 17:8 54:7 58:22 maintaining 18:12 54:1 57:25 58:13 97:11 maintenance 37:16 75:6 75:16 77:2 major 21:9 28:6 71:2 makers 62:5	making 23:8 35:19 38:3 57:1 65:16 67:23 81:23 83:15 86:24 94:1 101:13 115:20 136:2 man 60:18 manage 75:14 76:14 114:17 managed 60:22 66:8 77:6 85:19 135:18 management 75:15 102:21 manager 135:3 mandated 103:17 mandates 103:21 manner 34:10 70:19 manufactur... 106:5 manure 94:14 map 29:7 mapped 23:22 Marcellus 67:21 120:3 Mark 1:10 4:16,22 5:1 5:5 22:18 32:16 33:4 60:8,8,13 61:3 70:2,2 70:9 72:12 86:3 95:25 96:19 137:19,22 Mark's 70:6 85:23,23 market 37:20 72:13 76:16 95:2 98:12 105:13 110:18	113:11 135:19 136:3 market-bas... 106:9 markets 130:1 Massachus... 24:10 28:19 29:25 30:11 31:19 37:14 65:19 Massachus... 31:24 massive 32:2 118:10 122:17 master 135:7 Masters 46:22 match 48:18 116:20 materials 40:8 Matt 116:7 125:10 matter 70:24 78:1 103:3 124:24 140:6 matters 44:22 maximum 29:4 Mayor 38:17 48:24 134:19 mean 59:17 62:15 88:18 89:2 94:21 110:23 means 15:25 16:2 17:2 17:24 49:17 58:18,19 65:7 101:2 140:16 measure 28:21,21 124:24 measureme... 28:24 29:9 mechanism 100:21	medical 6:24 meet 33:20 34:8,17 36:14 37:9 38:25 39:16 46:2 64:23 95:15 120:21 129:11 meeting 39:6 49:1 64:5 73:1 125:25 128:13 130:3 137:15,17 139:3 meets 40:2 member 2:14 5:6 members 3:1 6:1 11:13 22:12 33:7 33:11,12 36:23 60:3 60:25 70:4 96:15 97:6 100:6 105:17 115:25 125:8 134:6 137:6 men 106:24 mention 77:23 mentioned 44:4 71:8 72:12 73:11 73:22 75:24 82:21 101:22 128:14,18 merger 39:22 Merrimack 26:23 met 30:23 123:3 methane 24:14 29:7 29:10 48:3 67:18 68:22 71:12 73:24 93:17,24 94:1,5,11	94:15 95:7 95:23 123:17,23 124:3,10 methane's 122:21 method 28:17 metric 103:7 Mexico 119:14 Miami 46:24 51:9 Michael 51:11 micro 99:4 microbes 93:23 microphone 4:25 21:5 mid 63:12 69:17 92:3 middle 11:21 63:4 68:25 Mike 116:7 119:3 mile 25:15 113:2 miles 30:13 31:21 97:11 milestones 129:8 million 24:17 25:15 45:12 71:10,11 103:6 106:3 millions 37:15 mind 12:14 17:13 89:19 mine 7:3 minimizing 71:6 76:12 mining 67:25 68:3 minute 64:7 minutes 27:3 mirror 120:6 mission 71:20 102:16 104:22 108:3 missions 86:16
--	--	--	--	--	--	--	---

Committee on Transportation and Public Utilities
April 26, 2019

Page 12

Mister 88:10	54:23	municipal	103:8,11,18	99:9 100:19	18:22 33:21	91:4,16,18	126:20
Mitch 116:8	monitoring	77:11 101:1	103:22	102:23,24	34:13,22	number	127:2 134:5
116:13	29:13	102:14	104:3,18	103:1	35:4,5	15:23 18:17	135:2,11
126:22	month 14:3,4	135:7	105:5,22	105:19	36:16 37:17	41:15 44:22	officer 31:2
mitigate	monthly 42:3	municipalit...	106:2,9	121:3,10,16	39:13 47:23	47:24 57:12	offices 70:12
113:11	months 39:5	105:11	113:17	121:17	48:11 50:2	62:17 70:3	135:6
mitigating	43:8 66:23	municipally	117:5 119:6	122:5	51:16,20	78:24 82:10	official
77:14	111:3,5	97:10	123:17,20	124:19	53:19,19,21	85:14 91:8	100:11
mitigation	moral 15:18	muscle 12:12	125:23	126:23	68:1 70:12	102:25	officials 48:14
98:18	moratorium	muscular	126:18,25	132:15,18	71:14 72:4	110:8 120:6	52:1
mix 51:4 91:2	18:18,19	12:9	127:6 128:1	133:8	72:17 73:15	numbers 24:2	oftentimes
91:6 100:21	morning 2:2		133:19	needed 12:19	74:19 75:2		84:9,16
104:16,17	4:18,19	N	134:11	18:3 28:13	75:8 76:10	O	Oh 1:12
130:24	11:11 41:8	N 140:1	135:4	36:18 37:9	85:14 86:9	O 140:1	11:13 22:22
mixs 52:2	46:15 70:4	naive 9:8,21	136:18	118:13,16	93:20 94:1	O'Sullivan	32:19 89:18
mobilization	Morris 12:1,8	name 4:21	Nav 28:6	118:17	98:24 99:2	96:23 100:3	137:20
37:19	mother 13:6	5:5 7:13,15	navigated	needle 58:10	101:3 105:5	100:4 112:7	oil 8:15 21:23
model 27:18	mothers	8:11 33:1	102:20	needs 17:5	118:4	112:21	105:15
58:7 62:11	12:25	41:6,10	near 5:21	37:4,5 46:2	nexus 62:18	114:7,12	123:2 124:1
64:16 69:5	motion	46:10,12	14:15 49:20	49:17 57:24	Nicole 4:16	115:4,10	okay 5:1 8:3
71:3 74:24	137:23	61:3 69:25	71:22 99:20	62:24 75:7	7:15 21:7	Oakland	8:6 22:14
75:2,13	138:13,19	70:9 93:17	nearby 5:23	76:23 110:8	night 12:11	70:12	23:12 29:1
76:4 98:3	motor 36:20	97:3 100:1	nearly 33:11	114:22	nine 42:4	objectives	29:15 31:8
101:25	133:19	100:3	42:18 51:7	115:2,3	45:7 129:4	34:2 71:22	32:20 39:24
114:9	136:18	116:11,13	necessarily	120:22	non-burn	77:13	40:12,17
130:22	Mountain	119:1,3	83:17 85:4	124:16,16	124:12	obligate	88:25 90:19
models 76:18	70:10	125:9 134:3	necessary	124:17	non-burning	133:21	90:20 92:2
99:3	move 3:19	names 116:6	3:15 34:13	126:11	124:18	obligations	93:5 112:6
moderate	14:1,2	naming 9:4	36:13 97:22	130:4	non-exhaus...	37:18	112:6
55:3,15	26:18 30:25	Nathan 22:18	99:8 117:17	negligible	130:11	observation	115:22
modernized	31:3 39:15	23:4,14	129:11	47:19	non-low 57:6	31:14	old 7:17
89:8	50:12,23	65:18	need 6:8,9	neighborho...	non-partisan	obstacles	23:18,19,20
modifications	51:23 58:10	nation 50:4	9:22,24	18:25 74:10	70:11	30:19	53:20,22
74:4	72:2 80:20	51:19 80:6	10:2,7,20	74:10	non-profit	obvious 42:15	80:16 90:13
mold 36:8	81:11 87:19	90:6	10:22 19:12	neighborho...	28:18 70:11	obviously	93:14
37:23	88:1 109:24	nation's	20:3,3	6:23 35:2	non-violent	42:12	115:13
molecules	110:20	77:11 97:9	28:13,24	75:19	21:11	occur 112:18	older 89:7
73:23	111:8,16	105:25	33:18 34:16	net 63:11	normal	occurring	Olney 7:18
mom 7:19	138:1,3,10	national	36:15,20	67:24	124:15	29:4,18	7:19
11:25	moved 6:13	27:15,24	38:2 41:21	126:19	normally	80:18	on-bill 76:5
moment 22:6	14:10 138:7	29:16 33:10	42:21 43:2	network	125:12	odds 71:19	once 90:9
119:18	movement	natural 6:21	45:14,20,23	37:11 76:14	north 14:17	offer 2:10	ongoing 2:23
money 10:7	7:17 21:9	23:16 47:15	45:23 47:10	84:22 119:4	26:23 36:24	129:15	46:1
14:1 25:17	moves 16:15	47:21 48:1	47:11 51:23	129:25	67:14	offering	open 2:9
32:3 33:22	movies 78:24	48:4 50:19	54:4,5	networks	Northeast	113:14	19:17 30:8
36:8 37:24	moving 30:3	67:15,17,24	57:19 59:1	130:16	119:4,7	offerings	102:1
54:6 55:14	30:4 37:25	70:17 71:9	63:10 71:2	never 14:3,6	14:22,22,23	76:16	opening 96:9
79:25 87:16	48:25 51:12	71:21 77:17	76:19,24	14:23,24	101:1	Office 3:4	operate 27:16
87:21 121:9	134:8	88:21 89:5	77:4 86:5	101:12	Notary	14:8 39:10	72:9 115:12
121:14	multi-family	89:7 91:7	86:20 87:12	123:13	140:11	46:21 97:5	115:12
122:5,7,8	39:11	92:7,8,20	87:13 88:17	new 6:16	noted 140:4	101:19	operation
122:18	multitude	93:17 94:2	90:15 95:5	18:12,18,20	notes 140:5	104:24	69:12
monitored	103:1	94:25 98:25	95:15 97:19		nuclear 91:3	111:15	operational
		101:15				117:12	

Committee on Transportation and Public Utilities
April 26, 2019

Page 13

66:5 operational... 28:9 operationally 28:14 operations 75:15 opportunities 34:16 50:19 53:19 74:19 78:16 98:24 110:9,10,16 130:2 136:24 opportunity 2:13 10:4 15:17 20:6 33:6,8,20 35:14 36:23 38:6 46:16 58:12 61:13 61:19 69:22 70:18,25 77:10,20,24 97:7 99:22 107:7 110:11,12 114:25 116:14 125:9 137:2 opposed 39:10 130:24 138:16 opposing 48:11 opposite 106:24 opposition 138:17 optimism 93:19 option 26:9 73:21 75:11 75:22 options 62:9 73:8 80:10 99:10 104:14 118:6,7,21 126:8 127:5 127:25 128:5,8,11	128:15,20 order 2:3 39:12 40:10 47:10 63:4 63:5,12 118:18 126:15 134:19 ordinance 133:16 135:21 136:10 organic 93:22 95:22 organization 5:8 33:10 46:19 85:24 86:7 organizations 17:4 organizing 21:15 oriented 85:13 outcome 58:14 outcomes 110:17,17 outlawed 69:15 outlines 17:5 outside 24:11 27:17 111:15 outstanding 37:18 overburden... 33:25 overcome 130:18 overseer 45:24 oversight 45:12 54:5 owned 97:10 99:11 owner 77:11 ownership 67:10 P p.m 139:3 page 48:22 50:17	100:17 107:15 pages 61:23 paid 18:14 56:16,22 57:6 87:3 pain 15:10 pairs 6:21 panel 4:14,17 9:16,23 22:12,17 31:11 41:1 41:4 60:7 60:10 96:15 96:20,24 116:1,9 125:15 132:10 parallel 104:23 paramount 16:6 Paris 48:24 62:25 parking 30:25 parks 87:8 part 2:20 7:7 10:21 34:8 39:22 53:2 57:6 76:25 81:19 91:2 93:25 95:5 98:14 100:9 100:13 102:6 103:23 106:15 107:1 109:6 111:18 112:22 participants 5:21 participate 132:17 participating 45:25 participation 52:12 participatory 17:7 34:8 132:20 particular	62:6 68:12 particularly 3:2 33:25 36:22 64:9 parties 132:21 partner 136:5 partnering 35:8 99:16 partners 20:22 70:15 112:14 partnership 107:23 parts 26:3 95:10 108:22 124:11 passed 49:9 passive 130:14 pastor 14:25 15:1 patching 30:8 path 65:2 pathway 25:5 64:5 patience 38:14 50:3 105:20 patterns 97:17 pause 22:24 pay 6:24,24 8:23 17:15 43:7,23 46:5 56:14 69:13 87:16 113:21 121:11 122:13 payer 127:16 payers 30:10 31:21 55:16 99:13 101:4 paying 10:24 13:18 42:13 55:11,14,18 135:20 payment 133:21 payoff 120:11 PEA 136:12	136:14 peak 120:4 peaking 76:13 PECO 90:22 91:1 113:21 PECO's 66:19 114:16 Penn 46:14 46:19,20 96:4 Penn's 61:6 Pennsylvania 1:5 42:5 56:12 60:13 61:4 91:3 93:1 95:8 103:9 Pennsylvan... 43:6 pensions 17:25 people 6:2,17 9:12 10:18 14:16,20 15:4,7,16 19:13 21:10 21:13 37:21 43:25 58:15 58:17,19 59:19 82:6 85:25 87:7 92:13 100:9 104:4 105:19 106:20 people's 20:20 108:23 122:11 percent 5:20 9:20,21,24 12:22,24 15:12 17:15 24:4,9,15 25:7,8 27:20,21 28:10,11 31:24 42:6 42:8,9 47:22 48:8 49:2,6,11	49:18 50:13 54:24,25 57:11,17 63:3,11 65:24 66:19 71:16 72:20 84:13,14 94:25 103:13 105:25 106:6 113:7 113:7 114:13 120:22 123:11 percentage 23:20 percentages 24:3 perfect 84:10 perform 76:15 127:4 performing 75:4,5 performs 75:2 period 23:10 48:5 74:16 108:1 111:9 122:24 periods 120:11 permanently 24:24 permit 138:4 138:11,22 person 9:6 97:21 109:13 personal 100:24 personally 107:1 perspective 70:16 71:15 79:21 80:3 81:7 87:18 87:24 104:19 107:7 perspectives 107:8 109:8 132:22	perverse 95:3 PES 5:12,14 PGC 102:21 PGE 87:2 PGM 91:2 120:19 PGW 2:22 3:1,4,20 6:9 6:15,20 7:8 8:10,12 10:21,22 15:16,23,25 16:22 17:24 17:25 33:20 34:6 38:2 41:20,23 42:1,3,13 42:16,22 43:3,14,19 43:21,23 44:16,20 45:11,21 46:1 47:16 50:9,18,25 52:2 53:5,6 53:13,16 54:16,22,24 55:2,14 56:5,8,9,12 56:19,24,25 58:6,12 59:2 64:11 64:18 65:10 66:5 69:5 69:12 70:18 71:8,13,15 72:7,9,15 72:20 73:6 74:20 75:11 75:22 76:3 76:19,24 77:4,13 86:13 97:13 97:16,19,24 98:3,9 99:9 99:13,15,18 101:1,6,22 101:24 102:2,10,15 104:8,12 105:1,17 106:3,20,24 107:23	108:19,22 109:22 110:4,9 111:16 112:9,11,19 113:17 115:8,13 116:25 117:3,6,18 118:15 119:8 122:14 125:1 126:5 126:9,17 127:6,19,25 128:23 129:5,6,11 129:19 130:7,18,23 131:4,9 132:8,23 PGW's 18:23 20:5,25 37:7,17 42:7 45:18 53:21 62:10 64:14,16 66:14 67:23 71:3,20 75:17 99:11 103:5 104:19 106:16 107:3 112:1 129:25 130:4,22 131:7 phased 74:9 74:11,19 Philadelphia 1:1,5 2:17 3:16,19,24 4:12 5:7,11 5:12,20 6:8 7:18 8:19 9:19 11:20 12:23 13:4 14:18 15:25 20:23 21:23 23:19 24:5 25:3 26:11 27:19 30:21 33:11 35:12
--	--	--	--	--	---	---	---

Committee on Transportation and Public Utilities
April 26, 2019

Page 14

44:23 45:3	5:2,6,8,10	123:18	20:20	polluting	64:2 68:9	42:15 66:11	problem
45:13 47:5	5:19 7:20	124:9 136:3	play 102:2	5:23	68:18 72:14	77:9 91:13	35:19 38:3
48:25 50:5	10:12 22:7	places 12:23	131:5	pollution 5:16	82:20 83:6	preventative	52:19 53:23
51:12,21,24	48:13,17	54:6 68:10	played 44:21	15:13 35:6	105:8,12	75:6	55:24 58:16
52:11 54:11	50:22 51:18	84:23	plea 83:15	36:19 37:21	113:19,20	previous	83:10 86:20
57:15,16	59:15	plan 6:8,15	please 4:6,14	69:14	119:10,15	47:20	123:16
59:15 64:10	103:11	9:2,14,21	4:20,25	pollutions	119:25	previously	problems
70:17 77:10	phone 91:21	20:25 34:7	7:13 22:16	128:6	power-to-gas	73:22	10:14 24:24
77:19 79:15	92:4	34:20 38:3	22:17 23:2	ponderous	82:19	price 104:7	27:1 53:20
83:17 84:21	pick 79:18,18	38:16,24	32:15 33:1	103:4	powerful 94:3	113:5,6,15	53:21 68:10
85:15 90:18	79:18 87:19	39:2,3,18	41:1,5	poor 14:20	Powering	119:16	83:7
92:6 97:9	picked 56:20	40:1,2,14	46:10 60:6	17:20 58:15	48:21 50:16	120:15	proceed 8:8
97:19 98:11	piece 6:18	43:16 45:18	69:25 96:20	portfolio	practical	prices 90:12	17:13 82:7
100:5,23	110:20	45:20 47:23	97:2 100:1	90:25	42:24	119:13	84:2
101:17,19	111:9	53:5 59:1	116:6,10,11	portion	practices	136:20,22	proceeding
102:20	125:25	61:10 76:19	119:1	135:15	105:6	pricing	43:17
103:25	pies 83:22	77:5,12	133:14,25	position 2:17	pragmatic	103:19	proceedings
104:12	pike 69:9	108:22	134:2	43:24 53:17	104:14	135:13	52:13 140:3
107:4	pilot 35:8	113:23	pleasure	positioned	praying	primary	process 3:22
110:13,18	84:18 99:17	126:9,12	60:14 69:21	16:3	12:16	35:14 41:17	9:7 17:6
116:13	99:18	127:7	plume 29:8	positive	pre-tax 43:8	48:3 104:20	22:1 34:8
117:25	107:16,17	128:23	Plus 87:12	104:24	preacher	135:3	39:14,19
119:5	108:7,11	129:1,5,9	92:19	106:22	15:1	principle	68:17,20,21
122:17	109:4 111:8	129:12,15	point 47:8	possibilities	preachers	29:24 30:1	93:13,14,22
125:21	Pilots 85:6,19	131:9,16	51:15,18	101:8	11:17	prior 46:20	95:21,22,23
135:10	pinpoint 29:3	135:8	56:8 59:6	108:10	precisely	prioritize	96:4 103:3
136:6,9	29:17	planes 124:13	71:6 83:19	possible	68:10	17:9 51:5	108:24
Philadelphi...	pipe 23:21	124:17	86:3 87:5	52:24 58:14	preferred	53:7,8	126:7,13
24:2 48:20	26:6 30:14	planet 15:16	94:21 120:7	59:20 74:12	128:11,15	prioritizes	127:3,8,10
50:15 70:19	31:21 65:21	15:20 66:7	132:22	81:17,20	128:20	16:16	129:14
73:9 75:19	pipeline 19:5	planned	pointed 62:18	82:10 85:20	premium	prioritizing	131:3
77:25 86:14	19:9 37:11	116:15	points 15:21	89:11	135:20	54:16	132:20
98:15 102:3	129:25	planning 11:3	28:1	possibly 62:4	prepared	private 16:7	136:1
104:16	pipelines	19:20 39:14	poisoned	114:19	18:9 32:22	16:19 27:12	processes
105:14	23:25 24:5	61:22 71:25	37:22	potential	presence 7:12	27:13 38:18	65:9 93:19
131:5	24:23 25:14	72:2 106:10	poisonous	65:23 76:2	22:21 64:10	40:14 70:15	procurement
Philadelphi...	25:16 30:7	112:24	36:7	95:7 105:15	present 1:9	79:20 80:9	75:14 105:8
3:7 20:2	30:8 34:24	116:24	poisons 15:8	114:25	41:22 128:9	80:21	133:17
Philadelphi...	48:2 105:23	126:7,12	police 31:2	122:21	129:1	privilege 45:6	135:3,6
8:23 17:6	pipes 35:3	127:3,10	policies 35:5	128:19	137:18	61:8	136:17
17:18 41:16	37:17 58:2	131:8	43:22 47:12	129:16	presentation	pro-dirty	produced
49:24 67:3	65:13 67:11	plans 25:2,4	51:3 69:10	130:1,12	8:1	106:23	94:6
107:2	97:12	26:12	105:5	136:19	presents	proactive	produces
Phillips 22:18	pitted 16:12	plant 13:10	106:11	potentially	58:11	71:24	94:15
23:4,5,7,12	pivot 26:18	14:17,18,18	policy 42:25	49:6	President	probability	124:21
23:14 27:9	place 14:2	39:10 131:7	50:21 61:7	poverty 10:16	112:24	82:3	producing
27:14,23	35:18,24	planting	62:19,20	16:9 18:7	President's	probably	129:24
28:3 29:5	49:23 50:14	60:17	63:20 64:13	42:9,14	59:11	27:2 53:16	130:2
29:22 31:7	51:12 82:22	plants 14:13	72:11 77:13	57:11,18	pressure 3:11	57:17 63:20	135:18
31:17 32:11	89:23,24	36:19	82:15	101:6	presumably	80:7,12	production
35:17 37:13	98:12	119:11,15	political 9:7	power 20:21	66:23	89:24 94:24	119:23
52:16	102:24	119:25	9:11	21:16 24:14	pretend 82:2	125:13	120:4
Philly 4:23	110:15	platform	polluted 6:7	36:19 50:10	pretty 41:22	132:15	products 79:4

Committee on Transportation and Public Utilities
April 26, 2019

Page 15

79:8 professiona... 106:25 professor 23:14 27:9 52:16 60:12 61:4 88:8,9 88:14 96:18 program 59:13 84:18 103:9 108:13 programs 36:12,25 45:22 56:5 59:18 85:6 85:19 106:4 129:20 progress 105:19 129:7 project 52:1 53:12,17 106:14 137:1 projects 48:11 53:8 84:18 101:3 108:14,23 137:1 promises 14:23 49:22 promote 50:1 prone 24:1,5 26:5 properly 138:8 proportion 74:13 proposal 39:18,25 59:11 proposals 43:18 48:17 58:4 propose 38:24 39:3 43:14 proposed 48:13 116:19 119:7,8 131:7	135:21 proposing 124:1 proposition 55:13 protect 6:16 16:10 44:19 51:16 117:20 protecting 136:19 protection 33:16 34:9 34:18 127:14 protective 117:18 Proud 107:2 proven 26:20 provide 18:4 44:1 55:8 55:21,23 56:5 61:1 61:24 63:5 76:5 97:7 97:22 98:1 107:18 127:22 128:12 135:12 provided 25:5 45:10 52:15 136:14 provider 74:23 90:24 114:15 135:24,25 136:4 provides 27:11 38:18 39:20 53:18 74:24 providing 46:4 54:20 78:15 117:5 proving 5:18 provision 136:10 prudent 45:12,24 54:5 prudently	45:18 public 1:2 2:3 2:5,6,15,20 2:22 4:10 6:6 11:14 14:8,8 15:23 16:1 16:18 18:10 18:13 19:6 19:10,21 38:21 39:4 40:7 42:8 43:4 44:22 54:11 70:14 79:16 87:1 87:8 111:18 112:2,2 116:4 118:10 126:3,11,12 127:3 128:9 128:10,25 129:2,6,14 131:2,3 132:12 134:22 137:12,13 137:15,17 139:3 140:11 publicly 3:23 3:23 99:11 publicly-ow... 80:6 published 24:7 25:7 PUC 43:11 45:16 51:3 57:1 112:18 pump 19:3 77:1 84:21 pumps 25:21 25:24,24 31:25 35:15 66:1 122:1 punitive 69:12 purchase 103:21 113:9,12 133:18 134:10 136:25	purchases 134:14 135:2,20 136:2,13,15 purchasing 112:12 135:1 purely 57:12 purpose 2:6 pursue 10:1 98:24 99:10 106:14 put 14:15,20 18:17,19 37:20 40:3 51:15 68:14 71:15 79:25 83:21,22 102:24 110:4 111:23 puts 87:11,18 putting 3:10 15:5 68:1 121:8 Q qualified 76:15 qualifies 46:25 quality 37:3 51:17,19 quarter 66:19 question 16:13 21:21 30:4,6,9,17 30:21 31:10 31:17 81:10 81:12 84:9 88:13 90:20 91:20 92:6 114:8 questions 22:11,13 27:4 31:11 38:7 40:20 40:21 46:7 52:14 60:2 60:4 69:20 78:7 96:15 96:16 99:23 100:20 107:14	113:2 115:25 116:2 137:3 137:6,8 quick 61:24 133:11 quicker 80:20 quickly 23:13 28:14 87:19 Quite 106:23 quo 120:24 quorum 137:19 quote 65:17 R R 140:1 racial 15:19 18:7 racism 7:4 radical 88:17 88:17 radically 9:17 raise 59:6 87:7 raised 7:19 7:20 12:2 85:10 raises 56:24 ramification 113:9 range 62:9 108:10 132:22 ranks 51:18 rapid 20:24 rapidly 126:17 rate 6:21 10:16 30:10 31:20 43:15 54:24 55:3 55:16 57:1 97:16 99:13 101:3 127:16 rates 8:17,25 10:11 42:2 45:16 56:24 76:9 87:15 Ray 112:23 reach 39:12 47:7 reached	102:23 reaching 120:4 read 4:6 7:25 11:15 15:11 116:6 131:16 133:14 reading 61:22 138:4,11,23 real 9:2 59:11 83:24 89:4 102:12 110:19 realities 9:9 reality 9:12 86:15 realizes 41:19 reallocated 25:17 really 12:9 26:5,16 28:1 29:6,8 29:12,22 30:20 44:14 45:19 54:18 58:5,5,10 58:11 59:12 83:14 88:13 94:21 107:24 108:2 110:9 110:12 117:7,17,23 118:9 126:24 rear 120:5 reason 17:1 41:17 53:4 reasons 93:18 119:9 rebuilding 26:15 receptive 43:18 recess 138:25 recognition 12:22 recognize 102:5 121:17 recognizes 137:22	recognizing 34:16 recommend 127:1 recommend... 98:8,10,13 115:1 138:3 138:10,21 recommend... 98:6 110:20 127:10 128:2 129:16 record 4:21 7:13 33:2 46:10 51:21 51:22 69:25 97:3 100:1 116:11 119:2 125:14 recover 56:25 60:23 recoverable 72:20 recreation 87:8 recruit 127:20 128:12 129:2,17 recruitment 135:11 recycle 121:20 recycled 73:19 red 18:5 Redeemer 11:23 15:2 reduce 9:19 9:21 36:19 43:5 54:18 55:5 59:12 74:9 121:19 128:5 reduced 43:13 reducing 35:6 66:7 72:22 72:25 77:14 103:5 106:4 reduction	15:12 49:2 49:7 62:24 63:3,11 70:21 73:3 98:7 101:17 102:10 106:10 107:25 reductions 63:9 72:6 103:14 refer 20:20 107:16 reference 38:15 54:21 80:8 81:1 87:7 109:8 111:17 133:2 referenced 110:7 111:20 130:17 refinery 5:12 5:15,21 13:3,8,22 21:24 22:5 124:1 reflect 57:13 78:18 reflecting 132:3,3 reform 93:16 93:24 reformed 67:18 reforming 68:3 regard 55:23 81:8 regarding 2:21 4:11 21:23 64:7 78:15 132:4 132:8 regardless 43:11 59:20 123:23 region 52:20 92:17 104:13 region's 105:3
--	--	---	--	---	---	--	---

Committee on Transportation and Public Utilities
April 26, 2019

Page 16

regional 33:4 33:9 136:3	92:13 108:20	54:19 65:21 75:7	115:16 136:11	5:17 respond	38:5 47:5 53:14 56:13	41:2 Robert 32:16	74:17 sat 123:4
regrets 82:12	reminds	replacing	requiring	53:13	58:24 61:19	41:7,10	save 36:8
regular 52:12	78:19	25:14,16	38:2	116:17	62:20 63:21	robust 34:3	37:23
regulated	remiss 82:24	30:7 58:7	research 17:7	response	64:12 65:9	80:13 82:9	saved 45:11
45:16	remote 32:21	73:11	23:15 28:12	48:22 81:16	65:13 67:4	126:7	saving 33:22
102:14	remotely 33:8	report 50:16	28:12	responsible	67:18 68:8	Rocky 70:10	37:14
135:24	remove 67:22	71:13 128:1	103:12	71:16	68:16 81:18	role 44:21	122:18
regulates	renewable	128:10,16	112:10	responsive	81:21 82:11	45:1,4,15	savings
38:22	6:10 11:3	128:21	researchers	16:1	82:17,22	52:11 74:22	122:13,19
regulations	15:17 16:23	reported	123:2	rest 56:7	83:8,25	75:18 76:2	saw 13:22
102:19	18:4,12	125:16	researching	77:22	85:25 86:2	99:11 102:3	saying 83:13
regulatory	20:1 35:17	138:1,9,20	123:7	restrictions	86:9 87:20	104:20	114:1,4
37:6 39:19	38:1 47:13	reporter	resident 5:7	112:8	88:12 89:3	131:5	124:20
39:25 62:11	48:8 49:11	140:11,19	residential	restricts	90:10 91:2	roll 132:12	138:14
69:16 86:11	49:18 50:13	reports 129:7	34:13 42:2	112:11	92:12 95:25	rollbacks	says 48:21
99:8 102:8	51:5 66:24	representat...	44:17 45:14	result 55:18	100:15	50:4	82:2 85:25
114:23	66:24 67:10	117:3	65:11,25	results 48:2	104:2 108:9	rooftop 36:17	scale 35:9
130:19	68:12 83:22	136:12	72:21	retain 97:21	108:25	130:20	67:2 68:11
reiterate 21:8	98:25	representat...	residents	retirees 17:25	111:13	room 1:5 5:13	72:10 74:1
related 28:23	103:11	128:18	15:25 16:5	retraining	113:6	6:2 8:11	88:23 90:1
119:13	105:1	134:23	16:10 17:10	108:12,19	114:11	12:15 69:3	98:17
130:10	114:13	representing	17:21 20:11	108:24	115:4,10	81:11 82:25	117:13
relating	118:1	4:23 5:2	33:24 47:4	retrofits	119:25	89:22	130:3
41:15	123:17,19	reproduction	97:22	36:13	121:20	roots 7:18	Scattered
relationship	126:18	140:15	100:23	retrofitting	123:12	17:3	121:2
136:9	127:21	repurpose	resolution 2:7	35:22	124:1,5	rough 29:23	scenario 74:7
relationships	129:24	75:22	4:1,7,8,9	reuse 121:20	125:2,20	routine 75:5	scenes 3:14
104:23	130:9,23	request 34:5	49:9 97:8	revenue	132:11,19	RPR 140:11	schedule 37:9
relatively	131:6	138:21	116:5	74:19 80:1	rightly 83:19	Rules 138:3	school 11:20
91:3,15	135:14	requests	RESOLUT...	revenues	rigs 105:22	138:10,22	11:21,22
120:8	136:25	42:23,24	1:18	74:21 98:11	ripple 12:12	run 25:22	science 63:1
relevant	renewables	require 18:24	resolve 44:10	Reverend	risk 66:5 71:7	64:21	122:24
127:18	10:3 19:2	34:6 35:5	resolved	4:15 8:3,7	72:10,19	running 47:9	science-based
reliability	26:20 105:5	38:22 43:7	88:18 114:3	11:9,11	77:15	103:8	47:12 62:23
120:22	105:12	43:14 66:15	resource 76:4	117:9	135:20	runway 83:11	63:14
reliably 71:21	106:11	68:21 75:21	82:23	review 98:23	riskiest 53:10		scientists
104:8	renewing	115:8 118:6	resources	99:2,7	risks 70:16	S	49:4 102:7
relinquish	20:1	129:6	10:7,8	114:22	72:7 73:4	S 1:11	scope 98:20
101:12	repair 18:25	required	16:21 20:19	reviewed	RMI 77:23	sad 5:24	109:24
rely 54:8	37:16 44:10	34:20 40:15	29:19,20	134:25	85:23	safe 14:22,22	115:9
58:19 59:3	59:13	74:8 114:20	31:13 44:18	rewired 36:16	RNG 103:10	14:22,24	116:20
relying 58:15	129:22	117:14	52:23 79:17	rewiring	103:13,19	16:17 19:22	117:13
remain 117:5	repairing	126:8 130:3	83:1 87:4,5	36:17	103:24	31:6	127:19,23
remaining	58:8	requirement	112:3	RFP 109:24	104:1,3	safely 71:21	scoping
73:1	repairs 44:7	110:24	117:13	111:24	108:11	104:8	109:22
remains	replace 24:23	115:2	118:3,8,17	rich 73:25	112:20	safer 25:12	scraps 124:2
103:20	26:6 30:13	requires	118:22	right 5:10	113:5	26:21 36:3	script 11:18
remark 70:6	31:21 35:2	28:20 34:2	132:16	12:7,25	road 26:13	safety 26:24	scrutiny
remarks 2:11	54:19	36:11 37:19	respect 3:9	13:7 14:21	30:22,25	33:23 87:8	29:11
61:2 70:23	replacement	58:1 72:2	respects	15:22 20:4	roadmap	101:11	seasonal
remember	29:21 30:15	72:24 93:15	115:16	20:25 28:3	98:1	128:3	66:22 67:2
64:20 84:12	31:14,23	113:9	respiratory	30:10 33:3	Rob 32:17	salary 18:2	seat 92:4
						sales 50:20	

Committee on Transportation and Public Utilities
April 26, 2019

Page 17

second 31:1 45:3 73:14 129:23 133:10 138:6	selling 39:1 send 8:2 40:9 77:21 Senior 112:23 sense 28:23 57:2 93:3 105:9 107:16 123:19 124:5,9,11	shale 67:21 119:19 120:3 shape 17:23 104:16 share 15:21 70:15 105:12 106:18 107:6 122:12	138:14 signs 120:2 Silberg 60:9 70:2,2,9 84:6 88:8 88:10 94:20 95:13,15 similar 29:3 34:20 52:22 121:25 simply 63:17 69:6	SoCal 94:21 social 127:17 society 8:20 46:23 105:18 sod 85:18 soda 87:11 solar 36:17 68:12,14,18 79:8,11 80:12,13,25 81:1 82:22 83:1 84:14 99:1 104:5 105:8 113:19 120:14,21 121:13,24 121:25 130:14 136:7 137:1	sore 51:20 sorry 30:24 32:19 36:5 89:19 90:4 sort 95:3 108:1 110:7 111:4 114:22 115:1,8 125:19 soul 61:22 sound 24:12 125:13 source 31:25 59:22 84:21 94:17 104:7 114:5 122:1 sources 73:2 93:9 94:18 94:19 98:24 98:25 South 5:7,12 5:20 6:7 7:20 10:12 11:19 13:4 48:13 southwest 14:18 space 65:8 spare 125:11 speak 4:24 116:15 125:9 speaking 3:6 3:6 7:4 21:15 100:17	Squilla 1:10 137:19,23 137:24 stability 16:15 19:23 stable 16:17 68:17,23 staff 45:10 70:5 109:13 112:10 stage 83:12 stages 98:20 staggering 135:19 stainability 55:20 stakeholder 127:18 stakeholders 2:21 128:13 stand 19:25 138:25 starring 102:3 start 20:25 35:2 38:2 70:1 77:6 82:14 89:3 started 21:10 21:13 29:19 64:25 89:9 109:15 120:6 starting 36:3 85:14,20 109:16 120:13,15 starts 48:10 51:24 121:18 state 4:20 7:13 21:12 33:1 41:5 42:2 43:4 43:12 46:10 49:10 52:1 61:21 62:4 69:25 72:11 77:15 94:24 95:7 96:4 97:2 100:1 102:19 112:11,18	116:10 118:17 119:1 134:3 135:23 state-impos... 86:10 stated 50:9 72:5 77:13 132:4 states 50:16 63:24 statewide 56:11,19 Stating 48:22 stations 36:18 statistic 65:20 status 22:4 59:20 120:24 129:7 staying 63:6 stays 129:11 steam 13:24 stenographer 133:8 stenographic 140:5 step 34:11 35:25 95:5 steps 37:19 47:1 49:15 85:6 stock 25:19 41:23 56:1 95:1 stop 27:3 34:22 37:20 48:6 51:25 62:22 68:7 69:19 103:10 stopped 103:5 storage 66:22 67:2 79:11 99:4 120:21 121:24 124:7 store 68:23 83:9 storms 20:10 story 12:5 strains 87:12
seconded 138:8 Secondly 16:20 seconds 91:21 sections 35:3 sector 32:6 63:23 64:2 64:4 70:15 79:20 80:9 95:19 121:22 124:21 sectors 49:12 98:19 see 5:17 12:11 19:17 55:25 60:14 60:19 71:2 73:15 84:19 84:23 96:18 104:11 106:20 108:3,4 109:20 110:10 117:7 120:13 124:8 seeds 60:17 seeing 80:8 80:18 120:11 137:11 seek 74:12 136:24 seen 19:14 26:22 51:13 51:17,20 80:4 95:9 segments 53:10 selected 136:1 selecting 75:8 sell 50:25 86:12 130:8 130:20	separate 72:5 SEPTA 14:17 sequence 77:5 series 39:4 serve 17:4 54:10,11 134:24 136:4 served 34:1 36:1 66:5 serves 16:1 64:18 65:10 135:2 service 38:21 40:7 41:16 43:3,9 44:19 52:9 56:22 57:1 71:14 74:22 97:12 105:23 122:10,15 135:24,25 136:4 services 39:1 41:12 43:16 52:12 74:25 86:3 97:22 99:3,5,6 serving 45:6 57:5 session 138:5 138:12,23 set 32:23 49:16 81:22 settle 20:8,18 Seven 128:22 severe 20:10 62:25 sewage 123:21 124:11	shared 12:4 shareholder 79:21 shareholders 16:8 sheet 77:4 shift 29:19 31:1 76:11 120:14 shockingly 66:1 94:3 short 14:24 119:19 134:8 short-sighted 48:16 shortage 100:19 shortly 119:12 133:10 show 98:9 105:10 showers 86:1 showing 72:1 shut 35:3 68:15 shutoff 42:17 side 78:25 79:10 80:12 80:23 114:9 sides 79:9 Sierra 33:5,9 34:5 sign 113:19 114:12 significant 3:15 24:18 31:13 35:5 87:13 105:16 signify	single 124:23 sir 4:25 5:4 32:9,22 33:1 site 48:14 53:13 sitting 120:20 120:25 situated 102:2 situation 24:21 58:25 six 39:5 51:7 61:23 110:1 120:18,25 128:17 sixth 9:1 size 28:22,23 skinny 12:9 slash 125:17 slated 30:15 31:20 sleeves 132:13 slower 109:16 slowly 109:11 sludge 123:21 124:11 small 12:9 78:24 79:19 85:5 91:15 Smaller 88:25 smart 99:4 smarter 19:12,15,15 Snyder 112:23 so-called 58:24 123:19	Solarize 59:15 solicit 127:3 127:12 128:10,14 solitic 129:1 solution 6:22 20:13 26:1 113:14 solutions 5:11 10:1,15 16:9 20:6,7 20:19 21:23 25:6,25 26:22 46:13 46:18 48:15 74:2 75:21 121:16,23 124:13,18 solve 49:25 50:23 solved 102:22 solving 53:20 somebody 89:7 somewhat 61:22 81:13 Sony 78:23 soon 85:20 120:8,12 sophisticated 29:8	sore 51:20 sorry 30:24 32:19 36:5 89:19 90:4 sort 95:3 108:1 110:7 111:4 114:22 115:1,8 125:19 soul 61:22 sound 24:12 125:13 source 31:25 59:22 84:21 94:17 104:7 114:5 122:1 sources 73:2 93:9 94:18 94:19 98:24 98:25 South 5:7,12 5:20 6:7 7:20 10:12 11:19 13:4 48:13 southwest 14:18 space 65:8 spare 125:11 speak 4:24 116:15 125:9 speaking 3:6 3:6 7:4 21:15 100:17 specialists 102:8 species 64:5 specific 110:24 132:6 133:1 specific-time 127:7 specifically 27:25 52:19 spectrum 67:6 spiked 119:13 spoke 117:9 spontaneous 68:20	staying 63:6 stays 129:11 steam 13:24 stenographer 133:8 stenographic 140:5 step 34:11 35:25 95:5 steps 37:19 47:1 49:15 85:6 stock 25:19 41:23 56:1 95:1 stop 27:3 34:22 37:20 48:6 51:25 62:22 68:7 69:19 103:10 stopped 103:5 storage 66:22 67:2 79:11 99:4 120:21 121:24 124:7 store 68:23 83:9 storms 20:10 story 12:5 strains 87:12	

Committee on Transportation and Public Utilities
April 26, 2019

Page 18

stranded 19:6 19:10 71:7 71:7 72:8 strange 15:5 strategic 19:20 25:10 30:2 84:3 strategies 35:9 99:18 107:17 strategy 73:4 107:19 135:1 street 92:25 124:5 streets 11:24 12:1,8 105:24 stress 66:9 strictly 50:14 strives 135:11 strong 17:9 56:8 136:8 stronger 16:11 48:4 structure 45:18 80:13 86:6,7,7 structured 44:15 stuck 19:5,9 student 21:11 studied 102:8 studies 85:6 95:9 108:3 124:22 study 10:4,8 10:19,20 16:22 17:8 17:12 24:7 25:5,6 75:21 83:13 97:25 98:4 98:14,21,23 99:2,13,16 101:24 107:24 108:2,6,8,9 109:2,6,18 109:23 110:5,25 111:7,11,16 116:20,23	117:8,13,17 118:16 120:19,24 124:23 126:17,22 127:19,23 128:2 129:18,25 130:13,21 stuff 29:8,14 52:23 stumbling 101:5 subject 62:8 submit 34:7 44:14 116:16 129:3,6 131:17 submitted 5:17 134:7 subordinate 43:20 subsequent 134:17 subsidies 120:23 subsidize 39:11 55:15 subsidized 56:15,21 subsidizing 57:23 129:21 subsidy 32:4 56:10 substandard 56:14 substantial 49:21 83:1 substantiality 125:17 substantially 109:3 substantiati... 113:2 suburbs 6:14 successful 68:11 successfully 63:21,23 135:17 suffer 6:1	suffering 97:14 sufficient 17:18 57:13 117:12,16 suggest 95:10 suggested 42:22 suggestions 88:1 suitable 75:20 suited 75:18 summarize 134:8 summary 61:24 summer 51:20 sunny 51:9 Sunrise 7:16 super 28:15 28:24 supervision 140:18 supplant 74:20 supplier 104:1 suppliers 103:18 113:5 supplies 65:12 133:22 supply 66:13 73:13 85:17 103:13 134:20,24 135:15,18 support 36:17 49:9 76:12 77:25 98:12,17 104:25 106:24 109:18 134:9 supported 34:3 supporters 33:13 101:16	supporting 33:12,22 37:2 48:8 108:2 supports 49:14 sure 21:14 35:25 44:16 47:3 54:6 55:24 59:1 87:14,19 90:17 101:9 101:13 112:5 surpassing 126:1 surprise 23:23 surrogate 28:21 surrounding 95:8 survey 5:19 127:13 survive 62:11 82:9 suspended 138:4,11,22 Susquehanna 91:10 sustain 98:12 sustainability 3:4 4:11 8:10 46:21 55:5 61:9 97:5 101:20 102:9 104:25 108:21,23 111:15 117:12 126:21 127:2 134:5 sustainable 4:1 10:21 37:5,6 55:12,17 59:21,22 69:6 86:14 98:2,10 125:22 126:6 131:4 swapouts	65:25 swapping 25:20 65:7 66:7 swift 34:3 switching 17:23 sybotia 93:13 syn 79:12,23 80:23 83:20 synth 92:14 synthesizing 94:1 synthetic 67:17 73:24 85:11 92:7 93:3,6,10 129:24 synthetically 67:19 system 9:13 20:9 25:10 25:11 26:25 34:1 54:7 57:25 58:13 58:20 66:9 67:9,15,16 67:24 72:9 72:18 74:11 74:13,15 84:13,14 91:2 101:10 116:25 118:12 123:10,25 124:25 system-wide 77:7 85:10 systemic 123:1 systems 8:13 19:4 20:16 23:16 28:16 35:10 73:18 73:20 89:6 130:15,21	tackle 50:10 58:1 tackling 48:7 take 12:17,18 19:25 31:5 31:19 34:12 41:22,23 42:15 43:13 45:3 47:1,6 47:9,10 48:9 50:21 51:23 86:16 87:5 94:10 101:14 110:8 124:2 129:10 133:11 taken 56:24 133:12 137:18 140:5 takes 43:11 talented 12:6 talk 7:21 8:9 55:3 61:12 64:11 65:6 69:20 90:23 109:5 talked 21:8 27:20 29:16 35:18 52:17 55:1 81:25 112:7 123:1 132:10 talking 37:13 45:20 48:7 63:15 64:6 65:3 82:23 86:12 90:1 92:11 95:20 108:19 112:17 121:8,22 122:6 tandem 101:23 tank 70:11 130:21 tanks 124:7 tape 28:20 target 27:25 52:19 targeted 7:4	30:1 106:11 targeting 106:6 targets 33:21 47:13 62:23 64:6 tasks 3:21 86:9 Taubenbeger 7:12 11:13 41:9 Taubenber... 1:12 88:5,6 88:12,25 89:13,15,18 90:6,14,19 91:5,9,13 91:17,22 92:1,5,10 92:21,23 93:2,5 94:5 94:9,14 95:12,14 96:2 131:13 131:14,21 137:20 138:6 taught 61:5 tax 59:12 87:11 taxes 62:12 team 3:13 teams 112:1 technical 82:1 technically 75:20 78:22 technologies 35:16 79:14 130:9,12 technology 20:3 29:3,5 52:18 53:18 78:23 79:9 81:3 87:20 94:18 99:5 130:23 teens 12:3 tell 9:10 113:4 123:3 telling 9:23 temperature 64:7	temperatures 51:20 temporarily 119:19 ten 23:17 51:19 93:21 120:12 129:6 ten-minute 133:11 Tenants 17:21 Tens 42:11 term 24:25 71:22 131:9 terminal 26:4 119:7 terminated 42:18 terms 25:18 29:6,13 66:25 120:17 133:23 territory 56:19 test 84:19 85:2,3,20 testify 11:17 33:8 38:7 46:16 116:5 116:14 137:3,10 testimonies 116:17,18 testimony 2:7 5:4,18 7:14 7:24,24 8:4 8:5 11:16 21:6,20 22:15 27:10 27:20 32:10 32:21 38:11 38:15 40:10 40:22 41:6 46:11 47:20 52:5,8,15 54:21 55:1 55:4,23 59:6,23 60:2 61:16 61:23 62:3 65:18 70:1
--	--	--	---	---	---	--	--

Committee on Transportation and Public Utilities
April 26, 2019

Page 19

78:14,19	131:14,23	42:21 44:4	37:21	68:13 81:14	training 18:8	16:18	two-year
96:8,17	131:24	44:12,24	three 12:2	122:23	36:25 76:24	transparency	108:1
97:3,7	132:1,2	45:5,13,19	18:17 24:22	timetable	trajectory	29:12	111:11
99:25	133:3,4,5,6	49:18 53:3	27:2 29:25	40:3	49:6,20	126:11	type 52:24
107:10,13	134:6 137:2	53:3 54:17	123:11	timing 76:11	transcript	transparent	58:25 114:5
107:16	137:5,9,24	55:25 57:15	127:24	tinker 79:24	140:6,14	135:13	114:6
116:3,16	139:1	58:4,9 59:6	three-minute	tipping 47:8	transfer	transportat...	117:17
117:3 119:1	thanks 11:5	59:8 62:2,5	23:10	tirelessly 3:13	59:12	1:2 2:5,15	127:9
130:17	105:4	62:7,14	threshold	title 4:6 33:2	transforma...	4:10 11:14	types 45:22
131:17	116:12,14	64:13 69:1	42:12 57:10	133:14	37:20 42:24	20:13 48:2	79:3 130:25
132:2,3	125:8	70:11 78:1	63:6	today 3:24	116:24	64:4 98:19	typical 42:2
133:5 134:7	that'd 3:21	81:15,17,18	thrive 4:23	7:16 11:17	117:8,18	122:2	47:23
thank 2:12,13	thermal 65:9	84:7 85:8	5:2,6,8,10	19:24 26:13	118:12,15	124:16,17	
2:19 3:5,12	95:22	85:13 86:5	5:19 13:16	33:8,14	transforming	126:3 131:2	U
3:16,20 4:3	121:25	86:12 87:18	22:7 97:20	35:20 41:17	72:13	134:22	U.S 49:1 72:1
4:4 7:9 11:6	130:15	87:23 91:10	thriving	42:1 44:13	transition	trapping 48:5	102:1
11:16 21:2	thermo 90:7	92:3 96:9	19:21	46:17 50:22	6:15 7:2	trash 123:21	Ultra 39:5,23
21:5,17,19	thing 12:19	100:8,16	throw 14:5	52:16 60:19	10:25 16:3	traveled	ultimate
21:20 22:9	12:20 63:17	103:24	throwing	61:12 63:16	16:15 17:8	100:11	110:23
22:10,14	67:6 81:16	106:12	50:7	70:3,7 71:5	17:10,12,17	trends 120:14	ultimately
23:8,12	85:8 89:25	109:2,12,23	thrown 15:9	71:25 72:18	17:21,22,24	triage 28:15	4:1 35:2
27:5,10	92:20	110:7	tide 51:10	82:9 85:14	18:1,11	triaging	39:14 61:15
31:1,7 32:9	117:22	111:22,25	tightened	93:6 100:8	19:1 20:24	25:11	62:10 80:1
32:11 33:3	121:5	112:21	63:9	100:20	32:5 35:15	trouble 42:13	unaffordable
33:6,7 38:6	things 14:15	113:13	time 7:9	105:3,18	49:10 50:11	82:24	120:12
38:10,13,14	29:10 39:8	115:6	13:17,25	116:15,22	65:1 70:14	true 62:16	unapprecia...
40:17,18,22	42:21 50:22	116:22	15:14 19:17	122:6 125:9	70:18 71:3	121:6	77:3
40:23 46:6	53:19 54:17	117:23	31:5 36:10	126:4	74:16 76:7	truly 49:14	uncertainties
46:8,15	65:1 68:6	118:1,5,14	41:21 42:6	today's 31:22	76:19,25	truth 21:15	74:5 82:4
52:3,4,7,8,9	68:24 69:4	118:18	42:23 44:5	told 9:6 13:23	77:5,7,18	try 53:7 59:8	uncertainty
54:13 59:5	79:8,11	125:21	47:9 48:6	15:8	78:1 84:15	65:3 79:22	81:24,24
59:23,24,25	81:2 82:14	126:9 132:6	48:17 53:23	tolerate 9:13	85:19 89:3	79:23 84:22	unchecked
60:1,5,11	86:21,22,24	132:8	53:24 64:2	tomorrow	118:1 121:5	85:5 127:2	8:16
60:15,16,20	86:25 87:6	thinking	64:21 65:2	84:13	121:6 122:7	trying 120:1	uncollectible
60:24,25	87:11 88:18	24:22 58:5	66:6 67:1	tons 71:10,11	122:19,20	132:6,10	56:23
61:12 69:22	89:21 93:10	65:22 66:10	83:11 86:19	103:7	125:1 126:5	tumble 29:23	undeprecia...
78:8,10,13	95:5,24	69:1 70:24	86:20 92:6	top 51:19	126:17,21	turn 20:6	72:16
78:14 81:9	108:15	83:9 84:25	96:11	123:1	127:7,19,21	21:4 47:8	underlying
87:23 88:2	109:1,15	third 23:24	110:23	topic 21:21	129:5,8,12	68:22 133:9	82:3 100:15
88:3,6	112:16,20	23:25 30:13	115:19	50:8 61:2	129:14,14	turning 19:25	undermine
90:20 96:7	112:25	59:16 73:21	119:10,20	61:18 78:15	131:4	twenty 111:5	101:10
96:11,13,14	120:16	thought	121:11	126:6	transitioned	twenty-mon...	understand
96:17,19	122:3,11	65:19 95:6	122:13	total 135:16	128:7	111:9	9:7 13:2
97:5 99:18	123:20,22	132:15	131:10	135:16	transitioning	two 28:8	15:6 45:14
99:21,24	123:25	thoughts	timeline	totally 57:11	15:16 25:12	34:25 43:8	83:14,16
100:6,8	132:9 134:8	52:21	40:13 109:8	touch 22:7	67:15 73:6	64:20 69:18	84:1 88:19
107:5,9,12	think 9:20,21	thousands	109:19	touched	74:7 90:2	71:2 80:10	97:20 115:6
107:13	14:25 23:9	33:21 37:24	110:25	55:22	125:21	93:16 95:24	123:9
115:22,24	25:6,11	42:11	111:11	toxic 5:15,25	127:5,25	109:1 111:2	understand...
116:3	26:3,6,8,10	threat 47:4	132:6 133:1	track 104:23	transitions	116:18	105:21
118:23,25	27:19 29:16	threaten	timely 136:14	129:11	16:22	127:20	understand...
125:3,5	30:16,20,22	36:10	times 12:5	Trades 36:24	128:23	two-thirds	21:25 27:22
131:10,12	41:18,20	threatened	36:21 48:4	train 95:6	transmission	135:16	50:24
							114:24

Committee on Transportation and Public Utilities
April 26, 2019

Page 20

understand... 102:22	urban 23:16	76:4,5,6,14	48:20	125:18	we're 70:10	133:25	109:14,19
understood 95:6	urge 19:24	77:3,12	126:14,15	129:15	84:12 91:23	witnesses	109:22
undertake 97:25	20:18,23	80:6 85:2	vital 102:12	wanted 7:25	111:4 114:8	116:21	112:13
undertaking 39:13	43:12 131:6	86:14 94:22	107:3 131:5	21:16 52:14	we've 6:4	137:11	114:8
underutilized 74:18	urgency	97:10,19,20	voice 7:5	54:15 63:17	28:17 31:18	women	121:17
underway 84:15	15:13	99:11,14	21:14 44:17	107:14	wealth 8:22	106:24	works 4:12
unfairly 17:22	urgent 43:1	101:2,16	99:14	116:17	weather	wondered	9:8 61:10
unfeasible 10:1	83:11	125:22	void 125:18	117:22	20:10 80:24	24:20	80:2 84:24
unintended 115:15	urges 131:1	126:6 131:4	volcanic	118:23	97:17	wonderful	88:11 97:9
union 10:24	urging 43:4	utilize 58:3	90:13	wants 6:20	weatherizat...	14:9	100:5
18:15	usage 56:6	utilizing	volcano 90:18	warmer	99:5 108:14	wonky 81:13	125:22
unions 17:2	97:15	35:16 73:18	volcanos	86:24 97:17	129:22	word 92:14	127:1
36:24	use 31:13		90:16	warming	weatherize	words 48:18	134:22
uniquely 16:3	34:14 35:6	V	volume 74:14	33:17 46:17	57:21	49:21 60:21	world 17:1
46:24	52:18 56:9	Valley 26:23	voluntary	122:21	website 40:7	work 3:3,6,9	63:21 67:14
Unit 41:12	65:1,7,23	value 24:17	103:8	warned 119:8	week 59:17	3:17 6:17	69:6,16
United 63:24	67:8 68:18	Vare 11:21	volunteer	Warning	109:15	12:16 18:3	70:13 80:7
units 39:12	70:21 72:7	11:22	127:14	46:13	weeks 110:1	34:20 36:23	85:14 88:20
65:25	72:23 73:12	variety 73:19	voters 50:3	Washington	welcome	37:2 47:11	100:13
130:14	79:2 85:11	86:8 93:8	voting 48:16	39:22,23	18:15	68:24 70:13	102:13
universal	93:12 123:6	108:15	vulnerable	Wasn't 92:8	wells 48:1	76:15 78:3	worried 70:6
43:16 56:22	123:19	119:9 130:8	3:8	waste 121:19	105:22	83:6 84:17	worse 35:19
universe	124:11	various 2:21		124:3	went 11:20,21	90:7 99:19	38:4 47:10
110:10,14	133:19	84:10	W	watching	west 7:17	101:23	51:13,19
University	useful 82:15	127:25	wage 16:11	12:15 13:1	80:25	103:1 105:1	123:11
23:15 46:23	126:10	132:21	18:14	51:8	wholesale	105:2	worst 9:18
51:9 52:17	uses 52:24	vector 25:13	wages 56:14	water 17:16	135:19	106:20	49:3 50:6
60:12 61:4	93:22 95:21	vehicle 36:18	waist 73:19	17:19 32:1	wide 113:3	108:5,16	58:14
96:5 120:18	125:23	132:19	wait 85:17	65:8 121:25	132:21	112:3,4,14	worth 58:5
unjust 9:13	utilities 1:2	134:11	wake 84:12	130:10,13	willing 20:8	113:23	worthy 103:3
unmet 43:2	2:5,15 4:10	135:4	Walker 116:7	130:15,15	20:15	121:14	Would-be
unpaid 44:1	6:19 11:15	vehicles	125:7,10	135:5,9	wind 104:5	125:20	18:5
unprece...	28:6,6,8	133:20	131:16,19	way 14:15,17	113:20	128:19	wrap 111:2
90:3,3,5	29:25 42:4	versus 16:13	want 2:19 3:5	24:21,24	120:14,20	132:13	124:20
unsung 45:5	75:13 80:23	16:14 79:4	3:12,20	29:9 30:2,5	121:12,24	135:6	written 7:23
unsustaina...	84:8,16	114:6	6:12 7:6,7	37:19 52:22	winding 37:7	worked 13:3	7:24 8:4
8:11,14,20	98:4 101:25	VHS 78:21	8:11 10:19	56:2 63:22	window	13:10 19:13	11:15
8:24	106:3 126:3	78:24 79:18	13:11 14:15	66:8 82:6,7	119:20	46:20	116:16
upgrades	127:22	viability	21:8 26:6,8	102:4	Wine 89:15	workers	128:10,12
75:5	131:2	110:18	45:3 47:15	103:25	winning 3:17	17:25 18:5	131:17
upheaval	134:22	viable 73:15	48:15 49:24	104:4,8	winter 42:17	18:6,10,10	wrong 79:18
103:17	136:23	85:4	58:25 60:11	105:10	66:23	36:21,22	
upstream	utility 15:24	Vice 1:10	61:23 62:1	108:5	wiring 36:9	workforce	X
20:16	19:21 27:15	112:24	64:11 65:17	113:18	wisdom 119:9	16:11 67:8	
	29:2 40:1	video 22:24	81:20 86:18	125:2	wise 118:2	75:9 76:24	Y
	40:14 41:16	32:23	95:16	ways 3:15	wish 78:4	97:21	yard 124:2
	42:8 43:4	videotape	106:21	12:10 17:18	withdraw	108:12,13	yeah 27:14,18
	47:16 50:14	78:21	108:3,4	28:14 35:1	48:23	108:19	29:5 91:14
	54:1 56:12	view 120:6	110:9 111:8	43:18 44:6	witness 4:17	working 3:13	92:18 93:4
	58:16 71:23	121:3	112:25	53:20 55:5	23:2,2	26:1 28:4	94:20
	72:16 74:22	viewing	113:1 115:7	59:19 66:10	32:15 40:20	28:18 34:22	107:20
	74:24 75:2	125:20	122:2,5	68:24 71:18	41:4 60:10	52:1 84:8	109:10
	75:9,13	vision 19:5,9	123:20,24	83:10 93:9	96:24 116:9	104:1	110:6 111:1
		19:16,17	124:8				111:20

Committee on Transportation and Public Utilities
April 26, 2019

Page 21

113:16	zones 35:16	2017 97:16	106:3	31:19 48:22		
123:5,9		2018 42:17	40 12:24	65:22		
year 15:9,9	<u>0</u>	42:19	31:24 65:24	90 24:17		
38:23 43:9		2019 1:6	400 1:5 113:7	99.9 120:22		
49:8 51:10	<u>1</u>	2020 34:21	119:10			
53:15 59:16	1 25:15 34:21	38:23 40:16	435,000			
59:17 63:24	38:23 40:16	2023 134:13	65:10			
65:12 68:13	71:11	2025 49:2	475,000			
71:9 93:14	1:20 139:3	2030 9:24	66:10			
97:13 111:2	10 24:15	10:6,23				
134:13	10:28 1:6	49:18	<u>5</u>			
years 7:17	100 9:24	103:16	50 24:4 25:8			
9:5,16 13:7	63:11	120:23	26:7 27:21			
13:21 14:6	1000 113:7	2035 25:4	28:11 30:12			
15:2 23:17	11.3 97:16	26:12	30:18 47:21			
24:22 26:7	12 13:21	2050 9:20,22	49:18 92:11			
30:12,18	12,000 33:11	15:13 19:21	106:6			
31:14 44:22	15 91:21	25:4 26:12	50-year 19:4			
45:8,8 51:7	150 42:8	49:7,11	19:8			
53:25 72:13	57:10	50:13	50/50 63:5,8			
72:17 86:22	155.11 42:6	20th 26:16	500,000			
91:20 92:10	1600 97:21	21,000 30:13	97:13			
92:11 93:21	106:24	216.48 42:3	53 50:17			
102:10	180976 1:17	22 55:10	58 51:20			
115:13	2:7 133:14	71:16				
119:5 120:4	133:16	23rd 12:1,7	<u>6</u>			
120:12,18	134:9	24th 11:23	6 17:15			
120:25	137:12	25 7:17 12:22	105:24			
122:24	138:1,8	66:19	6,000 65:13			
123:8	181081 1:18	25,000 65:11	97:11			
125:16	2:8 4:8 97:8	250 45:12	60 26:7 30:18			
133:22	183 115:12	26 1:6 14:6	47:22 92:11			
134:18	18th 11:24	28 49:2	686 108:20			
136:21	1947 13:5					
yesterday	1978 64:2	<u>3</u>	<u>7</u>			
87:1 109:18	1996 15:2	3 24:9	7 25:7 27:20			
York 35:4	1999 61:5	30 12:23	28:10			
70:12 72:4		51:10 54:24	7,000 30:14			
young 9:5,6	<u>2</u>	123:8	31:21			
9:12 10:18	2 6:6 25:15	30-year	70 26:7 92:11			
12:6 21:7,9	33:17 71:11	120:10	70s 92:13,15			
21:10,13	20 31:23	30.8 42:6	73 72:20			
60:18	65:24 94:25	300 57:17	75 65:12			
younger	103:12	30s 91:25	78 97:12			
78:20	122:23	92:1,3				
youngest 12:4	20-year 48:5	33,000 42:18	<u>8</u>			
12:5	2000 15:3	33.7 5:20	8,000 42:16			
	51:21	3356 23:23	80 9:20,21			
<u>Z</u>	2005 63:25	350 116:13	15:12 49:6			
zero 10:5,23	2010 134:13	36 54:25	63:2,2 71:9			
47:24 63:11	2012 134:15	36.4 42:9	86 48:4			
67:24 73:17	2013 24:7					
125:24	2016 25:7	<u>4</u>	<u>9</u>			
126:19	51:11	4 51:22 71:10	9 30:11,15			

