

COUNCIL OF THE CITY OF PHILADELPHIA
JOINT COMMITTEES ON FINANCE AND
TRANSPORTATION AND PUBLIC UTILITIES

Remote location using Microsoft® Teams
Wednesday, February 9, 2022
1:00 p.m.

PRESENT:

COUNCILMAN DEREK S. GREEN, CHAIR
COUNCILMAN KENYATTA JOHNSON, CHAIR
COUNCILWOMAN CINDY BASS
COUNCILWOMAN KENDRA BROOKS
COUNCILMAN ALLAN DOMB
COUNCILWOMAN HELEN GYM
COUNCILMAN CURTIS JONES, JR.
COUNCILMAN DAVID OH
COUNCILMAN MARK SQUILLA

ALSO PRESENT:

COUNCILWOMAN KATHERINE GILMORE RICHARDSON

RESOLUTION: 210653

1 - - -

2 COUNCILMAN GREEN: Good
3 afternoon. Thank you everyone for
4 joining us this afternoon for this
5 important Joint Committee hearing.

6 I understand that state law
7 currently requires that the following
8 announcement be made at the beginning of
9 every remote public hearing as follows:
10 Due to the current public health
11 emergency, City Council Committees are
12 currently meeting remotely. We're using
13 Microsoft Teams to make these remote
14 hearings possible.

15 Instructions for how the public
16 may view and offer public testimony at
17 public hearings of Council Committees
18 are included in the public hearing
19 notices that are published in the Daily
20 News, Philadelphia Inquirer and Legal
21 Intelligencer prior to the hearings and
22 can also be found on PHLCouncil.com. I
23 note that the hour has come.

24 Mr. Iannuzzi, can you please
25 call the roll. (Inaudible) although you

1 can sing if you'd like, and please say a
2 few brief words when responding so that
3 your image can be displayed on screen
4 when you speak or sing.

5 THE CLERK: Councilmember Bass.

6 COUNCILWOMAN BASS: Good
7 afternoon, Mr. Chairman and colleagues.
8 I am present.

9 THE CLERK: Councilmember
10 Kendra Brooks.

11 COUNCILWOMAN BROOKS: Good
12 afternoon. I'm present.

13 THE CLERK: Councilmember Allan
14 Domb.

15 COUNCILMAN DOMB: Good
16 afternoon, Chair and colleagues. I am
17 present.

18 THE CLERK: Councilmember Helen
19 Gym.

20 COUNCILWOMAN GYM: Good
21 afternoon, Mr. Chair and colleagues. I
22 too am present.

23 THE CLERK: Councilmember David
24 Oh.

25 COUNCILMAN OH: Yes, I'm

1 present. Thank you very much.

2 THE CLERK: Councilmember Mark
3 Squilla.

4 COUNCILMAN SQUILLA: Good
5 afternoon, Chairs and colleagues.
6 Present.

7 THE CLERK: Chair of the
8 Committee on Transportation and Public
9 Utilities Kenyatta Johnson.

10 COUNCILMAN JOHNSON: Present.
11 Good afternoon, everyone.

12 THE CLERK: And, Chair of the
13 Committee on Finance Derek Green.

14 COUNCILMAN GREEN: I am
15 present. Thank you, Mr. Iannuzzi. A
16 quorum of these two Committees is
17 present and this hearing is now called
18 to order. This a is joint public
19 hearing of the Committees on Finance and
20 Transportation and Public Utilities
21 regarding Resolution No. 210653.

22 Mr. Iannuzzi, will you please
23 read the title to the resolution.

24 THE CLERK: Resolution No.
25 210653, resolution authorizing the

1 Committee on Finance and the Committee
2 on Transportation and Public Utilities
3 to conduct joint hearings regarding
4 sustainability and diversification of
5 the Philadelphia Gas Works.

6 COUNCILMAN GREEN: Thank you,
7 Mr. Iannuzzi.

8 Before we begin to take
9 testimony from the witnesses we have
10 here for today, everyone who has been
11 invited to the meeting to testify should
12 be aware that this public hearing is
13 being recorded. And because the hearing
14 is public, participants and viewers
15 should have no reasonable expectation of
16 privacy. By continuing to be in the
17 meeting, you're consenting to being
18 recorded.

19 Additionally, prior to
20 recognizing Members for any questions or
21 comments they have for witnesses, I will
22 note for the record at this time that we
23 will use the chat feature available in
24 Microsoft Teams to allow Members to
25 signify that they wish to be recognized.

1 In order to comply with the Sunshine
2 Act, the chat feature must also only be
3 used for this purpose.

4 Also, I would like to state
5 that we do have a number of people who
6 are here for this very important
7 hearing. Please make sure that you keep
8 your audio on mute so we do not
9 interrupt or disrupt the hearing. This
10 is a very important conversation that we
11 are having here today regarding
12 diversification of Philadelphia Gas
13 Works and its future.

14 And it's interesting that we
15 are having this hearing on February 9,
16 2022. Because on February 10, 1836,
17 that was when Philadelphia Gas Works was
18 started and was started with a few
19 employees in putting gas lights on 2nd
20 Street. So PGW has always been an
21 institution owned by the public that's
22 been able to transition with time.

23 It started as a lighting
24 company and then transitioned into a
25 heating company. And when we look at

1 all the issues and challenges that we
2 have for Philadelphia Gas Works, we can
3 see a future transition as well. So the
4 goal of this hearing is to really review
5 and have a public conversation regarding
6 the Diversification Study.

7 I want to thank the Office of
8 Sustainability and all the partners of
9 the Diversification Study Working Group
10 on coming together to put together this
11 study. It happened during the course of
12 a pandemic, and we have a lot of great
13 participants who provided a lot of great
14 input in this conversation. Because of
15 the challenge in bringing together both
16 E3, who was one of the entities that
17 worked on the study as well as trying to
18 put together two different Committees to
19 have this hearing, we will have a
20 further hearing to provide additional
21 input for those from the public to
22 provide their perspective on the study,
23 and we'll look to get a date and time
24 for that hearing in the future so that
25 way we can have additional opportunities

1 to have this conversation.

2 We're also working with the
3 Office of Sustainability to see how we
4 can publish the written testimony
5 provided for this hearing online to
6 those who are not able to be at this
7 hearing, the opportunity to hear and the
8 opportunity to read some of the
9 conversation that occurred during the
10 hearing.

11 I want to thank both
12 Councilmember Johnson who is the Chair
13 of the Committee on Transportation and
14 Public Utilities as well as
15 Councilmember Katherine Gilmore
16 Richardson who is the Chair of the
17 Committee on Environment for their
18 support and work regarding this
19 important topic.

20 At this time, I'd like to
21 acknowledge Councilmember Johnson to see
22 if he has any comments as well as I
23 believe Councilmember Katherine Gilmore
24 Richardson as well.

25 COUNCILMAN JOHNSON: I just

1 want to thank --

2 COUNCILMAN JONES: Excuse me,
3 Mr. Chairman, before the other Chairmen,
4 for the record I am present and a member
5 of both Committees as well as being a
6 Gas Commissioner. I am here.

7 COUNCILMAN GREEN: And thank
8 you. And, Councilmember Jones, if you
9 would like to provide any additional
10 comment as well after Councilmember
11 Johnson because you have also been a
12 part of this work through your role not
13 only as a member of these two Committees
14 but also as a member of the Gas
15 Commission.

16 But with that, we'll go to
17 Councilmember Johnson and then allow
18 others to provide comments.

19 COUNCILMAN JOHNSON: I'll be
20 brief, Mr. Chair. I just want to thank
21 you for your hard work and your
22 dedication on this issue. This is an
23 issue of environmental justice. And so,
24 as it relates to the City of
25 Philadelphia, we can do a better job.

1 So I just want to thank you for your
2 leadership with PGW, and I want to thank
3 you for your leadership of Seth Shapiro
4 and I know with Councilman Derek Green
5 on the case, we will become a more
6 environmental friendly City of
7 Philadelphia.

8 So thank you very much,
9 Mr. Chairman, and keep up the good work.

10 COUNCILMAN GREEN: Thank you,
11 Councilmember Johnson.

12 Councilmember Jones.

13 COUNCILMAN JONES:
14 Mr. Chairman, I don't need to make a
15 comment. I am excited about the
16 discussion we're going to have this
17 afternoon, and I also thank you for your
18 leadership at the Commission.

19 COUNCILMAN GREEN: Thank you,
20 Councilmember Jones and Councilmember
21 Johnson. As you know and I think others
22 know that the City of Philadelphia has
23 and owns the largest municipal-owned gas
24 utility in the nation. We have hundreds
25 of thousands of ratepayers. Many who

1 are moderate to low income. And so, how
2 we balance that issue of providing
3 efficient and reliable energy through
4 our dedicated workforce who are members
5 of Local 686 and exempt staff and do
6 that in a way with a very seasoned
7 infrastructure and a very seasoned City
8 is a challenge as we also try to address
9 the issue of climate change and all of
10 the other variables and impacts it has
11 on our City.

12 I look forward to having this
13 conversation, which is the beginning of
14 a conversation that some of us have been
15 having for some time, now bringing this
16 conversation in a much more public way
17 through this Diversification Study to
18 better inform the public regarding some
19 of the challenges and opportunities that
20 we have as we try to address this issue
21 going forward. So I look forward to
22 today's conversation, and thank you to
23 all of the attendees, all the partners,
24 all of the individual organizations who
25 are here to provide their perspective on

1 this very important topic.

2 With that, Mr. Iannuzzi, will
3 you please call the first witness we
4 have to testify this afternoon regarding
5 Resolution No. 210653.

6 THE CLERK: Christine Knapp,
7 Director of the Office of Sustainability
8 for the City of Philadelphia; Amber
9 Mahone, Principal at the Energy &
10 Environmental Economics; and Seth
11 Shapiro, President of PGW, and they will
12 be joined by Niki Lintmeijer from E3 as
13 well.

14 COUNCILMAN GREEN: Okay. Thank
15 you and we'll have each person testify
16 in that order. Ms. Knapp, if you will
17 just state your name for the record and
18 then proceed with your testimony.

19 MS. KNAPP: Good afternoon.
20 I'm Christine Knapp, the Director of the
21 Office of Sustainability. Good morning,
22 Chair Green and Chair Johnson and
23 members of the Committee on Finance and
24 the Committee on Transportation and
25 Utilities. I'm here to testify on

1 Resolution No. 210653 regarding the PGW
2 Business Diversification Study. I'm
3 actually going to be joined by Niki
4 Lintmeijer, the Senior Managing
5 Consultant at Energy and Environmental
6 Economics or E3 who served as the lead
7 consultant on the study. And Niki and I
8 are going to be sort of jointly sharing
9 the project purpose and background, the
10 findings and the recommendations of the
11 study and the next steps that we're
12 taking. So I'll start off and then pass
13 it to Niki, and then I'll finish up our
14 testimony.

15 So as you may know,
16 Philadelphia is serious about being a
17 climate leader. We recently received an
18 A rating from CDP, among only 4 percent
19 of cities in the world to receive that
20 top rating. Last year with the release
21 of our Climate Action Playbook, we
22 updated our goal to commit to achieving
23 carbon neutrality by 2050.

24 This goal is in line with the
25 Biden Administration's goal and is

1 minimally necessary in order to stave
2 off the worst effects of climate change,
3 such as extreme heat and more frequent
4 and more severe storms. Meaning, this
5 goal will require decarbonization in all
6 sectors, including from thermal energy.

7 At the same time, PGW's gas
8 usage per customer has been declining
9 due to a host of factors, including
10 appliance sufficiencies, conservation
11 efforts and a change in climate. In
12 fact, in PGW's rate filing in 2017 they
13 cited warmer weather as a cause for
14 decreased usage. These issues will only
15 intensify as temperatures continue to
16 rise and policymakers place a stronger
17 focus on reducing the amount of carbon
18 in the atmosphere.

19 As a gas-only utility, PGW and
20 the City as its owner needs to
21 understand how the utility can provide
22 necessary services in a low or no carbon
23 future, will also thrive financially,
24 protecting low-income residents and
25 retaining its 1600-person workforce.

1 With support from the Bloomberg
2 American Cities Climate Challenge, the
3 City and PGW came together to explore
4 this challenge through the PGW Business
5 Diversification Study. The goals of the
6 study were, one, to examine
7 technological pathways to reduce
8 greenhouse gas emissions from heating,
9 cooking and other uses for natural gas
10 in line with the City's climate and air
11 quality goals, and to evaluate the
12 impact of those pathways on PGW's
13 current business model and customers.

14 Two, to identify near-term
15 business strategies for PGW that help to
16 sustain jobs and maintain customer
17 affordability. And three, to identify
18 near-term promising pilot projects for
19 PGW to have the potential to reduce
20 greenhouse gas emissions, benefit
21 low-income customers and result in long-
22 term workforce opportunities.

23 I'll now ask Niki to share her
24 screen and provide a brief overview of
25 the Diversification Study. You have

1 that enclosed slide deck in our
2 submitted testimony. And when Niki is
3 finished, I'll come back to me and
4 finish out the testimony.

5 MS. LINTMEIJER: Thank you,
6 Christine, and thank you for giving me
7 an opportunity to speak. My name is
8 Niki Lintmeijer. I am a Managing
9 Consultant at Energy and Environmental
10 Economics and I was a project manager
11 for the PGW Business Diversification
12 Study that was developed by E3 together
13 with Portfolio Associates and Econsult
14 Solutions. I am joined today by Amber
15 Mahone who is a partner at E3. And
16 through this presentation, I will walk
17 you through the key findings and
18 recommendations of our study.

19 The City of Philadelphia has
20 set ambitious climate targets. Reaching
21 carbon neutrality by 2050 requires
22 transitioning a way from fossil fuels
23 such as natural gas. The combustion of
24 natural gas in the City contributes to
25 approximately 24 percent of City

1 emissions. Through this study, we
2 analyze how PGW distributes natural gas
3 to Philadelphia's homes and businesses
4 can reduce greenhouse emissions, while
5 safeguarding customer affordability and
6 supporting PGW's workforce.

7 Our analysis resulted in the
8 following key findings: First, from a
9 literature and regulatory review, we
10 found that diversifying a municipally-
11 owned natural gas utility is a
12 multi-dimensional challenge that lacks a
13 silver bullet solution today. We also
14 found that a diverse set of existing and
15 emerging technology and business options
16 will be necessary. And as PGW's needs
17 and role evolve, so too does regulatory
18 landscape.

19 From our analysis of greenhouse
20 gas reduction scenarios, which I will go
21 on in more detail later, we found that
22 achieving net zero emissions in the City
23 of Philadelphia is challenging, but
24 technologically feasible and that near-
25 term action is required in order to

1 achieve net zero by 2050.

2 It is important to note that
3 household decisions and other market
4 trends along with legal and regulatory
5 environments will have a big impact on
6 the City's trajectory to net zero. Each
7 of the greenhouse gas reduction pathways
8 we analyzed presents trade-offs between
9 cost and feasibility, as I will show in
10 more detail later on. And in the long-
11 term, PGW's current legal and regulatory
12 structure and cost recovery model may
13 pose challenges mainly related to
14 customer cost and affordability.

15 Our analysis of business
16 diversification strategies, we found
17 that the long-term need for alternative
18 models can be partly addressed through
19 near-term promising diversification
20 strategies, ranging from options such as
21 expanding weatherization services to
22 providing strategic electrification
23 services. We found that these options
24 on the long-term however do not result
25 in sufficient additional revenues for

1 utility to cover its cost.

2 As mentioned, we found that
3 achieving net zero emissions is
4 challenging, but technologically
5 feasible through a mix of options.

6 These options range from electrification
7 on the bottom of this chart where
8 customers disconnect from the gas system
9 and adopt electrical appliances to
10 decarbonize gas, which is on the top of
11 this chart, where PGW would inject
12 renewable natural gases into the system.

13 In between those options, we examined a
14 hybrid electrification strategy where
15 customers adopt heat pumps that are
16 paired with a gas furnace to supply heat
17 in the winter, and we examined a network
18 geothermal strategy where PGW would
19 operate a shared network of pipes
20 delivering heating and cooling for
21 Philadelphia's buildings. They found
22 out energy efficiency is a foundational
23 component to each of these strategies.

24 They evaluated each of the four
25 scenarios based on four evaluation

1 criteria that were developed together
2 with the working group and stakeholders.
3 For the first criteria, the impact on
4 greenhouse gas emissions, we found that
5 all four scenarios have the potential to
6 reduce greenhouse gas emissions in
7 support of the City's climate goal.

8 For the second criteria air
9 quality, which we evaluated
10 qualitatively, we found that mostly
11 scenarios that involve electrification
12 improve air quality. That in contrast
13 to a decarbonized gas scenario, that
14 does not see significant improvements
15 compared to today. For customer
16 affordability, we found that all
17 scenarios result in challenges on the
18 long-term under the current regulatory
19 framework.

20 A decarbonized gas scenario
21 sees small impact on the short-term, but
22 may lead to significant changes in the
23 commodity cost of gas as more expensive
24 gases are required on the long-term to
25 achieve the City's carbon neutrality

1 goal. The electrification scenario
2 requires higher upfront costs for
3 customers, though customers may see
4 longer term benefits compared to other
5 decarbonization options examined.
6 However, this scenario poses challenges
7 for those customers unable to electrify,
8 as the costs of the gas system are
9 continuously shared over fewer customers
10 over time.

11 A hybrid scenario may mitigate
12 these effects, but still sees upfront
13 cost challenges and increase in energy
14 bills on the long-term. We found that a
15 network of a geothermal scenario
16 requires capital-intensive
17 installations, but the cost to customers
18 depend on how such a system will be
19 financed, for which additional research
20 is required.

21 In terms of impact on PGW
22 revenues and workforce, we found that a
23 decarbonized gas scenario and a hybrid
24 electrification scenario will keep the
25 current gas system intact. Network

1 geothermal systems may even lead to
2 additional workforce opportunities for
3 PGW. An electrification scenario on the
4 other hand would lead to a long-term
5 reduction in PGW revenues, with
6 potential implications for the workforce
7 on the long-term that require further
8 study.

9 Our project team considered a
10 variety of alternative business models
11 for PGW. These models range from
12 options that extend PGW's current
13 business such as providing RNG
14 operations, providing network geothermal
15 systems or weatherization services,
16 potential new business models for PGW,
17 ranging from providing strategic
18 electrification services to utility-led
19 financing to community solar.

20 We found that each of these
21 options may provide a way for the City
22 and PGW to facilitate part of the low
23 carbon energy transition while
24 supporting jobs and value to customers.
25 However, these options do not result in

1 sufficient additional long-term revenues
2 for the utility to cover its cost. I
3 would like to note that the PGW
4 Diversification Study was supported by a
5 dynamic analytical local tool developed
6 by E3. This tool allows users to
7 explore a different future for PGW, for
8 example, by providing inputs on types of
9 scenarios and fuel mixes, which results
10 in outputs related to PGW's consumption
11 forecast, greenhouse gas forecast and
12 revenue forecast. For this tool, that
13 is a dynamic user interface. Users can
14 explore different futures for PGW.

15 Going forward based on our
16 evaluation of options, we recommend the
17 following three near-term promising
18 pilots for PGW: The first is a
19 weatherization program that novel
20 financing opportunities, where PGW and
21 the City will work together to support
22 low- and moderate-income customers in
23 the upfront financing and implementation
24 of weatherization applications, such as
25 home insulation.

1 The second is a feasibility
2 study for network geothermal systems,
3 where PGW investigates the technical and
4 geological potential of block-leveled
5 network geothermal systems as well as
6 the utility financial model for such a
7 system. The third is a local
8 decarbonized gas program where PGW would
9 work together with other City
10 departments, such as Streets to convert
11 City waste into biomethane, making use
12 of local resources to reduce carbon
13 emissions.

14 Our study team also makes the
15 following additional recommendations to
16 promote actionable next steps. First,
17 we recommend to define mid-term
18 greenhouse gas reduction targets for
19 PGW. Second, we consider ways -- we
20 recommend the City and PGW to consider
21 ways to better align the legal and
22 regulatory constraints and cost recovery
23 mechanisms of PGW with achieving the
24 City's climate neutrality and air
25 quality objectives.

1 Third, we recommend the City
2 together with PGW to collaborate on a
3 greenhouse gas reduction implementation
4 strategy for Philadelphia's buildings.
5 And lastly, we recommend the City to
6 work closely together with PGW to
7 conduct a PGW workforce impact study.
8 Thank you. That ends my presentation.
9 I'll hand it over to Christine.

10 MS. KNAPP: Thanks, Niki. So
11 to pick up where she left off, the City
12 is committed to working with PGW and
13 other partners to take next steps on the
14 study's recommendations. To advance the
15 pilot projects, we are currently
16 exploring federal opportunities to
17 support the weatherization program pilot
18 recommendation. We are meeting with
19 philanthropic organizations to find
20 funding for a feasibility study for a
21 network geothermal, and we'll be
22 convening a meeting with PGW, the
23 Streets Department and the Water
24 Department to explore that local
25 decarbonized gas program pilot

1 recommendation.

2 On the other recommendations,
3 we are launching a workforce impact
4 assessment with technical support from
5 partners in the Bloomberg American
6 Cities Climate Challenge and with Local
7 686 to get a deeper understanding of how
8 different decarbonization scenarios
9 would impact PGW's workforce.

10 We're advancing a variety of
11 building decarbonization policies and
12 programs, including recently joining the
13 White House Council on Environmental
14 Qualities New Building Performance
15 Standards Coalition. We're also
16 beginning conversations with the Law
17 Department about reviewing PGW's
18 regulatory structure. And lastly, we've
19 encouraged the Gas Commission and the
20 Philadelphia Facilities Management
21 Corporation to work with PGW to set
22 greenhouse gas reduction goals for the
23 midterm.

24 I'd like to close by thanking
25 the members of the Diversification Study

1 Working Group. I won't name them all,
2 but I do appreciate the diverse
3 expertise that was brought to this
4 project. And I'd also like to thank the
5 many stakeholders that participated in a
6 workshop, in an online survey, Gas
7 Commission town hall and all those that
8 provided feedback on the study's draft
9 materials as well. It's clear that our
10 goals for a sustainable future and the
11 concern for the complexity of the
12 potential solutions are shared by many
13 across the City. Thank you for the
14 opportunity to testify and I'll be happy
15 to answer any questions that you have.

16 COUNCILMAN GREEN: Thank you,
17 Ms. Knapp. Before we go to any
18 questions, we'll hear from Ms. Mahone
19 and Mr. Shapiro, and then we'll take
20 questions from members of Council.

21 MS. KNAPP: So Amber is not
22 testifying separately. Amber and Niki
23 are part of the same team, and because
24 of Amber's jury duty, we weren't sure
25 who was coming today.

1 COUNCILMAN GREEN: No problem.

2 Okay. We'll go right to Mr. Shapiro.

3 Ms. Mahone, if you have any
4 additional comments or, Ms. Lintmeijer,
5 please feel free.

6 After Mr. Shapiro, we'll have
7 questions from members of Council.

8 MR. SHAPIRO: Good afternoon,
9 Councilman Green and Councilman Johnson.
10 Thank you to other members of the Joint
11 Committee. I really appreciate the
12 opportunity to be in front of you today.
13 I miss you guys and I wish that we could
14 be in person, but it's good to hear
15 nonetheless. And I'm really excited
16 that we're having this conversation.

17 As you guys know, I'm
18 relatively new to management in PGW, but
19 have nearly two decades on the Board.
20 And I've been very excited to sort of
21 have this conversation and move this
22 effort forward. I'm excited that we're
23 sharing what I think is really important
24 in facts and findings, and I'm excited
25 to talk what they mean for both the City

1 of Philadelphia and its residents.

2 So the goal is to talk about
3 some of the specifics for the
4 Diversification Study and what it means
5 in the bigger picture. But first, let
6 me start with the end and let me start
7 with what the next steps are. Christine
8 and Niki talked about some of this.

9 So first thing, so first and
10 foremost with respect to the study, the
11 study identifies three pilot programs,
12 and PGW is committed to pursuing each of
13 the pilot programs. Number two, the
14 study highlighted some really, really
15 significant obstacles and challenges and
16 we think the collaborative approach that
17 the study sort of already indicated is
18 the right way to try and collectively
19 find the path to solve some of those
20 issues. And then the third one, and I
21 want to say this quite clearly, we at
22 PGW are comitted to achieving the
23 Mayor's goal of carbon neutrality by
24 2050.

25 So with that said, let's go

1 through some things. First of all, it
2 is irrefutable that climate change is
3 one of the most significant threats to
4 our civilization. To address that
5 threat, we have to use every greenhouse
6 change reduction strategy there is.
7 Growth and renewables alone cannot be
8 the solution. It is truly irrefutable
9 that right now today natural gas is
10 perhaps the most significant tool
11 greenhouse gas reductions worldwide.
12 The overwhelming majority of the
13 reductions in greenhouse gas emissions
14 that's seen over the past few decades
15 have come from the transition from coal
16 and heating oil to natural gas.

17 Some folks have the luxury of
18 folks keep seeing myopically on one
19 facet of the issues. But when we're
20 making real decisions and you guys make
21 real decisions and we make real
22 decisions, we have to weigh all of the
23 facets and we have to focus on real
24 facts and we have to focus on the
25 repercussions of the decisions we make.

1 So let's talk about some facts.

2 Less than 5 percent of Pennsylvania's
3 electric grid right now is produced by
4 renewables. 40 percent of
5 Pennsylvania's electric grid is produced
6 by natural gas and converted into
7 electricity. About 20 percent is
8 produced by coal and about 20 percent is
9 nuclear. The growth that we're seeing
10 in renewable generation cannot keep up
11 the growth in demand for electric. And
12 if think about the exponential growth
13 we're going to see in electric vehicles,
14 it's just not going to keep up.

15 I haven't seen a single
16 credible projection that shows a decline
17 in natural gas usage for electric
18 generation over the next several
19 decades. In fact, just last month
20 McKinsey put out a study that said the
21 demand for electric will be two times
22 what it is today in 2050. There's not a
23 single projection for growth and
24 renewables that gets you to where demand
25 is today much less where demand will be

1 then.

2 And so, when there's a push for
3 electrification, it ignores the
4 monumental truth it's not going to
5 change any time soon. So much
6 electricity is created through burning
7 natural gas. And in fact, it burns more
8 gas making electric, making
9 electrification, than it makes in homes.
10 Let me try and put a finer point on
11 that.

12 So let's start with 100 BTUs,
13 British thermal units of energy, right,
14 and natural gas molecules. And you take
15 that 100 BTUs energy and you burn it in
16 an electric plant to create electricity,
17 and you transmit that electricity across
18 lines to Philadelphia and then you use
19 that electric in your home to create
20 heat. You are getting 36 BTUs of heat
21 in your home. If you take that same 100
22 BTUs of natural gas and you transmit it
23 across gas lines and put it into your
24 home and burn it into a natural gas
25 boiler in your home, you get 91 BTUs of

1 heat so 91 percentage of heat versus 36.
2 Simply put, it means electric heat burns
3 more gas regionally than gas heat. And
4 when you hear people talk about site
5 versus source, that's what we're talking
6 about.

7 Let me demonstrate it another
8 way. So the Delaware Valley Regional
9 Planning Commission calculates energy
10 use in Philadelphia. And so, the last
11 numbers they gave are as follows:
12 Electric energy produced 46,000 BTUs,
13 meaning British thermal units, at a cost
14 of 1.3 billion and emitted 5.1 million
15 metric tons of emissions.

16 Natural gas in that same period
17 produced 79,000 BTUs of energy at a cost
18 of 730 million and emitted 4.2 million
19 metric tons of emissions. So natural
20 gas produced close to twice as much
21 energy at half the cost with fewer
22 emissions. So the right decisions based
23 on facts and think about repercussions,
24 right. Those facts alone we think
25 demonstrates what an integral part PGW

1 plays in meeting the City's carbon
2 reduction goals.

3 We're also excited to talk
4 about opportunity to lead the effort,
5 right. I've actually said to people who
6 have asked about my transition from real
7 estate in energy, and I've said, if you
8 care about climate and you care about
9 achieving these goals, perhaps the
10 single best place to be is sitting at
11 PGW with the chance to make a
12 difference. So we have been leading --
13 and this is not new territory. We've
14 been leading this area for 186 years,
15 right.

16 So let me talk a little bit
17 about the things we're doing. Annually,
18 we eliminate methane escape investing in
19 our infrastructure. Last year we spent
20 \$85 million and replaced 37 miles of
21 cast iron main, right. Obviously, you
22 understand the equation. Every 5-ish
23 miles that you've reduced eliminates 23
24 metric tons of methane, right.

25 In Fiscal '22, we spent \$10.8

1 million weatherizing our low-income
2 customers' home. In fact, over the last
3 10 years we've spent \$75 million
4 weatherizing 25,000 low-income homes at
5 no cost to the owner. These efforts
6 have contributed to our overall energy
7 efficiency, and just those have reduced
8 emissions by 920,000 tons of CO2. We
9 are looking at our own footprint. We're
10 consolidating -- as you've seen some of
11 our facility consolidation plans, we're
12 consolidating eight buildings into one
13 central operations center, and that's
14 going to reduce the carbon print of
15 those operations by 50 percent. And
16 over the 25-year lease, save our
17 customers about \$100 million.

18 we continue to create things
19 and innovative things like advancing
20 CHP, combined heat and power. You may
21 have read about the project the National
22 Park Services is doing, converting
23 buildings to natural gas. That's going
24 to save the federal government \$750,000
25 a year in operating expenses, and it's

1 going to reduce their energy usage by
2 114,000 MMBTUs. We're a partner in the
3 US EPA's Methane Challenge Program. We
4 continue to look at things like
5 renewable natural gas, responsibly
6 sourced gas and hydrogen.

7 We also recently launched an
8 Energy Innovation Lab incubator
9 competition where we partnered with
10 Temple University's small business
11 office to identify and support creative
12 entrepreneurs and start-ups who have
13 innovative energy reduction concepts,
14 and we've awarded our first two winners
15 in that program.

16 We're proud of what we've done.
17 But the next question we need to ask is
18 what are we going to do to further our
19 shared goals, how do we further diverse
20 our business and tackle this challenge
21 of climate change while we maintain the
22 sustainability of this asset and the
23 affordability of energy for our
24 customers.

25 And there's a couple of things

1 you need to know, and I think the report
2 did a good job of highlighting some of
3 this. Remember, we are not a private
4 company. PGW does not have profits. We
5 do not have stockholders. The only
6 dividend we pay is \$8 million to the
7 City of Philadelphia. We operate and
8 break even. The cost of operating this
9 utility are spread with our customers in
10 a manner reviewed and approved by the
11 Public Utility Commission. That means
12 if our expenses rise or our revenues
13 fall, the direct result is an increase
14 cost to our customer base.

15 And as you guys know better
16 than I do, our customer base already has
17 one of the highest energy burdens in
18 this country due to poverty. We
19 understand that our efforts to further
20 diversify our model are not going to
21 happen overnight. That's why we're so
22 grateful for the collaborative
23 opportunity. We've been wrestling with
24 these issues for decades. And so, we
25 really appreciate this level of

1 engagement from you and your colleagues
2 and also from other key stakeholders.

3 I want to thank certainly you,
4 Gas Commission Chair Green and Gas
5 Commission Member Jones. You guys have
6 been spectacular partners in this. We
7 appreciate involving all things, but
8 particularly the Diversification Study,
9 the rest of your fellow Gas Commission
10 members. I want to acknowledge
11 Philadelphia Facilities Management
12 Corporation of which I used to be a
13 member, and those members work very hard
14 and are very supportive.

15 Local 686, our union is a
16 spectacular partner and none of the
17 things we accomplish get accomplished
18 without their participation, including
19 this study. And I have loved the
20 employees, private citizens and
21 passionate stakeholders who have been
22 engaged and involved in this
23 Diversification Study.

24 Climate change is a
25 generational challenge and it will

1 require a seismic shift in the way we
2 live and the way we create and deliver
3 the energy we use. Natural gas and
4 PGW's employees will continue to be a
5 driving force in reducing emissions. We
6 are wholly bought in to the goal of
7 carbon neutrality by 2050. We subscribe
8 to facts. We have a responsibility to
9 make sure that achieving that goal does
10 not result in untenable repercussions to
11 our core mission, which is providing
12 safe, reliable, affordable energy for
13 our customers. Thank you guys so much
14 for having me. I really appreciate the
15 opportunity to talk about it, and I'm
16 happy to answer any questions that you
17 and your colleagues have.

18 COUNCILMAN GREEN: Thank you,
19 Mr. Shapiro and the other panelists, for
20 testifying this morning providing that
21 insightful information, an overview of
22 the Diversification Study as well as
23 Philadelphia Gas Works perspective. I
24 have a few questions and I believe some
25 of my colleagues may also have

1 questions. If so, please indicate in
2 the chat feature.

3 I will start with Ms. Knapp.

4 One of the things that I think about,
5 the different initiatives that we have
6 and some of this work is going to have
7 to occur through policy change. I think
8 about my sister who's a physician. She
9 lives in California. She has her third
10 electric car now. And it wasn't that
11 long ago if you were in the City of
12 Philadelphia if you saw an electric
13 vehicle, you would think what is that.
14 Now, in almost every neighborhood in the
15 City there's an electric vehicle.

16 The reason for my observation
17 and research of how we've been able to
18 get to that point is because it's been a
19 combination of both policy initiatives
20 at the federal level and also to some
21 degree the state and also, the private
22 sector investing in electric vehicles.

23 So when we have a municipal gas
24 utility, the largest one in the nation,
25 probably the largest in North America,

1 probably one of the largest on the
2 globe, what steps are we taking as a
3 City to work with our federal partners
4 in reference to our federal delegation
5 to start up to make some of those policy
6 changes to make some of the things that
7 we're talking about as part of the ideas
8 coming out of the study come to
9 fruition, and then also reaching out to
10 other entities and maybe some
11 investor-owned entities in order to move
12 that forward?

13 MS. KNAPP: Sure. Thank you,
14 Councilman. I would say on the policy
15 front, we obviously have been working on
16 building decarbonization as an office
17 priority for a number of years. The
18 City's benchmarking program has been in
19 effect for almost 12 years and the
20 recent Building Energy Performance
21 policy that passed through Council in
22 2019 will have its first compliance year
23 in 2022. So there are some pretty
24 significant avenues that we've taken
25 from a local policy perspective. But I

1 think to your point -- Niki showed that
2 chart right at the beginning that showed
3 our 2050 goal. And if we did everything
4 that's in our Climate Action Playbook,
5 we still have that gap there.

6 And what we actually have seen,
7 we put that report out about three weeks
8 before the Biden Administration took
9 office. After they took office and
10 President Biden made a commitment to
11 having a carbon-free electricity grid by
12 2035, we actually redid that chart and
13 found that almost the entire green
14 section that was sort of our gap in
15 hitting that goal was eliminated by the
16 federal government taking that level of
17 action, so it just really highlights
18 that we can do a lot on our own, but we
19 can't do it all meeting those goals. So
20 having state level and federal level
21 policymakers part of this work is really
22 important and it hasn't really been
23 something that we were able to really do
24 much of in the prior Administration, but
25 I think we certainly have an

1 Administration that have the same carbon
2 neutrality goal and I think there are a
3 lot more opportunities partly through
4 policy, partly through the funding that
5 we are now seeing flowing from the
6 infrastructure bill, and hopefully if we
7 ever get to Build Back Better as well,
8 some additional funding opportunities is
9 there as well.

10 COUNCILMAN GREEN: And this is
11 for any of the panelists if they want to
12 jump in because I think this is
13 something that we need to take
14 leadership in trying to push these
15 issues, because if we're going to get to
16 some of these goals that we need, we're
17 going to need additional opportunities
18 for renewable natural gas, for
19 weatherization, for decarbonization for
20 geothermal. I think the infrastructure
21 bill provides some opportunities, but we
22 really need to have some of our fellow
23 partners take some leadership in helping
24 to make that happen, especially with
25 this current Administration.

1 So, Mr. Shapiro, I wanted to
2 touch base with you. I know PGW has
3 been working on some different
4 initiatives. I know the renewable
5 natural gas pilot was an initiative that
6 PGW tried to address, which provides
7 some space in that decarbonization gas
8 lane. I believe the pilot was about
9 \$500,000. And I believe PGW purchased
10 about \$130 million of gas per year, if
11 I'm correct.

12 I want to get some perspective
13 on what are some of the regulatory
14 challenges from the state law
15 perspective. And I know we have an
16 oversight entity with PUC, the Gas
17 Commission, PFMC and PGW which is a
18 collection of assets. But if you can
19 give some perspective on that pilot and
20 what was the response from PUC and what
21 led to it not being successful based on
22 the PUC perspective?

23 MR. SHAPIRO: Thanks, and
24 that's a great question. You probably
25 don't have time for me to give an

1 adequate explanation to all of the
2 regulatory hurdles we face. As you guys
3 are familiar, we have City oversight in
4 terms of the Gas Committee of City
5 Council. We have state oversight
6 certainly in terms of the legislature
7 that can pass bills but also the Utility
8 Commission, and then we also have
9 federal oversight in terms of FMSA and
10 FERC.

11 When PGW was created, it was
12 186 years ago. And while we've changed
13 a little bit, the documents that we
14 operate under didn't contemplate sort of
15 the realities that exist now. So there
16 are constraints in terms of the
17 businesses we can -- we're constrained
18 to be in the business of delivering
19 natural gas. We are constrained
20 geographically within the City limits.
21 We are constrained in terms of what
22 other businesses we can get into in
23 terms of putting our financing on our
24 bill or doing any financing together.

25 We have all sorts of

1 procurement requirements that keep us
2 from doing things that our investor-
3 owned counterparts have the ability to
4 do. You see a lot of them doing
5 creative things in terms of changing
6 their service area or changing what they
7 do, and we don't have that.

8 Now, what we have said both in
9 conversations during the Diversification
10 Study process but then also in all of
11 our email discussions is that as I've
12 talked about the monumental nature of
13 this challenge, so we are trying to
14 ignore temporarily the regulatory
15 hurdles and say, if they didn't exist,
16 what would we want to do. I mean, we're
17 working through that, but our idea is to
18 say find something, identify the
19 hurdles. I have faith having all of the
20 regulatory bodies I mentioned before, if
21 we came up with a good solution and said
22 this is the assistance we need, whether
23 that's assistance we need from you guys
24 or assistance we need from the PUC or
25 the state legislature or assistance we

1 need even from the federal government, I
2 think the mentality is there to do it.

3 You asked specifically about
4 RNG and you had the facts spot-on. We
5 would like to add a very, very small
6 amount of RNG to our gas supply. And I
7 think the PUC Commissioners wanted to be
8 able to say yes. And in fact, if you
9 read the opinion they issued, they said
10 all the right things. They understand
11 the significant nature of this too.

12 Unfortunately, one of the
13 regulatory hurdles is that there is a
14 least cost-supply requirement, right.
15 And so, they said because of that, we
16 can't approve it. And that is something
17 that we're now having conversations, my
18 staff and I have gotten calls from
19 legislators saying, hey, we're thinking
20 about a legislative solution to this
21 that maybe will allow us to do some
22 other things that may not even be --
23 there's other solutions that other
24 utilities have started to propose, which
25 it could be either doing a renewables

1 for gas and selling the RINs, selling
2 the credits to bring the cost to the
3 same cost as natural gas.

4 Now, you should know that we
5 have in some of the energy choice stuff
6 that goes on for customers, you do have
7 the ability as a customer to buy a
8 third-party gas supplier if you chose to
9 buy from a gas supplier who is using
10 RNG. That is a way for a PGW customer
11 to have access to RNG.

12 COUNCILMAN GREEN: That
13 definitely sounds like a conversation we
14 need to have with our Philadelphia
15 Delegation, others around the
16 Commonwealth regarding this issue. I
17 just have one last question and then
18 we'll hear from Councilmember Bass, then
19 Councilmember Gym and then Councilmember
20 Jones.

21 One of the aspects of this
22 transition is that we need to find ways
23 for people to use less energy. I think
24 Mr. Shapiro gave a lot of information
25 regarding the challenges in reference to

1 we don't have enough energy sources as
2 it is. But in order to look at ideas
3 like electrification or solar or
4 geothermal, decarbonized gas, the RNG or
5 renewable natural gas conversation that
6 we just had, we also have to find ways
7 to make the homes in the City of
8 Philadelphia more sustainable. Because
9 if you make the homes more sustainable,
10 you're using less energy and it makes it
11 more feasible for some of these other
12 ideas that we're talking about.

13 However, to do that, that's a
14 real challenge in the City of
15 Philadelphia which is a very seasoned
16 city. Not everyone has the resources to
17 make their home very sustainable. I was
18 just with Emily Schapira and the
19 Philadelphia Energy Authority this
20 morning at a press conference where they
21 were installing a solar panel on a
22 homeowner's home in Belmont, but they
23 had to make the home sustainable first
24 to stop the leakage of energy out of the
25 home, do that first, and then do the

1 solar installation.

2 And when I think about that, it
3 makes me think about Philadelphia Gas
4 Works having a Parts and Labor program
5 where we're using our PGW workforce
6 going to homes to make sure that people
7 have great energy, appliances and that
8 they are safe. But considering we have
9 that service, to me that also provides
10 an opportunity that we can maybe expand
11 Parts and Labor again to areas like
12 weatherization and other services to
13 make people's homes more sustainable,
14 and it can also provide an opportunity
15 from a workforce perspective considering
16 we have such a high rate of poverty and
17 we need to provide more jobs and
18 opportunities for people in the City of
19 Philadelphia, and there's also a
20 training perspective that can help
21 people coming out of a neighborhood
22 school or any school in the City of
23 Philadelphia to train people to go into
24 that space to grow that workforce.

25 So I say all that to say I

1 wanted to get some perspective on that.
2 PGW currently has a gas line training
3 program where if you go through
4 Community College of Philadelphia, you
5 can get a certification so you can be a
6 gas line operator and get a sustainable
7 job and career if that's something
8 you're interested in.

9 So I wanted to get some
10 perspective on how do we address the
11 weatherization aspect, if there's ways
12 we can do that using PGW. As I talked
13 about the Parts and Labor, how to expand
14 that and really use this transition and
15 issue on climate change as a way to
16 address workforce and poverty in our
17 City and still make our homes in our
18 City more sustainable and make some of
19 these other energy concepts that we
20 talked about more viable. And that's
21 for any of the panelists.

22 MS. KNAPP: Sure, I'll be happy
23 to chime in on that. And I think Seth
24 noted in his testimony that we do have
25 one of the highest energy burdens in the

1 country. There's some good data that
2 we've been able to access regarding
3 that, so I think that's a real problem,
4 this issue that's kind of at the nexus
5 of housing, climate, equity,
6 affordability. So it's something that
7 our office has been investigating over
8 the last year and change. We held a
9 series of community conversations with
10 six communities that were identified as
11 having some of the highest energy
12 burdens in the City, to kind of really
13 hear from people who are experiencing it
14 and what sort of solutions and ideas
15 they would have for the City to better
16 address that issue.

17 And I think one of the main
18 things that we heard is that -- we heard
19 a lot of findings and I'll be happy to
20 share the larger presentation about
21 these findings another moment -- but I
22 think one thing we heard is that if
23 we're just talking about weatherization
24 of homes, it's hard to do that when the
25 home has a lot of other needs. If

1 there's asbestos that needs to be
2 remediated, if there's mold in the home,
3 if there's a leaking pipe that's going
4 to keep leaking and even if you
5 remediate the mold, if the pipe isn't
6 addressed, it's going to create mold
7 again, right. So you can't just invest
8 in the weatherization of a home if
9 you're not looking at the home more
10 holistically. And that's not surprising
11 news, right.

12 The City ran an EnergyWorks
13 home audit and energy efficiency program
14 in the last Administration using AERA
15 funding and it felt short I think of
16 some of its goals in part because of
17 that. It only provided one sort of key
18 service and wasn't really connected into
19 other services that those same homes
20 also needed. So we've been partnering
21 with the Energy Authority on the Built
22 to Last pilot model which we think will
23 help us unpack how do we do better more
24 comprehensive home interventions that
25 can make homes healthier, cheaper to pay

1 for energy bills, more resilient against
2 heat and the changing climate. This is
3 really the groundwork and with 600,000
4 single family homes, it's going to be a
5 heavy lift. But I think that is really
6 going to be one of the priorities for
7 our office that overlaps both with the
8 gas work sort of transition work as well
9 as lots of other programs that we're
10 concurrently running. So I'm happy to
11 continue that conversation on that
12 front.

13 MR. SHAPIRO: The only thing
14 I'll add to that, Councilman, so as I've
15 mentioned we've spent \$75 million in the
16 years weatherizing homes and you're spot
17 on that that's helpful and a really
18 crucial component. Obviously, we're
19 very proud of Parts and Labor and having
20 our trained technicians go out and
21 address issues and also improve the
22 efficiency of their appliances, so
23 that's helpful as well.

24 Christine brings up an
25 interesting point about some of the

1 challenges of weatherization. There's
2 small other components of our
3 weatherization program where if our
4 folks find health and safety issues,
5 they have a small budget to address it.
6 So we've actually over the last two
7 years spent a quarter of a million
8 dollars addressing those health and
9 safety issues that we see in people's
10 homes.

11 So it's a great program. It's
12 largely voluntary, meaning that PGW
13 doesn't have to do it to the extent we
14 do it. But as we talked about, we think
15 it's the right thing to do. I think
16 your idea of trying to sort of leverage
17 the combination of Parts and Labor and
18 weatherization is an interesting one and
19 something I take note of and we'll look
20 at that further.

21 COUNCILMAN GREEN: Thank you
22 all. I would like to recognize
23 Councilmember Bass for questions.

24 COUNCILWOMAN BASS: Good
25 afternoon. And thank you, Mr. Chairman.

1 Just a couple of questions that
2 I had. And, Christine, number one, I
3 wanted to thank you for acknowledging
4 that we need state and federal
5 assistance. When you put up the graph
6 or I think it was maybe Niki put up the
7 graph and I was going through it, I saw
8 the big gap in terms of what we were
9 doing now and how we were going to get
10 to carbon neutrality by 2050, and that
11 green area was really troubling. And
12 so, I'm glad to hear that there's a
13 recognition that we do need our state
14 and federal partners and we need a
15 significant amount of assistance to be
16 able to get there.

17 My question, I actually have
18 one question for Christine and one for
19 Seth. Christine, if you can give me
20 some sense, because the numbers tell the
21 tale, of how are we getting to the end
22 result that we're looking for in terms
23 of making homes weatherized or just
24 ready giving them the intervention as
25 you've just described it so that they

1 are leading towards our goal of being
2 carbon neutral? And I guess what I'm
3 saying is how many units need to be
4 addressed in the City of Philadelphia
5 and how far along are we? Are we
6 tracking what's being done?

7 I know the City's doing stuff,
8 individual organizations are doing
9 things, PGW is doing things. Are we
10 tracking all of the things that are
11 happening so we can have a good sense of
12 how close, far away, whatever we may be
13 from reaching our goal?

14 MS. KNAPP: That's a great
15 question. As you know, there's not a
16 single sort of metric for that. There's
17 so many different actors doing so many
18 different programs, which is wonderful
19 but it is also part of the complication
20 that there's a lot of different programs
21 for one homeowner or one renter to
22 access, so that makes it difficult for
23 them.

24 But I will say this, because of
25 that energy burden data that we were

1 able to access, as I mentioned we've
2 been deepening our work in that regard.
3 We are starting to try to pull those
4 numbers together from those different
5 programs to see how they add up. So
6 just one top line number I'll share is
7 that according to this energy burden
8 mapping that we have, about 118,000
9 homes are in severe energy burden which
10 means they're spending --

11 COUNCILWOMAN BASS: How many
12 did you say?

13 MS. KNAPP: 118,000.

14 COUNCILWOMAN BASS: 118,000. I
15 thought you said 18,000. I was like is
16 that it.

17 MS. KNAPP: No. Yeah, 118,000
18 are in severe energy burden. I don't
19 remember the number below that that was
20 sort of the next level of very
21 energy-burdened, but it was somewhere in
22 the same ballpark of six figures,
23 100,000-plus. So what we're trying to
24 do is track according to those levels of
25 energy-burdened what are the programs

1 that exist for them and how many are
2 they servicing each year.

3 So for example, we just
4 partnered with the Energy Coordinating
5 Agency to apply to a federal
6 Weatherization Assistance Program
7 Innovation and Enhancement grants,
8 that's a mouthful, with the idea of
9 looking at the Neighborhood Energy
10 Centers that the Energy Coordinating
11 Agency services. They run those 17 --
12 there's 17 Neighborhood Energy Centers
13 in different neighborhoods of the City,
14 how many people are getting services
15 through those NECs, how many programs
16 are they getting registered for, et
17 cetera. So we're actually basically
18 embarking on trying to answer the
19 question that you just asked. And I'd
20 be happy to share what we've compiled so
21 far, but we still I think have more
22 digging and compiling to do.

23 COUNCILWOMAN BASS: Well, that
24 will be great if you could provide that
25 to the Chairman. And I'm sure he will

1 get that to the members of the
2 Committee, that will be fantastic, so
3 that we can have some sort of a sense of
4 how far off we are. And as the budget
5 season quickly approaches, that may be
6 something that we want to talk about
7 because your priorities are showing in
8 your budget. And so, if we're not
9 budgeting for it and preparing for it,
10 we're not really serious about it, so
11 that's the first thing.

12 My second question is for you,
13 Seth. And I know just loosely following
14 this issue in terms of some of the
15 things that are happening on the state
16 side, I know that previously you've
17 addressed questions around Senate Bill
18 275 and PGW's membership in industry
19 associations. And I was wondering if
20 you could kind of talk about that or
21 elaborate on that issue just a little
22 bit. If you could just touch on that,
23 that will be great.

24 MR. SHAPIRO: Thank you,
25 Councilwoman. And I am particularly

1 excited to answer your questions,
2 because as a Northwest resident, you
3 represent me, so thank you.

4 COUNCILWOMAN BASS: Thank you.

5 MR. SHAPIRO: So we've talked
6 about 275 a great deal. So let me
7 address it in sort of the context I did
8 with my comments in terms of facts and
9 repercussion, right. So fact, as a
10 Philadelphia resident born and raised
11 here, I'm never in favor of the seat
12 telling the City, telling you guys how
13 you can and can't legislate, right. So
14 that's why we're neutral on that, right.
15 That's too blunt a tool to do anything.
16 But we are extremely concerned about the
17 catastrophic impact that (inaudible)
18 energy of choices would have on our
19 customers want and the huge economic
20 burden it would place on the finances of
21 the City of Philadelphia.

22 We already serve a clutter in
23 population. Shifting natural gas
24 consumption upstream to sell us higher
25 cost electricity isn't helpful. Now, we

1 are subject matter experts. When
2 legislation comes, our stakeholders, you
3 and your fellow City Councilmembers and
4 state legislators and federal
5 legislators call us and ask opinions.
6 It is our responsibility to answer.
7 That's our job. That's not lobbying.
8 Imagine for a moment you called me to
9 say, hey, I have questions about a bill.
10 And my response to you was, Councilwoman
11 Bass, I might not be in support of that
12 so I'm not going to answer your
13 question. Our job is to answer
14 questions, but that's not lobbying.
15 So you also asked of our
16 membership in industry associations,
17 right. We're a member of couple of
18 industry associations, American Gas
19 Association is one. That's a national
20 trade organization comprising of 200
21 members. On the more local level, we're
22 part of the Energy Association of
23 Pennsylvania. It's just Pennsylvania
24 utilities.
25 The value we receive from these

1 organizations is exponential compared to
2 what we spend. Again, I'll give you
3 facts. We spend \$445,000 a year I think
4 on the American Gas Association. They
5 provide a whole variety of services and
6 best practices. We have I think 75
7 different employees who participate in
8 34 different committees with their peers
9 around the country. These are
10 committees including safety, energy
11 code, sustainability, accounting,
12 customer service, cyber security, human
13 resources, internal audit, gas control,
14 materials, OSHA and I could go on and
15 on, right. They teach us best practices
16 about pipeline safety, about methane
17 reduction. During COVID, they were an
18 invaluable resource with health facts
19 and advice on how to protect our folks.
20 So the AGA has to (inaudible) IRS, what
21 percentage of their activities finds of
22 lobbying. This percentage is 3.8
23 percent, right, 3.8 percent.

24 So what we get out of AGA is
25 not lobbying. What we get out of AGA is

1 best practices. By the way, the Energy
2 Association of Pennsylvania I think just
3 reported a couple of weeks ago their
4 number of what percentage of their
5 efforts are lobbying as opposed to the
6 (inaudible). It's 1.47 percent. And by
7 the way, when it says lobbying it's not
8 (inaudible). AGA is lobbying for
9 pipeline safety. AGA is lobbying for
10 LIHEAP. AGA led the effort nationwide
11 at \$4.5 billion in supplemental LIHEAP
12 funding in the American Rescue Plan Act
13 of 2021. Also, they got \$8.25 billion
14 in LIHEAP in 2021. It's the highest
15 level in history. They lobby for
16 infrastructure money for methane
17 reduction and alternate fuels. So this
18 whole idea when people say we shouldn't
19 be part of these organizations, these
20 organizations accrue benefits to PGW, to
21 the City and to ratepayers that are so
22 exponential compared to what we spend
23 that it's quite frankly comic to think
24 we would be better served not being
25 members. So thank you for the

1 opportunity to address that.

2 COUNCILWOMAN BASS: Thank you.

3 Thank you for clearing that up. I
4 appreciate it.

5 Thank you, Mr. Chairman.

6 COUNCILMAN GREEN: Thank you,
7 Councilmember Bass.

8 We'll now hear from
9 Councilmember Gym and then Councilmember
10 Jones.

11 COUNCILWOMAN GYM: Thank you
12 very much, Mr. Chair, and thank you
13 especially to my colleague Councilmember
14 Bass. I appreciate your line of
15 inquiry.

16 I wanted to follow up with Niki
17 a little bit on the Diversification
18 Study. And one, I just also want to say
19 thank you to Christine Knapp, to your
20 team and everybody. I know that the
21 City has been explicit about its
22 commitments and the need to move boldly.
23 And these are difficult times, there's
24 no question. We are going to have to
25 imagine a future that does not currently

1 exist while protecting our customers,
2 protecting our City's standing, ensuring
3 employment and a strong labor force,
4 they all matter to us. But it's
5 important to think about that part of
6 this conversation is not about today and
7 the metrics of today. Part of our
8 conversation is about the metrics of a
9 decade from now or 20 years from now
10 long past people's tenures and different
11 agencies, long past all of us being in
12 office, and we must still stay the
13 course, right. So I am interested just
14 in hearing from you a little about the
15 Diversification Study from Niki, I
16 guess, whether there are potential cost-
17 savings -- whether the study looked at
18 potential cost savings or other
19 potential value in exploring the
20 alternatives in terms of the ability to
21 potentially decommission portions of an
22 aging network and infrastructure. Is
23 that something you took a look at? And
24 if you didn't, is it something that you
25 think would be beneficial to examine the

1 future studies?

2 MS. LINTMEIJER: Thank you for
3 that question. That's an excellent
4 question. Our focus of the study was
5 really diversification options for PGW,
6 so how PGW could thrive in a lower
7 carbon future. As part of that scope,
8 we did not look at potential cost
9 savings for PGW, but we did look at
10 additional business models and business
11 revenues that are complimentary to the
12 work that PGW is doing today. And we
13 looked at a broad variety of options
14 from, for instance, the network
15 geothermal systems that are mentioned,
16 expanding the weatherization services,
17 but we also looked at options such as
18 PGW providing strategic electrification
19 services to its customers, which will be
20 a bit further away from the current
21 business model.

22 Each of those options have the
23 opportunity to provide value
24 particularly to either PGW's customers
25 or the workforce or the City as a whole

1 in achieving its carbon neutrality
2 goals. We also found that none of these
3 options really have the potential to
4 fully support or to fully recover or
5 cover the cost of the utility on the
6 long-term. So while providing a
7 combination or a mix of these options is
8 valuable, cost recovery is still a
9 challenge on the long-term.

10 COUNCILWOMAN GYM: Yeah,
11 there's no question that we're conscious
12 about that. Can you talk a little
13 bit -- I mean, we've made multiple
14 statements about the financial viability
15 of the natural gas model. We've talked
16 about declining customer base as
17 alternatives become more affordable and
18 more accessible. Can you speak to the
19 financial risk facing PGW if they don't
20 diversify quickly enough or
21 significantly enough and embrace
22 renewable options from the revenue
23 standpoints?

24 MS. KNAPP: If I can jump in
25 first here, Niki, and then have you

1 answer as well. I just wanted to speak
2 a finer point to the point that you're
3 bringing up, Councilmember, because I'm
4 not sure we stated it earlier. But it
5 was actually one of the concerns that we
6 had and why we wanted to tackle this
7 study, which is the gas system costs
8 what it costs. Any utility takes what
9 it takes to manage that infrastructure
10 and do what it needs to do. I worked at
11 the Water Department and you have to
12 understand that bottom line.

13 When people leave the system,
14 it still cost what it cost. And so, a
15 part of our concern was that if people
16 who can afford to electrify their homes
17 start leaving the system, those who
18 cannot afford to would be left paying
19 the cost of maintaining that system,
20 whether it's a million people or 100,000
21 people. So I do think that's an
22 inherent concern that we had.

23 And as we noted in my upfront
24 comments, we have seen decline with PGW
25 and they've noted it themselves as well

1 from a climate sufficiency from warming
2 weather, so that was a key concern that
3 we had. And then if you were to add in
4 any carbon tax, any larger sort of
5 federal or state intervention from a
6 regulatory standpoint, what would that
7 then further do, right. So that was
8 very much part of our impetus behind
9 this and I just wanted to give that a
10 little extra flavor, so thank you.

11 And, Niki, I don't know if you
12 wanted to add anything further on that.

13 MS. LINTMEIJER: I think that's
14 exactly right. It's important to note
15 that the cost of the system are costs
16 and investments that have been made over
17 the past decades, so decades of
18 investments and reliable infrastructure,
19 especially with programs to prevent
20 methane leakages, the costs of the
21 system are there and they're embedded.

22 And to answer your question on
23 potential risk, what we're seeing and
24 what Mr. Shapiro said before, currently
25 under of the framework the cost that the

1 PGW has to maintain are shared over the
2 customers. So you can imagine if
3 customers choose to electrify for
4 instance, that customer would leave that
5 gas system customer base. And as that
6 happens, as fewer customers remain on
7 the system, there's sort of a risk that
8 those rates or the cost that PGW needs
9 to recover are shared over those fewer
10 customers, which potentially raises the
11 cost for customers. And that we think
12 it's especially a risk for low-income
13 customers as they may not have the means
14 to an electric heat pump, for instance.

15 COUNCILWOMAN GYM: Okay. And I
16 think this is one of the reasons why we
17 want to be talking now. We're not
18 talking about something that happens
19 overnight clearly, but we need to be
20 talking about a future-forward
21 conversation about financial viability
22 as well as climate. We are also
23 stewards and as managers of this public
24 utility, which we held onto for a
25 significant political reason to take

1 care of our customers, but we also are
2 deeply invested in the financial
3 viability, and diversification is not a
4 threat to the financial viability.
5 Diversification may be, in fact, the
6 underpinning of viability here, and I
7 think that that's one of the things I
8 wanted to highlight and hope that we can
9 continue to have more of the
10 understanding about the failure to move
11 quickly enough could put us in a bad
12 financial state. Again, maybe not in
13 the next two or three financial cycles,
14 but we're looking at 10 to 20 years.

15 Increasingly, we are taking a
16 look at population health benefits and
17 climate issues. Was the study able to
18 consider the potential population health
19 impact, and particularly the benefits of
20 shifting from natural gas towards
21 alternative sources? And could you
22 speak to the cost of a city that is, as
23 we have noted, one of the most polluted
24 cities in the country, particularly on
25 air pollution standards and how they end

1 up being borne by the City?

2 MR. LINTMEIJER: I can briefly
3 follow up on that. So one of our
4 evaluation criteria that was developed
5 by the working group and stakeholders
6 was air quality, so we looked at
7 potential impact on our air quality.
8 But it's important to note that we did
9 that from a qualitative perspective, so
10 we did not look at a quantification of
11 what those health benefits could be to
12 the City.

13 We linked air quality to the
14 combustion of fuels. And as you saw in
15 that chart that I pulled up earlier with
16 the check boxes, we see that especially
17 moving toward electrification
18 potentially improves air quality whereas
19 continuing to rely on decarbonized
20 gases. We do not have a quantification
21 of those impacts.

22 COUNCILWOMAN GYM: Well, we
23 look forward to working with you a
24 little bit more, and I hope certainly
25 that help becomes part of the

1 conversation around climate. This isn't
2 an abstract issue, but one that directly
3 impacts our residents' lives. Before I
4 move to Mr. Shapiro, I just wanted to
5 say a little bit of some thoughts.

6 There's no question that we
7 have to work on a multiple goal kind of
8 strategy. We do have both the urgency
9 of time, which will not stop in any way,
10 shape or form, but we do have some
11 amount of time to be able to move
12 through things. And one of the most
13 important things is to be able to
14 balance these multiple goals and
15 responsibilities first and foremost
16 ensuring and protecting our residents'
17 health, ensuring that all Philadelphians
18 have the energy they need for a
19 dignified life at an affordable rate,
20 protecting jobs, especially union jobs
21 in ensuring that workers aren't left
22 behind and eliminating the use of fossil
23 fuels by 2050 at a minimum, and noting
24 that we don't actually have that plan.
25 We have a chart towards it. But as my

1 colleagues have noted, with a
2 significant gap, and you have noted as
3 well that we can't actually get to 2050
4 by ourselves. So this is a serious
5 concern for us. So either we're going
6 to need to accelerate on our end.
7 Because if we are to have to a plan by
8 2050, it is my personal opinion that we
9 have to be in charge of that plan,
10 right. We can't cede so many
11 significant parts of the plan to other
12 entities, so we need to think about what
13 that means for ourselves.

14 I also want to just open up a
15 little bit about being careful of false
16 choices, that only some of these goals
17 can be achieved, that some things are a
18 direct threat to others. At the pace
19 that we're on and with the urgency in
20 which this needs to happen, we actually
21 have to reject those false choices and
22 need to be on a dialogue and playing
23 field where we can talk about protecting
24 residents' health and ensuring that
25 Philadelphians have the energy they

1 need. And we're going to have to have a
2 conversation about protecting and
3 creating union jobs while we move
4 towards a world in which the City is not
5 reliant on fossil fuels over the next
6 several decades.

7 So the task is to figure out
8 how we can accomplish these objectives
9 in a manageable way, recognizing that
10 some may accelerate at different points
11 than others. Not all of them have to
12 move as quickly at the same time, but
13 they all have to move and we all have to
14 be committed to all of them so that both
15 our residents aren't harmed, our
16 customers aren't harmed, our City is not
17 harmed and that we maintain a strong
18 labor force in the process.

19 This is clearly a complicated
20 issue, but it does not mean that we
21 stall out or that we have to slow down
22 things. I just think we have to be even
23 more aggressive in exploring and
24 pursuing alternatives. So I would
25 encourage the City's sustainability

1 group to not continue with the
2 feasibility studies, but to start
3 exercising on smaller scale pilots as we
4 continue to do feasibility studies that
5 allow us to take a look at larger scale
6 pilots, so that would be just one
7 comment and point of feedback.

8 For Mr. Shapiro, I did want to
9 ask a couple of follow-up questions to
10 my colleague Councilmember Bass, and I
11 wanted to thank her for laying out some
12 of the questions. But I do want to be a
13 little bit more clear about what I
14 understand PGW's work to be around SB
15 275. And to be clear, the City of
16 Philadelphia -- you are our municipal
17 entity. We resisted the need to sell
18 off PGW, to privatize it, because the
19 City and our municipal utilities should
20 be on a joint path together.

21 And I feel very strongly that I
22 would have fought had I been on City
23 Council, I wasn't at the time, but I
24 would have fought for privatization of
25 PGW in part because we want to be able

1 to jointly control our own future, to
2 plan together and to look out for the
3 best interest of our residents while
4 bringing in expertise from the energy
5 world about what our City can do.

6 The City is on record as
7 opposing SB 275. We believe that
8 preemption is a hazard. It limits our
9 ability to consider it and SB 275 to be
10 clear is a preemption bill. It was
11 blocking municipalities from eliminating
12 fossil fuel use and promoting
13 electrification.

14 And I guess I have an issue
15 with you saying that you've taken a
16 neutral stand on the bill when, in fact,
17 it seems to indicate that right-to-know
18 legislation -- right-to-know lawsuits
19 have indicated that you took a direct
20 role in crafting the legislation,
21 strengthening the legislation. And then
22 my concern is that with your stating
23 that you are now neutral on the
24 legislation that you helped craft and
25 strengthen, that works against the City

1 of Philadelphia's own interest. How are
2 you reconciling that? Because I
3 actually think that in order to do this
4 appropriately PGW can't be neutral. You
5 have to step away.

6 MR. SHAPIRO: I'm sorry. Did
7 you say we have to step away?

8 COUNCILWOMAN GYM: I think you
9 have to say that preemption, a
10 preemption bill from a city-owned
11 municipality public utility is
12 antithetical to PGW's mission and to the
13 City of Philadelphia's best interest.
14 That would keep us consistent on our
15 positions. Not neutral. You had a role
16 to play in the legislation. This was
17 prior even though you were on the Board
18 as the executive, as now the Executive
19 Director, it is antithetical to the City
20 of Philadelphia. It harms us. It
21 promotes preemption, which is harmful to
22 our City's ability to control our own
23 future. And it is implicitly counter to
24 the testimony issued by the Mayor's
25 Office of Sustainability.

1 COUNCILMAN GREEN: Mr. Shapiro,
2 I just have a point of information
3 considering that I was the sponsor of
4 that resolution opposing that work.
5 Councilmember Gym, earlier I just want
6 to make sure I have the full context of
7 the question. Earlier you also said as
8 a preamble to this question that you
9 would have supported the privatization
10 of PGW. I want to make sure I --

11 COUNCILWOMAN GYM: I would not
12 have.

13 COUNCILMAN GREEN: Okay. I
14 want to make sure.

15 COUNCILWOMAN GYM: Very
16 important for you to say. I would not
17 have supported the privatization of PGW
18 specifically because of situations like
19 this. I want the City of Philadelphia
20 and its publicly-owned utility to be on
21 the same page.

22 There was a purposeful decision
23 not to privatize PGW, and I believe
24 again for the record, Mr. Chair, that
25 that was the right decision. Because in

1 difficult circumstances, we must hold
2 the same line in order for us to meet
3 our common goals in the best interest of
4 our customers, of our City, of our
5 workers and of our residents.

6 And so, that is why I'm asking
7 this question to you, that it's not
8 enough to say that it's okay for you to
9 be neutral on legislation when you had
10 such a strong hand apparently in
11 crafting it and maybe even making it
12 stronger. I think it's important with
13 new leadership at PGW that you take a
14 stand against SB 275 and keep our public
15 utility in line with the mission, the
16 goals and the stand of the City of
17 Philadelphia.

18 MR. SHAPIRO: So thank you. I
19 appreciate the question. And let me say
20 as an At-large you represent me too, so
21 thank you.

22 COUNCILWOMAN GYM: Yeah.

23 MR. SHAPIRO: If you'll indulge
24 me, you said two things before you asked
25 the SB 275 question that I don't want to

1 let pass, because you made two really
2 critical points that I want to emphasize
3 and provide a little color on one. So
4 the second point you made was about your
5 position of sale, and I'm not here to
6 opine as to whether PGW should have been
7 sold or not.

8 But to one of the points I made
9 during my testimony, I couldn't agree
10 with you more that as a city that wants
11 to make a difference with respect to
12 climate change, we are the largest
13 municipally-owned utility in the
14 country. And if we want to make a
15 difference, I can think of no better
16 place to be than as the owner of that
17 utility. So I echo what you said. I
18 think it puts us in a really good
19 position to be accountable to our
20 citizens other than shareholders, and
21 that's a nice position to be in.

22 The second thing you said,
23 which you said earlier, was talking
24 about the financial implications of
25 conservation. And there's a nuance that

1 I think is important for you folks to
2 recognize and I don't mean Council, I
3 mean the public, about what goes on in
4 terms of this conversation with PGW.

5 So this Diversification Study,
6 which we were thrilled to participate
7 in, asked a very specific question. And
8 that question is how can the City
9 decarbon neutrality by 2050 and what
10 role can PGW play and what are the
11 impacts. That's a very important
12 question to ask. But there's another
13 equally important question to ask, and
14 it's a question we ask internally every
15 day. What should PGW do to prepare for
16 the moment natural gas revenues itself
17 aren't enough to sustain the company and
18 our workforce. But our diversification
19 in response to that question isn't
20 limited to things around climate, right.

21 We have to look at this asset
22 of which we are the stewards for the
23 City and say what are the skills, what
24 do the things have, right, what are the
25 things that our workforce is good at.

1 Our workforce is good at customer
2 service and billing and infrastructure.
3 And Councilman Green talked about, Parts
4 and Labor.

5 We own this incredible
6 infrastructure design for the
7 transportation of molecules and what
8 does that mean, and what else can that
9 transportation network and
10 infrastructure and rights of way be used
11 for. We own this incredibly valuable
12 LNG facility, right, we gave ratepayers
13 \$4 billion with this LNG facility and we
14 continue to produce revenue through the
15 LNG facility.

16 So I love the lens you put on
17 it, which is we need to make sure that
18 if we are too slow, that can have more
19 catastrophic financial repercussions
20 than being quick to act. So I think you
21 put it very well and I just had to thank
22 you for that.

23 COUNCILWOMAN GYM: To be clear,
24 I was not talking about slowing things
25 down. I was actually talking about an

1 urgency of action, but there are
2 different --

3 MR. SHAPIRO: You're talking
4 about how not acting can be equally
5 catastrophic. I'm with you. So let me
6 talk about two points. First of all, it
7 is not my job and it is not my
8 coworker's job to be for or against
9 legislating necessarily. I hear you say
10 I should have come out against it or
11 would have come out against it --

12 COUNCILWOMAN GYM: Can you
13 clarify did PGW have an active role in
14 the crafting of SB 275?

15 MR. SHAPIRO: So I would have
16 said your language of saying we had a
17 strong role -- I mean, you've seen the
18 emails. I've seen the emails, right.
19 In email over email, our Vice-president
20 of Government Affairs says PGW neutral.
21 There are a couple emails, right, and I
22 understand this was a rightful request
23 which was voluminous, I mean pages upon
24 pages upon pages, right, none of which
25 had anything to do with us opining on

1 this. Most of which were all the
2 investor-owned utilities commenting on
3 things, and everyone's pointing to a
4 single or two emails from one of our
5 employees saying, hey, when you're
6 describing energy, why don't you
7 describe it in these ways, right.

8 And it's what I said to
9 Councilwoman Bass, if you call me and
10 ask me about a bill, what would your
11 reaction be if I said, I don't know if I
12 agree with the bill so I'm not willing
13 to answer your questions. If you say
14 what language would encompass these
15 sorts of things, it's our job to know
16 how various bills impact us. So I
17 understand your frustration. I
18 understand others frustration.

19 I get -- let me just finish
20 what I was saying. I get that
21 preemption is not a thing we're in favor
22 of for the City. And I've said that
23 multiple times and I've been in multiple
24 venues, right. The fact is we are not
25 in favor of preemption. If you want to

1 do a public statement that says I, Seth
2 Shapiro, am in favor of anyone
3 preempting the rights that Philadelphia
4 govern, I'll sign --

5 COUNCILWOMAN GYM: No, I'm not
6 asking you about preemption. I want
7 to --

8 MR. SHAPIRO: I've read these
9 emails and I just -- it's not lobbying.
10 I don't see it. I don't see it as
11 communication with the Gas Commission,
12 with the Mayor's Office. We didn't push
13 for 275.

14 COUNCILWOMAN GYM: So my
15 understanding is PGW provided line edits
16 to the bill, line edits around the
17 definition in the bill prohibiting
18 Philadelphia from enacting legislation.
19 So definitions do matter, the feedback
20 matters. And claiming neutrality or
21 lobbying -- not having to lobby for a
22 bill that you provided line edits for is
23 a problem. It allows you --

24 MR. SHAPIRO: We did not
25 provide line edits. We did not provide

1 line edits. You suggested -- and by the
2 way, not to -- and understand just to
3 everyone else who's listening who may
4 not know the detail that you know, our
5 employees were in communication with
6 legislative staff or with legislators,
7 right. They were in a dialogue with
8 dozens of other energy industries and
9 these are dialogues that cover a whole
10 host of topics. And to say that one of
11 his peers asked him what he thinks a
12 definition of energy should be and for
13 him to comment, I just think it's a
14 stretch to call it lobbying. I'm sorry.
15 I just do.

16 COUNCILWOMAN GYM: I don't
17 think it's -- I mean, I think it says
18 what it says. So you suggested language
19 for a bill that was specifically about
20 preemption though?

21 MR. SHAPIRO: So I did not.
22 Let's just be very clear. There was an
23 employee who responded I believe -- and
24 again, I have to pull these from a long
25 time ago -- who provided a suggestion, a

1 definition of a single term to a
2 colleague who's not a legislator or
3 legislative staff. I believe that's the
4 emails that are creating all the
5 kerfuffle.

6 COUNCILWOMAN GYM: And do you
7 believe that if this were to circle back
8 around again, if a senate, senator from
9 outside of Philadelphia were to reach
10 out to you to request suggested language
11 to a bill, would PGW continue to comply
12 with that?

13 MR. SHAPIRO: So let me be
14 clear. As I talked before, we have a
15 number of regulators and we answer to a
16 number of levels of government. I am a
17 public servant, okay. If you call me
18 and ask me an opinion, I'm going to try
19 and be a subject matter expert for you.
20 And yes, if a center from some other
21 parts of the state calls me and asks me
22 a question for which I am a subject
23 matter expert, I believe I am obligated
24 to give them a response, right.

25 You could be introducing

1 legislation I don't agree with and I
2 welcome you. If you're introducing
3 legislation that I don't agree with or
4 even legislation that I think is harmful
5 to PGW, I will still respond to you and
6 I will still give you the best of my
7 subject expertise to help you do my job.
8 That's my responsibility.

9 COUNCILWOMAN GYM: So PGW is a
10 member of the American Gas
11 Association --

12 COUNCILMAN GREEN:
13 Councilmember Gym, I do know that E3 has
14 a time window --

15 COUNCILWOMAN GYM: Okay.

16 COUNCILMAN GREEN: -- and I
17 know Councilmember Gilmore Richardson
18 and also Councilmember Jones, I know
19 Gilmore Richardson who's also part of
20 this conversation wanted to make some
21 remarks, so I just wanted to be
22 cognizant of --

23 COUNCILWOMAN GYM: This is my
24 last question.

25 COUNCILMAN GREEN: -- because

1 they were the drafter of the study.

2 COUNCILWOMAN GYM: Yup, this is
3 my last question. So PGW is a member of
4 the American Gas Association; is that
5 correct?

6 MR. SHAPIRO: Correct.

7 COUNCILWOMAN GYM: And how much
8 do you pay per year to be a member of
9 that Gas Association?

10 MR. SHAPIRO: So again this is
11 off the top of my head, but I believe
12 the number I just gave was I think
13 \$445,000 a year.

14 COUNCILWOMAN GYM: Was any of
15 the work that you provided around SB 275
16 part of what you would have done as
17 through the American Gas Association or
18 was there any relationship between that
19 and the work around SB 275?

20 MR. SHAPIRO: I'm not aware of
21 any conversations that happened between
22 PGW employees and AGA staff about 275.
23 I'm not aware of what role AGA played in
24 it.

25 COUNCILWOMAN GYM: Okay. Thank

1 you very much. Again, I just want to
2 emphasize that the reason why PGW is a
3 municipal utility and why so many people
4 fought to hold on is because we should
5 be in alignment. SB 275, PGW's past
6 work in responding to SB 275 is
7 antithetical to the City of
8 Philadelphia's mission. I consider it a
9 problem. I believe policies need to
10 change at PGW on that particular issue,
11 and I do think that while I recognize
12 that you've said that there are certain
13 amounts of benefits from the American
14 Gas Association, their work also works
15 to undermine many of the goals that
16 Philadelphia has.

17 As a municipal utility, I
18 believe that you should cut ties and
19 that we should work together. And
20 partly why we have Ms. Lintmeijer here
21 is because we are invested, we are
22 deeply invested in individuals who
23 conduct these studies and we would like
24 to see \$445,000 honestly from PGW go
25 into subject matter experts who can

1 bring PGW the kind of vision that it
2 needs to have to be a thriving strong
3 public municipality. And those are all
4 my comments.

5 Thank you very much, Mr. Chair.

6 And thank you --

7 MS. KNAPP: Councilman, may I
8 just respond to one point that
9 Councilwoman Gym brought up about
10 feasibility studies?

11 COUNCILMAN GREEN: Yes.

12 MS. KNAPP: I'll be very quick.
13 I just wanted to say, Councilmember, I
14 hear your idea of, you know, let's not
15 study, study, let's act. I think
16 particularly when it comes to the
17 network geothermal -- and, Seth, you can
18 chime in here, I think this came out of
19 a conversation that you and I had about
20 next steps for pilots -- if we wanted to
21 say let's pilot network geothermal,
22 where would it go. Where geologically
23 can Philadelphia have geothermal bored
24 down in, what is the workforce that
25 would be needed to install it and

1 maintain it, and how would PGW finance
2 it.

3 So those are the -- it's a
4 feasibility study, but they're kind of
5 the critical building blocks of being
6 able to actually implement a pilot. So
7 those are the key things that we would
8 want to explore, not to study it to
9 death, but to really figure out how do
10 you get it down in a very logistical
11 way.

12 COUNCILMAN GREEN: Thank you,
13 Ms. Knapp. And I agree with you, we
14 need a roadmap to get these things done.

15 Councilmember Gilmore
16 Richardson, do you have a very brief
17 comment because I know Councilmember
18 Jones has been waiting.

19 COUNCILWOMAN GILMORE
20 RICHARDSON: Thank you so much,
21 Mr. Chair. And thank you to my District
22 colleague Councilmember Jones for this
23 latitude, but I just wanted to be
24 recorded as present for this hearing,
25 Mr. Chair. I am not a member of either

1 of the Committees, but as the Chair of
2 City Council's Committee on the
3 Environment I wanted to tune in to this
4 hearing, really have the opportunity to
5 hear more about the Diversification
6 Study which has been all the talk and
7 all of the conversations that we've had
8 with the environmental group. So thank
9 you very much, Christine Knapp and to
10 your team, and who has done really a lot
11 of work on this issue.

12 I also just wanted to mention
13 that I'm looking forward to how we think
14 about together as a City our goal of
15 carbon neutrality by 2050, and we will
16 be proceeding with the hearings on
17 building decarbonization in this spring
18 to further think about our next steps.

19 And lastly, for the record I
20 just wanted to know if there was a
21 timeline for next steps now that the
22 study has been released on all the next
23 step efforts that have been mentioned?
24 But I'll be here listening and I'm
25 looking forward to this conversation.

1 And I'm very happy to see the level of
2 interest, not only from some of our
3 environmental groups, but from everyone
4 who now has a keen interest in this
5 issue.

6 So thank you very much,
7 Mr. Chair, and thank you to all of the
8 parties involved.

9 COUNCILMAN GREEN: Thank you.
10 And we will have a second hearing on
11 this issue where we can focus on some of
12 those next steps.

13 Councilmember Jones.

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

16 And thank you to the Chair of
17 Environmental for the Committee for City
18 Council and her laser focus on this
19 issue and I appreciate it. I represent
20 the 4th District. And whenever one of
21 those 100-year storms happens, it
22 happens on Main Street where we have to
23 dig out businesses, deal with the
24 flooding, evacuate apartment buildings.
25 And it's supposed to happen every 100

1 years. It looks like it's happening
2 every other year, so this is a real
3 thing for us. So carbon neutrality at a
4 particular point is important.

5 But I want to note for the
6 record, I think it was 2014, when the
7 issue was hot and heavy about the sale
8 of PGW. This Council stopped it. This
9 Council in spite of the recommendations
10 of the editorial boards at the time, the
11 belief was that the Gas Works was in
12 such financial crisis, on the verge of
13 collapse, on the verge of financial
14 devaluation and it was going to take the
15 City's bond rating. I remember being in
16 the hearings with all of that. And I am
17 glad and thankful to this management
18 group that we're still here. We're
19 still viable and we're still providing
20 services, Mr. Chairman, to the customers
21 in the City of Philadelphia.

22 Having said that, a couple of
23 questions. And I'm glad that we're now
24 able to not be worried about putting out
25 the fire but looking towards the future

1 of this institution. Could you recap
2 for me is there dollars to be
3 anticipated towards this effort from the
4 Biden infrastructure bill?

5 MS. KNAPP: I can take a stab
6 at that if that's all right,
7 Councilmember. So we're going through
8 the infrastructure bill obviously with a
9 fine tooth comb. It depends on what
10 you're looking to do. So there are
11 weatherization dollars, WAP. The WAP
12 program is getting a big infusion of
13 cash through infrastructure, so that's
14 great --

15 COUNCILMAN JONES: So can you
16 be specific, how much cash? And what's
17 that impact going to be on reducing
18 carbon footprints?

19 MS. KNAPP: So I don't have an
20 exact number of what the WAP amount that
21 would go to Pennsylvania, and then from
22 Pennsylvania they distribute it to the
23 Energy Coordinating Agency, which is our
24 local WAP administrator. I don't know
25 that we have a number yet. I think we

1 know how much may be coming to
2 Pennsylvania. We don't know yet how
3 Pennsylvania will allocate that by
4 county, but I can check in with the ECA
5 and see if --

6 COUNCILMAN JONES: And can you
7 provide that to the Chair who will get
8 to it members of Council?

9 MS. KNAPP: Sure. And the
10 answer may just be that we don't know
11 yet because there are still a lot --
12 there's still a lot about this
13 legislation that is still coming down,
14 and then there's also amounts that are
15 designated to formula, which the WAP
16 dollars are formula. Then there's
17 competitive grants that we can seek out,
18 so really going through both of them to
19 understand what formula dollars may be
20 flowing here and what competitive grants
21 we may want to actively pursue.

22 So the answer is there's
23 definitely money in there for lots of
24 things that could help support next
25 steps on this front. It does kind of

1 depend on which of the pilot
2 recommendations or other recommendations
3 that are or other activities that Seth
4 and his team may want to pursue in some
5 of their other sort of sustainability
6 and methane reduction goals for things
7 like pipe replacements or fixing methane
8 leaks. So the short answer is yes, but
9 the more difficult answer will be kind
10 of getting those details and seeing what
11 can go toward which goal.

12 COUNCILMAN JONES: So I
13 remember also back then all of the
14 companies were circling the caucus of
15 PGW looking to pick its bones. And one
16 of the bright spots was liquefied gas
17 is -- and I must be getting old because
18 I remember when natural gas was
19 considered the clean industry and dirty
20 old coal was the bad guy, and somehow
21 that has changed.

22 And I agree we need to look to
23 the future. But however nevertheless,
24 as we look at internationally what
25 Israel has done with its offshore

1 holdings and what Putin is doing with
2 the pipeline coming through to go to
3 Germany, they're looking at this in a
4 futuristic vain, and help me to
5 understand how freezing electrification
6 of gas as an export, how is that going
7 to be dealt with in the future?

8 MS. KNAPP: I can only answer
9 the first part of your question, which
10 is that natural gas has been looked at
11 as one method of decarbonization and
12 that is generally less carbon-intensive
13 than coal, but that is an accounting
14 that may not take into the full life
15 cycle of the fracking and transportation
16 and leakage of natural gas. And what we
17 do know is it is still a fossil fuel.

18 And so, I think as Niki pointed
19 out in the testimony, the use of natural
20 gas in Philadelphia accounts for about
21 24 percent of our carbon footprint. So
22 it would be better -- it's likely it's
23 better that it's coming from that than
24 from coal or it would be much higher,
25 but it is still a significant portion of

1 our carbon footprint. And I couldn't
2 answer your question about LNG. It's
3 out of my area of expertise. I'm sorry.

4 COUNCILMAN JONES: Just one
5 other thing, isn't gas used in the
6 creation of electric energy today?

7 MS. KNAPP: Yes, sometimes.

8 COUNCILMAN JONES: Give me the
9 percentage, how does that -- give me the
10 mechanics of that.

11 MS. KNAPP: I think Seth
12 already spoke to that in his testimony.
13 Perhaps he --

14 COUNCILMAN JONES: Would you
15 indulge me, Seth, and repeat that then?

16 MR. SHAPIRO: Of course. So
17 the grid in Pennsylvania is about 40
18 percent nat gas, 5 percent renewables,
19 20 percent coal, 20 percent nuclear
20 roughly. And I can answer some of your
21 LNG questions. Do you want me to
22 address some of that?

23 COUNCILMAN JONES: Please.

24 MR. SHAPIRO: And let me for
25 those listening, either your colleagues

1 or the public who aren't aware, so one
2 of the things that makes gas and the
3 transfer of energy through molecules
4 battle is that the difficulty of energy
5 is storing and transporting it. And one
6 of the tools that makes natural gas one
7 of the things in which to restore energy
8 and transport it is the ability to
9 liquify it.

10 When you liquify natural gas,
11 you cool it 260 degrees -- negative 260
12 degrees Fahrenheit. It makes it 600
13 times more dense, right. So we have an
14 LNG facility where we both do that
15 cooling process to create liquid out of
16 the gas and we can store up to 4 BCF, 4
17 billion cubic feet of it.

18 And we use that for two really,
19 really important things: The first
20 thing we use it for, hedging, right.
21 Unlike some of our investor-owned
22 brethren, we can't buy financial hedges
23 on the price of natural gas. We can
24 physically hedge it, right. We can put
25 it into the tank so that we have it, so

1 that when things spike, right, like what
2 happened in Texas or even there was a
3 spike last week in parts of New England.

4 In context, let's say right now
5 we're paying about \$4 for gas. There
6 was a spike last week in New England
7 where gas was \$15, right. We have the
8 ability to vaporize that stored liquid
9 so that helps, and we estimate we've
10 saved over the life of those tanks \$4
11 billion, billion with a B, for our
12 customers.

13 The other thing it allows us to
14 do is provide for our peak day, right.
15 So with any gas utility, the regulations
16 that both come from the Public Utility
17 Commission and from FERC, the Federal
18 Energy Regulatory Commission require us
19 to have a gas site for the sort of peak
20 design day that you think you're going
21 to have. And to put a little flavor
22 into that, our peak day, our peak design
23 day is right around 700 MCF, million
24 cubic feet, okay.

25 We have the capacity on

1 pipelines to bring 300 MCF a day. We
2 have the ability to bring from the
3 storage we have out along those pipes
4 another 120. The rest, the other 280
5 that we would need if there's a cold day
6 so that we don't have to turn off gas
7 for customers, we get by vaporizing,
8 turning back into gas what we've stored
9 there. So it is this monumental thing
10 that we have that puts us in a better
11 situation than many, many, many of our
12 peers. And in fact, it's why that
13 despite all the (inaudible) of municipal
14 ownership, we still tend to have one of
15 the lowest prices of the quantity gas of
16 all of the utilities in Pennsylvania.
17 So the LNG is a huge, huge attribute.
18 It also has great value. So we
19 also have the ability to vaporize gas
20 and then sell those reservations in the
21 pipeline that I talked about and turn
22 that into dollars and that gets into the
23 diversification strategy. I can use
24 that asset I think -- and I don't know
25 exactly what it is, but I would say we

1 made \$10 million to \$12 million on
2 behalf of our ratepayers over the last
3 year by selling the assets that having
4 that LNG allows us to do.

5 COUNCILMAN JONES: So one other
6 technical question and I don't pretend
7 to be an engineer. So our molecules
8 come from Texas and through fracking.
9 Do you know of what percentage of which
10 we utilize?

11 MR. SHAPIRO: So it varies
12 greatly, right. And one of the weird
13 things is the way natural gas pipelines
14 work, there's gas filling up pipes. The
15 pipes actually flow south until probably
16 Virginia and North Carolina and north
17 from the Gulf south of that, and it
18 varies depending upon time of the year.

19 So I will tell you that we may
20 buy molecules far south of us, so the
21 bucks we're paying is based there. But
22 the actual molecules we get actually
23 come from Marcellus Shale, right. So
24 you're not always getting gas from where
25 you buy it. That's just the nature of

1 the commodity trade. I will tell you
2 that in the summer and into sort of
3 shoulder seasons, the likelihood of
4 almost all of the gas is coming from
5 Shale gas, like Dominion South or
6 somewhere over there.

7 In the winter, my guess is it's
8 closer to a few 50/50 split. If you
9 wanted more specificity, I could ask
10 someone unlike you and I. I at least
11 pretend to be an engineer, but there are
12 people here that actually are. But any
13 of those numbers are about right, that
14 about half our supply if we were to look
15 today is coming from Shale and half is
16 probably coming up from the Gulf.

17 COUNCILMAN JONES: So there was
18 discussion about commingling certain
19 gases within a pipeline to make it more
20 profitable, more efficient and using
21 less energy and reducing our carbon.
22 What was the other chemical to condense
23 the gas molecules in co-transport, do
24 you recall?

25 MR. SHAPIRO: I don't. I know

1 that there are conversations about what
2 we would augment our gas not only with
3 RNG, but if you could insert hydrogen.
4 There's still --

5 COUNCILMAN JONES: Yeah, that's
6 what I think it was.

7 MR. SHAPIRO: So there's talk
8 about that. They're still out on that.
9 I think if you were to (inaudible) the
10 industry, they will tell you that much
11 more than 5 percent, I'm sure of, right.
12 Part of it is the molecules are of a
13 different density, the molecules are of
14 a different ignition profile. It would
15 change our leaks drop conceivably
16 because the molecules are different. So
17 we're still doing feasibility on what we
18 could do for hydrogen.

19 As we talk about different sort
20 of pilots we're looking at, we are
21 looking at pilots that might inject a
22 small amount of hydrogen into our
23 existing pipes. We're also looking at
24 whether you can create a stand-alone
25 hydrogen network, right. We love the

1 idea of creating a geothermal micro grid
2 and finding a place to do a pilot where
3 you're not commingling geothermal
4 obviously with natural gas, creating its
5 own infrastructure.

6 I think similarly the right
7 path -- perhaps the right path for
8 hydrogen is to create a stand-alone
9 infrastructure around maybe a warehouse
10 that uses hydrogen for its energy or
11 maybe we talk to other big
12 infrastructure users about how to create
13 a hydrogen, but it's a great question.

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

16 COUNCILMAN GREEN: Thank you,
17 Councilmember Jones, and thank you for
18 steering us back to the point of this
19 afternoon's conversation which is the
20 Diversification Study.

21 Are there any other comments
22 from members of Council for this panel?

23 (No response.)

24 COUNCILMAN GREEN: Seeing none,
25 thank you all. And we do look to have a

1 follow-up conversation on this issue in
2 another hearing. And in that follow-up
3 conversation some of the other potential
4 partners, hopefully we can have them in
5 that conversation, especially from some
6 of the other departments of the City and
7 some of the other nongovernment entities
8 that can help us in moving this
9 conversation forward.

10 I will now ask the Clerk to
11 read the title -- I'm sorry, read the
12 names of the next panel of witnesses to
13 testify regarding Resolution No. 210653.

14 THE CLERK: Audrey Shulman,
15 Co-founder and Co-Executive Director of
16 the Home Energy Efficiency Team; Zeyneb
17 Magavi, Co-Executive Director of HEET;
18 and Ashita Gona, who is an Associate at
19 RMI.

20 COUNCILMAN GREEN: Thank you,
21 Mr. Iannuzzi. We will have each one of
22 those witnesses to testify in that
23 order. I know it's been some time. You
24 heard a lot of conversation, but knowing
25 this panel, I expect you to bring the

1 HEET.

2 I'm sure you've heard that joke
3 several times, but I've enjoyed your
4 presentation in the past. So please
5 state your name for the record and
6 proceed with your testimony.

7 MS. SHULMAN: Thank you so
8 much. I'm Audrey Shulman, Co-Executive
9 Director of HEET. HEET's a climate
10 solutions nonprofit incubator that came
11 up with the GeoGrid. The GeoGrid as you
12 can see here is a network ground source
13 heat pump system that's referred to in
14 the PGW report as networked geothermal.
15 This system uses known and proven
16 technology. There's similar
17 installations in campuses across the
18 country.

19 Our innovation is to have the
20 gas utilities installed and operated in
21 the right-of-way of the street. Network
22 ground source heat pumps are the most
23 efficient method of providing heating
24 and cooling known. And let me just
25 quickly acknowledge what Mr. Shapiro

1 said with great respect. A new gas
2 boiler can burn up to 97 percent
3 efficiency, and that means it delivers
4 less than 1 unit of heat to the home for
5 each 1 unit of energy used. The GeoGrid
6 by moving heat sort of the same way your
7 fridge does whether then making it
8 through combustion can move 6 to 8 units
9 of energy per 1 unit of energy used.
10 That's a lot better.

11 Also, I believe Page 29 of the
12 E3 report refutes the statement about
13 the impact of building electrification
14 on greenhouse gas emissions. It lowers
15 greenhouse gas emissions. And as a
16 second thing, I've got a new expensive
17 gas boiler a while ago. And I did that
18 because I thought it was the cleanest
19 way to go forward.

20 However, gas unburned is
21 overwhelmingly methane, a potent
22 greenhouse gas. New research shows that
23 if more than 3 percent of it is leaked
24 without being used or without being
25 burned, anywhere from the wall head to

1 your stove, it's worse than coal. I
2 don't want the City and its emissions
3 reduction work to make the same
4 expensive mistake that I did. The PGW
5 Diversification Study goals are to
6 reduce emissions, benefit low-income
7 customers and provide long-term
8 workforce opportunities, and the GeoGrid
9 can meet all of these goals.

10 Emissions, the GeoGrid runs on
11 electricity. Since it's so efficient,
12 it needs only a tiny amount of
13 electricity where Buro Happold
14 Engineering calculated that in
15 Massachusetts for any buildings
16 connected, the emissions will reduce 60
17 percent immediately in comparison to
18 gas. As your electric grid moves to
19 renewables, these emissions will decline
20 further.

21 Workforce opportunities,
22 because the GeoGrid uses the same type
23 of pipes as gas, workers can transition
24 easily with minimal training, keeping
25 their good jobs for the lifetime of the

1 infrastructure which lasts about as long
2 as the gas infrastructure. And with
3 low-income customers, Philadelphia
4 families spend twice as much of their
5 income on energy as the national
6 average. No one wants to increase that
7 burden. But if we continue with the
8 business as usual, this is exactly
9 what's likely to happen.

10 As Niki explained it before, as
11 customers move off the system, they will
12 raise gas heating bills for those who
13 remain. In the end, the only ones left
14 will be the low-income and the City
15 might have to pay for stranded assets.
16 Finally, adding decarbonized gas will
17 only accelerate that vicious cycle by
18 increasing customer energy bills. Thank
19 you. Zeyneb.

20 MS. MAGAVI: Well, I have to
21 manage to unmute and unshare and turn my
22 camera on. There we go. Does that work
23 out?

24 COUNCILMAN GREEN: (Nodded
25 affirmatively).

1 MS. MAGAVI: Excellent. I'm
2 Zeyneb Magavi, the other Co-Executive
3 Director of HEET. And I just want to
4 start by saying that I still admire the
5 complexity of the conversation you're
6 having here today and thank you for the
7 opportunity to participate.

8 Decarbonizing one of the oldest gas
9 systems in the country efficiently and
10 accurately is an enormous challenge.
11 This challenge must also be a great
12 opportunity to boldly build the energy
13 system of the future.

14 You have a lot of old pipes.
15 45 percent of your system is aging cast
16 iron pipe that must be replaced from now
17 until 2057. That is billions of dollars
18 of new fossil fuel infrastructure. It
19 will take half a century to pay off
20 during which there may be even more
21 restrictive emissions mandates.

22 Risky, yet it is also risky to
23 leave aging, leaky infrastructure in the
24 ground indefinitely. The last thing we
25 all want is a cracked main too close to

1 a building or a leak filling up a
2 manhole with gas. So you can address
3 both of these types of risk by
4 redirecting that infrastructure spending
5 to replace the old gas infrastructure
6 with the GeoGrid instead where possible.

7 If you do this at the same pace
8 as the cast iron as being replaced
9 today, nearly half of your PGW system
10 can be modern non-emitting
11 infrastructure by 2057. Growing a new
12 diversified and future proof business
13 model, that best meets your customer
14 needs, needs like low monthly energy
15 bills.

16 And, yes, the GeoGrid does cost
17 more to install so it sounds confusing,
18 but a Massachusetts economic analysis
19 predicted lower customer energy bills.
20 Why, because the increased installation
21 costs spread over decades were entirely
22 offset by the greatly reduced fuel cost.
23 Also, needs like better indoor air
24 quality to mention the public health
25 impact, more cooling and no explosions,

1 that's good too.

2 The higher efficiency of the
3 GeoGrid even helps us avoid the pitfall
4 described by Seth Shapiro where we grow
5 electric demand much faster than we grow
6 renewable electric supply and end up
7 working at odds with our climate goals
8 until the renewable supply catches up.
9 Higher efficiency addresses that, and it
10 also lowers the winter grid peak,
11 essentially moving that seasonal storage
12 of gas and LNG to the ground under your
13 feet.

14 I'll try to wrap up. As you
15 mentioned, PGW started in 1936 and has
16 moved from a lighting company to a
17 heating one, from gasification to
18 natural gas. This tells me it's an
19 organization with a history of changing
20 to meet the needs of the people it
21 serves. So I hope PGW joins the handful
22 of gas utilities that are already
23 installing the GeoGrid such as National
24 Grid, and Eversource and ConEd and those
25 utilities are investor-owned and see the

1 GeoGrid as a promising business model
2 even with their obligation to generate
3 profit for investors.

4 They are gas utilities approved
5 to rate base the cost of the
6 installation allowing the GeoGrid to be
7 depreciated and socialized in a
8 conventional gas utility way, creating
9 one single merged geo gas rate base or
10 pool of customers with the increasing
11 GeoGrid customers protecting the
12 remaining gas customers from rising
13 costs.

14 I do not believe the PGW
15 analysis socialized the infrastructure
16 cost of the GeoGrid in this way, and I
17 suggest it be considered in the proposed
18 feasibility study. Doing so will allow
19 PGW's forecast of income to increase
20 with a gas geo customer base instead of
21 decreasing from a declining gas customer
22 base, allowing for decarbonization
23 without rising cost, job loss and
24 increasing energy and equality.

25 So three quick closing notes:

1 We're attaching testimony submitted in
2 the Massachusetts rate case where
3 National Grid Gas was approved in
4 December to rate base four different
5 installations of the GeoGrid. The
6 testimony is from Steve Bryant, the
7 ex-head of Columbia Gas, describing why
8 he thinks this is a good business model
9 for gas utility and from Cary Smith from
10 the GreyEdge Group describing the
11 engineering paradigms.

12 We suggest too that you move
13 more quickly, identify potential sites
14 where there is a distal branch of the
15 leak-prone cast iron, yes, the bedrock
16 is the closest to the surface of the
17 north side of Philly which keeps
18 drilling costs down. But you may just
19 want to prioritize a site that
20 represents your gas system best, and
21 then a site feasibility review can
22 select one for a first demonstration and
23 you can learn on the ground even as the
24 proposed feasibility study maps out your
25 scaling potential.

1 Finally, we at HEET are happy
2 to connect you to experts of all kinds
3 and to share the key learnings from our
4 work at Massachusetts and other states.
5 And I want to leave you with one. We
6 urge you to clearly include from the
7 beginning your utility workers in your
8 first demonstration project. After all,
9 they are the shoulders upon which
10 success will depend. Thank you so much.

11 MS. GONA: (Muted).

12 COUNCILMAN GREEN: You're on
13 mute.

14 MS. GONA: Sorry. Can you hear
15 me now? Good afternoon --

16 COUNCILMAN GREEN: I can hear
17 you. State your name for the record and
18 please proceed with your testimony.

19 MS. GONA: Okay. My name is
20 Ashita Gona and I'm an Associate of RMI.
21 Thank you Zeyneb and Audrey for that
22 great presentation, and thank you to
23 Chairs Green and Johnson and members of
24 the Committee for your time today.

25 My name is Ashita Gona, like I

1 said earlier. And a little bit of
2 background of RMI, we're an independent,
3 nonpartisan, nonprofit organization
4 whose mission it is to transform the
5 global energy system to secure clean,
6 prosperous and zero carbon future for
7 all.

8 In 2019, a colleague of mine
9 actually testified in front of this body
10 on the need for proactive planning for
11 PGW to equitably achieve Philadelphia's
12 climate and economic goals. So the
13 release of the Business Diversification
14 Study brings this conversation full
15 circle, and today's hearing is a really
16 important moment for Philadelphia.

17 The study frames PGW's
18 challenge and its opportunity. The
19 challenge is that PGW will need to
20 significantly evolve in the next decade
21 to maintain its financial viability and
22 workforce, but this challenge actually
23 also presents a really great opportunity
24 for the City to improve its aging
25 housing stock, reduce carbon emissions

1 and improve local air quality and
2 health.

3 There's a few items we would
4 like this body to consider: First,
5 while there are a range of options, the
6 study presents a clear conclusion that
7 decarbonized gas is not a solution to
8 PGW's business model challenge or for
9 buildings. The study itself finds that
10 using decarbonized gases for more than
11 15 percent of required gas supply in
12 buildings presents significant financial
13 concerns. Sky high commodity costs will
14 leave PGW with a \$840 million annual
15 revenue gap in even the most optimistic
16 decarbonized gas scenario.

17 By contrast, the study and
18 similar studies in Maryland, New York
19 and New Jersey, which we would be happy
20 to share, have found that transitioning
21 to clean electric heating is cost-
22 effective and would substantially reduce
23 gas use. Second, proactive planning and
24 action from the City and PGW this decade
25 can ensure an equitable and prosperous

1 energy transition.

2 Regulators should explore
3 nonpipe alternatives to gas investment
4 and to diversify PGW's business. This
5 includes neighborhood level
6 electrification measures and network
7 geothermal pilots that we've been
8 talking about. The savings of doing so
9 could be significant. PGW is slated to
10 spend more than \$600 million through
11 2027 replacing or building out its aging
12 gas system.

13 Low-hanging fruit to consider
14 include requiring all electric new
15 construction, ensuring that oil or
16 propane heating customers are
17 prioritized for electrification first
18 because that is the most cost-effective
19 scenario in which to electrify, and
20 slowing down gas infrastructure
21 replacement programs while triaging
22 leaks. Third, the City should
23 prioritize solutions for low-income
24 households. This includes
25 electrification subsidies, embedding

1 electrification into existing City
2 programs and reforming low-income
3 electricity rate structures.
4 Philadelphia has a once-in-a-generation
5 opportunity to secure opportunities for
6 its workers and the City's residents but
7 only through proactive and transparent
8 planning. Thank you so much for your
9 time.

10 COUNCILMAN GREEN: Thank you
11 for your testimony. I appreciate it.
12 Sorry for the brief interruption.

13 I just have a quick question
14 for the two representatives from HEET.
15 And I want to get some perspective on
16 this concept. Assuming that we did not
17 have the issues that we have with the
18 PUC like we had with the renewable
19 natural gas pilot that PGW attempted, if
20 there was a company let's say that
21 wanted to come to the City of
22 Philadelphia and say if we wanted to
23 have some type of district geothermal in
24 reference to provide energy to our
25 business and we did that at a location

1 that we control, let's call it the
2 Philadelphia Navy Yard which is managed
3 by our Philadelphia Industrial
4 Development Corporation, PIDC, if PGW
5 were to engage in that concept where PGW
6 helped to develop that district
7 geothermal to provide energy for that
8 company at the Navy Yard, my
9 understanding on geothermal is that we
10 would then have to basically drill down
11 to the part of the earth which is going
12 to draw the energy or the heat up
13 through and then transition that
14 throughout the company. And that's a
15 way that we could do that and you would
16 need labor working with 686, our labor
17 union, to help in that installation. Is
18 that somewhat similar to what happened
19 with National Grid and Boston Gas with
20 the United Steelworkers because I want
21 to get some perspective on that?

22 MS. MAGAVI: So I'll start
23 briefly with the word geothermal which
24 has so much headache because it means
25 four different technologies really. If

1 you drill very deep in the earth, we're
2 talking miles, two miles and get
3 something hot, hot water, hot steam, hot
4 lava, you are doing something quite
5 different than what we're proposing,
6 which is just to go a couple hundred
7 feet down with a very small bore hole,
8 we're talking 6 inches. It's far less
9 disruptive and really not the same. And
10 it moves temperature both in and out
11 seasonally rather than having a source
12 of heat that you're going down to.

13 Audrey, do you want to address
14 the workforce?

15 MS. SHULMAN: Yes. So at
16 National Grid and Eversource, they're
17 going to be probably using a third party
18 to do the design and install because
19 they don't have yet experience on their
20 workforce to do that. I believe
21 National Grid might, might not. We do
22 not know yet whether they will actually
23 have their workforce there to, you know,
24 to watch and learn about it. We
25 encourage greatly to whoever does it to

1 have their workforce there, you know,
2 observing, training and participating so
3 that they can go forward in this new
4 area.

5 MS. MAGAVI: And some of the
6 skills that the existing gas workers
7 have -- in our area it's steel workers
8 that are doing the repairs for
9 example -- are the same skills that you
10 would need for the this system, like
11 butt fusing HDPE pipe for example, same
12 skill, already certified, so there's a
13 lot of transferability that's ready to
14 go.

15 We understand why, for example,
16 Eversource is bidding it out as a
17 complete project for their first try,
18 and we would love to see it really be
19 clear from the beginning that the future
20 work of this would be a continuation of
21 the engagement to be current workers.

22 MS. SHULMAN: We did sit down
23 with a geothermal expert and the head of
24 the local gas workers union here in
25 Massachusetts, and there was very, very

1 minimal differences in the work.

2 COUNCILMAN GREEN: Well, thank
3 you -- do you have another comment?

4 MS. MAGAVI: (Muted).

5 MS. SHULMAN: You're muted,
6 Zeyneb.

7 MS. MAGAVI: I apologize. It
8 appears the Navy Yard is actually on the
9 river, yes, so you might not need to
10 drill to do that one. You could
11 probably use the temperature in the
12 river.

13 COUNCILMAN GREEN: Okay. Thank
14 you for that perspective. I just wanted
15 to kind of get an idea of what you were
16 talking about in using kind of a real
17 life Philadelphia example of land space
18 that we kind of control and the idea
19 that various companies do come to the
20 Navy Yard because of the various
21 benefits and tax breaks that will occur.
22 And to me seeing that could provide that
23 opportunity for that kind of pilot using
24 or looking at dollars to the
25 Infrastructure Investment and Jobs Act

1 as a way to start that process that will
2 include both labor, PGW and a private
3 entity that will be looking to come to
4 Philadelphia, and that could be one of
5 the ideas coming out of this
6 Diversification Study that we can put
7 into implementation based on the concept
8 that you described and what is currently
9 going on in Boston with National Grid,
10 so thank you very much.

11 Are there any questions or
12 comments from members of Council?

13 (No response.)

14 COUNCILMAN GREEN: Seeing none,
15 at this point I want to thank you all
16 for your presentation. It's good to see
17 this information once again.

18 And, Mr. Iannuzzi, if you can
19 call the next panel.

20 THE CLERK: Joline Price,
21 Energy Unit Supervising Attorney at the
22 Community Legal Services; Bill DiCroce,
23 CEO at Vicinity Energy; and Tammy Murphy
24 is Advocacy Director of Pennsylvania
25 Physicians for Social Responsibility.

1 COUNCILMAN GREEN: Okay. Thank
2 you, Mr. Iannuzzi, for that.

3 If we could have the first
4 witness Ms. Price. State your name for
5 the record and then begin your
6 testimony.

7 MS. PRICE: Thank you,
8 Chairperson Green. Good afternoon. My
9 name is Joline Price. I'm an attorney
10 in the Energy Unit at Community Legal
11 Services. CLS's Energy Unit advocates
12 to ensure that Philadelphia households
13 have access to affordable water, heat
14 and electricity in their homes. CLS's
15 Energy Unit serves two important roles.
16 We serve as public advocate representing
17 PGW's residential customers in matters
18 before the Philadelphia Gas Commission
19 and we represent individual low-income
20 utility customers in affording,
21 restoring and maintaining utility
22 service and groups of customers seeking
23 improvements to programs and policies
24 that benefit low-income utility
25 customers.

1 I'm glad to be here today to
2 discuss the sustainability and
3 diversification of PGW. I'd like to
4 provide perspective on the
5 Diversification Study that is informed
6 by CLS's work with hundreds of
7 individual PGW customers who are
8 currently struggling to afford and
9 maintain heating in their homes. As the
10 study notes, Philadelphia households
11 already face high energy burdens.

12 Free home repair and
13 weatherization programs are critical to
14 reducing energy costs in keeping people
15 healthy and safe. We urge the City and
16 PGW to utilize all available resources
17 to provide free home repair,
18 weatherization and energy efficiency to
19 low- and moderate-income homeowners and
20 tenants, but these programs must be
21 free. The Diversification Study's
22 proposal that PGW provides loans and
23 financing to low-income customers for
24 customer energy upgrades is simply put,
25 a bad idea.

1 When we talk about Philadelphia
2 households that are already struggling
3 to get by, we cannot be adding more to
4 their cost-burden. It was disappointing
5 to see that after the lengthy effort put
6 into this study the result included an
7 ill-advised proposal to have PGW finance
8 weatherization and energy efficiency
9 with customer loans rather than
10 increasing assistance to customers.
11 Studies have noted that these loans are
12 inappropriate for PGW's residential
13 customer base, showing that they quickly
14 become unaffordable for the people they
15 are supposed to be helping.

16 Households enrolled in the
17 Customer Responsibility Program or CRP,
18 PGW's low-income bill assistance program
19 are unlikely to benefit from any
20 supposed cost-savings. Because CRP
21 rates are calculated based on income,
22 not usage, these low-income customers
23 would only incur higher monthly bills.
24 Increasing monthly costs to low-income
25 customers is not a viable option short-

1 term or otherwise and the recommendation
2 to pursue it should be rejected as a
3 nonstarter.

4 PGW also already has a
5 low-income usage reduction program,
6 which provides free weatherization and
7 usage reduction services to low-income
8 customers. If we want to keep people
9 safe in their home, the City must think
10 creatively about sources of funding and
11 methods to implement programs to address
12 home efficiency. Rather than provide
13 financing through loans, PGW could
14 prioritize and invest in expanding its
15 weatherization programs to promote
16 efficiency and usage reduction and
17 explore ways to partner with the City to
18 pair these usage reduction efforts with
19 basic home repairs.

20 Ultimately, people should get
21 to live in safe and healthy homes
22 regardless of how they heat their homes.
23 Congress is making 3.5 billion available
24 for weatherization assistance through
25 the Infrastructure Investment and Jobs

1 Act. Pennsylvania stands to have
2 hundreds of millions of dollars to make
3 these investments at no cost to the
4 recipients. PGW should not get into the
5 business of building and then collecting
6 on people's debt for home repairs when
7 there are much better options available.
8 Rather the City should invest already
9 available funding and identify new
10 sources of funding to prioritize safe,
11 efficient, durable homes for low-income
12 Philadelphians.

13 The City of Philadelphia and
14 PGW must examine options to decarbonize
15 with affordability of heating as a
16 backdrop. As households with the
17 ability to move away do so, both PGW and
18 the City need to commit to ensuring that
19 those who are currently unable to afford
20 their utility bills have options to
21 maintain heat in their homes. In a city
22 like Philadelphia where so many families
23 already cannot afford to stay connected
24 to PGW service, any proposals must be
25 viewed with consideration to those who

1 have the least capacity to pay. Thank
2 you.

3 COUNCILMAN GREEN: Thank you,
4 Ms. Price.

5 Mr. DiCroce, if you can just
6 state your name for the record and
7 proceed with your testimony.

8 MR. DiCROCE: Sure. Bill
9 DiCroce, President and CEO of the
10 Vicinity Energy. First of all, I'd just
11 like to thank Chairman Green, Chairman
12 Johnson for inviting me to participate.
13 It's much appreciated. We're a
14 significant energy player in Center City
15 and West Philly, certainly not in a
16 broad geographical context, but we play
17 an important part there.

18 So our company owns and
19 operates the largest portfolio district
20 energy networks in North America in 12
21 cities, about 19 separate districts.
22 The largest of those is Philadelphia.
23 And where they have Philly's district
24 energy system is the second largest on
25 the continent just right behind

1 Manhattan, so ConEd system is a bit
2 bigger.

3 That asset class, that unique
4 and invaluable asset class is what I
5 want to talk about. As many people have
6 stated, there's no silver bullet in this
7 battle into net carbon zero, period.
8 We've got to use every tool in the
9 toolbox, so I'm here to talk about our
10 tool and how it can work, and in some
11 ways we can work with PGW, in some ways
12 we can work independently. But bottom
13 line, Philly needs to use all the tools
14 it has.

15 On that front as far as
16 decarbonization, given the fact that we
17 operate in many different cities, we see
18 many different policies, we see many
19 different gas markets, electric markets.
20 And what we try to do is learn from the
21 best and then pass it along. So I'll
22 talk a little bit about some stuff
23 that's going on inside Philly and
24 outside Philly and what can apply to
25 Philly in the future.

1 So I'll start with present and
2 then go to future. So today we operate
3 this large district in Philly. At its
4 core, its heart, it's the largest
5 combined heating power plant in the
6 Commonwealth, so that's Grays Ferry,
7 sitting down at the Old Peco station,
8 which we now own in South Philly.

9 That plant today by an
10 established mechanism, established
11 science, it's recognized by the federal
12 EPA, Pennsylvania's DEP, under the
13 methods of how you calculate using CHP
14 to electrifying heat versus conventional
15 means, avoids over 300,000 tons per year
16 of carbon in Philly. So that means for
17 everybody who's breathing the air in the
18 Greater Philly bubble, and as we know
19 that bubble doesn't draw lines in
20 neighborhoods, it's everybody, today
21 we're avoiding 300,000 tons of carbon by
22 otherwise using conventional means, and
23 why is that.

24 Just fundamentally,
25 combining -- Seth talked about power

1 plants, right, that put electricity on
2 the grid. The big difference on a CHP
3 plant is that big power plants you see a
4 cooling tower. Well, the 100-year-old
5 technology uses steam turbines has to
6 condense the steam coming out of the
7 back-end for the process to work, and it
8 throws that energy away up a cooling
9 tower or into a river or into the ocean.
10 That's just the technology that's been
11 around for a while for power gen, power
12 generation.

13 The difference from CHP is we
14 don't throw it away. We put it in the
15 pipes and we heat the City, so we're
16 dramatically more efficient than
17 conventional power plants. And in fact,
18 we're the greenest way, the lowest
19 carbon way to burn methane large scale.
20 That's present -- and we'll talk about
21 the future -- but that's today and the
22 benefit of that.

23 We distribute that through 30
24 miles of very robust underground piping.
25 It was frankly built and designed back

1 in the day, but it's in fantastic shape
2 which we maintain. We provide 99.9
3 percent reliability with data that shows
4 that. The reason being is because our
5 biggest customers in Philly, and frankly
6 in most of our cities, if not all, is
7 hospitals. So hospitals need our steam
8 to sterilize. You have to have it. If
9 they don't have our steam, they cancel
10 surgeries. So we design our liability
11 at that very high end. Everybody else
12 on the system gets the benefit of it.

13 As I mentioned, compared to
14 conventional means, we're dramatically
15 below our carbon footprint. We touch
16 the hospitals. We touch municipal
17 buildings, commercial space, hotels, art
18 museums, sports venues, life science.
19 In Philly, that's 75 million square feet
20 of heating. And in the summer, 25
21 million square feet of cooling. That's
22 equivalent to 50 Comcast towers. So a
23 lot of people don't understand the touch
24 we have on downtown, but that's the
25 nature of what it is.

1 Our company is -- we view
2 ourselves as an environmental company.
3 That may sound funny, because you say
4 wait a minute, you've got power plants,
5 you burn methane. But, in fact, because
6 our footprint is so dramatically low in
7 a conventional means, we're trying to
8 grow it. And I'll get to the future
9 where we're going to dramatically
10 decarbonize going forward.

11 But just using that cogen that
12 we have in Philly, every new million
13 square feet of buildings that we attach
14 to our system, you get a 3,000 to 5,000
15 ton per year avoiding carbon. That's
16 real. And the other thing to consider,
17 when you utilize our CHP system with
18 those types of benefits, you're not
19 adding more stacks to downtown. And
20 ultimately, every time you put more
21 combustion equipment into buildings,
22 it's more stacks and it's already a
23 dense environment where lots of people,
24 lots of cars, lots of emissions, the
25 more stacks we have, the worse the air

1 gets, so we really are contributing and
2 the further use of our system
3 contributes to a cleaner air
4 environment.

5 And the reality of this, when a
6 building owner or a city or a university
7 puts in those types of assets, they're
8 going to be there for a while and
9 they're going to keep burning fossil
10 fuels for a long time, so that's just
11 something that we consider as we're
12 looking forward.

13 Another important part, we've
14 invested -- our company's invested north
15 of 300 million in green of assets over
16 the last decade. That's all private
17 money. That's not taxpayer money.
18 That's not citizens money. It's
19 shareholders money. In our case, we're
20 owned by folks -- we're basically funded
21 by pension funds, so it's pretty low
22 cost money, low cost to capital and
23 there's a large reservoir of that to
24 drive further investment.

25 But moving on to the future --

1 so that's today, what we have and what
2 we offer, which again is kind of an
3 irreplaceable type infrastructure.
4 There's not many cities that have it and
5 the ones that have it are lucky to have
6 it.

7 The future, so we issued like
8 many institutions in government a 2050
9 net zero plan, right. And it's going to
10 happen quicker in some cities than it
11 happens in others. Policy will drive
12 it. Assets will drive it. Investment,
13 basically community views on the
14 environment will drive it. But what we
15 know is in some places we're going to
16 get to net carbon zero a lot faster than
17 2050.

18 Let me give you an example of
19 what's going on just up the road up 95.
20 Two big cities we've studied is Boston
21 and Philly. And because Boston -- as
22 you've heard some of the other
23 speakers -- where they are at the end of
24 the gas pipe, it used to be from the
25 Gulf of Mexico, the last stop on the

1 line was Boston. They had suffered
2 through price spikes, shortages,
3 interruptions, so policy has driven
4 things a bit differently in Boston than
5 maybe in Philly. But one of the things,
6 we really changed our view of our
7 business with electrification. If we
8 were back five years ago, we would say
9 electrification is frankly crazy and
10 it's our competition.

11 We finally realized that you
12 can't avoid the fact that methane use is
13 going to continue to go down and
14 renewable capacity is going to continue
15 to go up, period. So we really looked
16 at what are the factors around
17 electrification and some of those have
18 been talked about. But if you look at a
19 city core when you're talking about
20 electrification, you're talking about
21 buildings, either existing buildings
22 retrofitting, extremely expensive.
23 They've got to do major surgery in the
24 building to put in heat pumps, for
25 example, change from what they have

1 today because heat pumps as other
2 speakers have said 300, 400, 500 percent
3 efficient, okay. But then they have to
4 go buy retail power which is expensive.
5 So it's a tall order of business for
6 existing businesses, okay.

7 For new businesses they got to
8 be a little bit worried about cities
9 that are trying to say, wait a minute,
10 I've got to get an X number of gigawatts
11 into this city in the next 10 years to
12 be able to deliver -- let's say the
13 offshore wind farms come on and they
14 will, it's happened around the world,
15 it's happened in Texas, it's happened in
16 the Midwest. That's a challenge for new
17 buildings because they're trying to
18 project what's the cost of that
19 distribution tariff is going to be in
20 the future, okay.

21 So we started thinking about
22 this and said, wait a minute, in our big
23 cities like Boston and Philly we have
24 big power plants, the big CHP plant,
25 combining power plant. We're connected

1 to the grid already, the high voltage
2 grid, which means wholesale access which
3 means wholesale pricing, which means
4 we're already on the backbone of the
5 grid. We're not out on the distribution
6 system. And we looked at them and said,
7 wait a minute, we can electrify and do
8 it quickly and we can do it
9 economically. And the buildings that
10 are attached to us don't need to do a
11 damn thing, pretty good.

12 So I will give you the quick
13 version of what that means. The first
14 version is large scale industrial
15 electrical boilers. So we did a port
16 right off the grid, we're already
17 attached. We're already moving in
18 Boston frankly. We've already designed
19 this and we're out taking bids on Phase
20 1. So large scale electric boilers pull
21 power off the grid, and that's not
22 inconsistent with the fact that the CHP
23 is running, so the grid still will tell
24 for now while those plants are still
25 viable to make power. It's not

1 inconsistent. We can also be buying
2 power at the same time that's renewable.
3 So we'll buy that power and convert it
4 at 100 percent efficiency. That's good.
5 It's not heat pump conversion, but it's
6 still 100 percent. So all the electrons
7 that come in, steam comes out the
8 backend.

9 Now remember, I want to make a
10 point here. Our district energy systems
11 that use steam to move energy around,
12 steam isn't a fuel. It's an energy
13 delivery process just like electricity.
14 So if you look over time, our plants
15 used coal. Then they used oil. Then
16 they went to gas. Now, they're CHP. So
17 the next step when we go to electrify
18 these renewable electrons, the steam
19 doesn't care. It's just moving energy
20 around. It already exists. It's got
21 networks in the ground and it's
22 connected to the buildings. You don't
23 have to buy it. You don't have to pay
24 for it. It's there. So that's Step 1.

25 Step 2 is you heard a lot of

1 talk about heat pumps, okay. Well, just
2 like in Boston and Philly we sit on two
3 rivers that we use today. We pull water
4 out of those rivers today and use it as
5 cooling in our plants.

6 We've already designed -- and
7 this will be the first of its type
8 industrial scale heat pump complex.
9 It's not the type of heat pumps you're
10 going to get in your home, in your
11 hospital, in your commercial building.
12 They use very different refrigerants and
13 you basically are not going to get it
14 permitted in those types of environments
15 because there's hazards related to them,
16 which are fine in an industrial complex,
17 not in your house, not in your hospital.

18 We will end up using
19 electricity and today it could be ground
20 electricity. In the future, it will be
21 that renewable electricity and we will
22 steal energy from the Schuylkill and the
23 Charles at 400 percent efficiency just
24 like previous speakers talked about, and
25 we have multiple purposes for that in

1 our facility to preheat, feed water in
2 our systems or to make steam. So again,
3 a very renewable source of highly
4 efficient power using our existing asset
5 class.

6 The final piece of that is when
7 you look at what happened in Texas and
8 when you look at what happened in other
9 markets where large scale wind came into
10 being, it's very disruptive to the power
11 markets because the wind blows at times
12 when you don't need the power. So we
13 all talk about storage, right, the whole
14 storage issue.

15 Storage is challenging to site.
16 You need lots of storage to take
17 gigawatts of wind and move it from when
18 it blows at night in the winter to the
19 morning when the buildings need heat,
20 right, so you need electrical storage.
21 Under design are large thermal storage
22 facilities on our plants like the
23 Schuylkill -- or in the case in Boston
24 at Kendall -- where we will have molten
25 salt batteries.

1 So in the middle of the night
2 when power pricing for wind is 0 or
3 negative, 0 or negative for wind power,
4 that's what happened ubiquitously in
5 Texas. It's happened in every market
6 where you get this introduction of
7 renewables up against conventional
8 fossil plants that set the market. We
9 will be able to buy that electricity,
10 convert it to steam if it's at the right
11 time. If not, we'll melt salt and in
12 the morning we'll make steam with it.
13 So these are all existing technologies.
14 On a scale of magnitude, they're not
15 that expensive. And it's all proven
16 technology and our facility is uniquely
17 situated to do that.

18 So if you think of it this way,
19 today we're sitting on this energy
20 distribution network that's got the
21 biggest CHP in the state we should use
22 more of, big tool. In the future, we've
23 got an energy network that can change
24 primary fuel sources and has four times
25 over its history, the next one being

1 renewable power. It represents a tool
2 that for a downtown where energy density
3 needs are very high, it's really hard to
4 replicate.

5 So I've spoken to some of the
6 folks that were on the last panel about
7 the geo networks. They're fantastic.
8 They're great in residential
9 neighborhoods and in some commercial
10 neighborhoods like the Navy Yard may
11 work. When you get into urban cores,
12 it's very challenging to pull that much
13 energy out of the holes you punch in the
14 ground, so we need all of these tools.

15 And I think what we really
16 represent for Philly is a great big tool
17 for Center City, for West Philly, for
18 basically the dense construct of Philly
19 that's high-rises and big buildings, and
20 we can decarbonize rapidly. And here's
21 the final kicker too on kind of where we
22 stand in this. I told you we've
23 designed it. We're moving forward. We
24 put out our first commercial offer to a
25 big life science company up in Boston

1 that is going to build a multi-million
2 square foot complex and it's based on we
3 call it e-steam, right, electric base
4 steam, renewable base thermal, and we're
5 in striking distance of natural gas.
6 Now, think about that. We're in
7 striking distance of the price of
8 natural gas boilers and them going to
9 the grid and buying power and having
10 renewable based thermal, because we can
11 do it so much cheaper at our plant.
12 We're sitting on the backbone of the
13 grid and we've already had the
14 distribution network in place.

15 So again, for these cities that
16 are lucky enough -- and I know for
17 example, we're leading the way on this.
18 ConEd came out with their podcast
19 recently and said they're considering
20 it, they covered a bit of this in their
21 own study on what to do for their
22 diversification and how their steam
23 network could work. They're following
24 our lead. We're really leading a
25 paradigm shift of district energy.

1 Wherever these districts exist, we've
2 got a central plant where you can make a
3 change and then touch all of the
4 buildings on it, that's the place to
5 make these changes and grab big chunks
6 of cities, big swaths of buildings in
7 these rapid conversions. So I think
8 we're really excited about it.

9 And another point to make is I
10 mentioned the funding available. We
11 recently were acquired by a fund, okay.
12 When we went to market to sell these
13 district energy assets, we had over 100
14 funds respond. I didn't know there were
15 that many funds honestly. 50 asked for
16 a book, 30 bid. There is such a
17 mountain of money out there below cost
18 capital, private money that's trying to
19 invest in this type of energy
20 infrastructure.

21 We're ready to grow with Philly
22 and help to decarbonize, and we've got
23 the technical wherewithal and the
24 financial backing to do it, and we hope
25 that Philly recognizes it. All the

1 tools need to get used and we want to be
2 part of that solution. And to the
3 extent we can partner with PGW to do
4 that -- because remember, all of the
5 fuel that we burn in that big CHP comes
6 through PGW at present, so we're a bit
7 joined at the hip now anyway. So I
8 don't think it's inconsistent for us to
9 try to work together and figure this
10 out. So with that, I think that will
11 wrap up our position kind of on future
12 and present benefits and future
13 potential with our system in Philly.

14 COUNCILMAN GREEN: Thank you
15 for your testimony. I actually had a
16 question about the distinction between
17 the Vicinity and HEET and you kind of
18 answered that in your presentation, so I
19 appreciate it and provided a lot of
20 perspective on the different capacities
21 where Vicinity could partner with PGW.
22 They currently partner with PGW, but
23 also going into the future. So thank
24 you for your testimony.

25 Ms. Murphy.

1 MS. MURPHY: Hi. Thank you. I
2 am in my car now so you'll have to
3 excuse me. I'm in the process of
4 picking kids up from school. So I will
5 read my testimony. Can anybody hear me?

6 COUNCILMAN GREEN: Yes, we can
7 hear you.

8 MS. MURPHY: Okay. To close
9 the Inquirer's Editorial Board,
10 Philadelphia needs to think creatively
11 about ways that the utility can utilize
12 its workforce, revenues and, if
13 appropriate, existing infrastructure in
14 a way that solidifies commitment to
15 jobs, housing justice and climate
16 change. The energy future of our City
17 depends on it.

18 I would like to draw attention
19 to the Footnote No. 19 in the E3 PGW
20 Diversification Study. I believe there
21 is great value in paying attention to
22 what is not being said. Footnote 19
23 basically clarifies that the
24 decarbonized gas option still emits
25 carbon.

1 The devil is in the details
2 here. Not only would the so-called
3 decarbonized gas method be terribly
4 expensive for Philadelphia's already
5 overburdened residents, it would also
6 not really decarbonize the system that
7 we're trying to decarbonize.

8 Costs including storage are
9 omitted from the study, so too are the
10 full life cycle cost of the for-profit
11 industry. One cannot simply ignore the
12 life cycle carbon emissions of fuels
13 because the life cycle -- there is a
14 growing body of work that has been
15 emerging in recent years addressing the
16 human rights and rights of nature
17 implications of fracking and climate
18 change.

19 I have seen the industry's
20 destruction with my own eyes. I have
21 seen its invisible toxicities through a
22 flare camera. I have smelled the air.
23 I have gotten sick to my stomach,
24 developed headaches, sinus pain,
25 nosebleeds and congestion in short

1 visits to gas patches. At one landfill
2 that collects fracked waste, my tongue
3 went numb when I removed my mask. 16
4 people on that street have had cancer
5 since they started receiving fracking
6 waste. Only 3 of them are alive at my
7 last visit.

8 Stories of toxicity, illness
9 and death are everywhere in fracking
10 areas. Mothers and fathers wonder how
11 their teenagers developed rare and fatal
12 cancers that took the lives of their
13 children and others in neighboring
14 school district in shale communities.
15 This E3 study admitted in the footnote
16 that biomethane and synthetic natural
17 gas still release CO₂ into the
18 atmosphere. Yet the study falsely
19 represented these carbon emitting
20 processes as carbon neutral fuels.

21 The E3 study omitted the human
22 rights violations entangled in the
23 so-called decarbonized process and
24 morbidity and mortality did not even
25 make it into the footnotes. The

1 inaccurately named decarbonized gas
2 process would bring high cost to
3 Philadelphians and still have the
4 unwanted negative and far-reaching
5 health consequences of pollution. It is
6 a false solution. A green-washing
7 for-profit overreach that will
8 ultimately endanger our health and
9 shared climate. The City need not
10 bother stagnating an industry-pushed
11 false solution while there are
12 sustainable solutions under our feet.

13 PGW started its business in gas
14 lighting. They have changed business
15 models to meet the needs of
16 Philadelphians along the way. Let's
17 leave all carbon emitting processes in
18 the past and move toward the genuinely
19 clean energy solutions for our City and
20 not allow PGW to go back to gaslighting
21 us. Thank you.

22 COUNCILMAN GREEN: Thank you
23 for your testimony. I want to thank
24 this entire panel for offering the
25 various perspectives that you've

1 provided this afternoon.

2 Are there any questions from
3 members of Council?

4 (No response.)

5 COUNCILMAN GREEN: Seeing none,
6 and also just to remind the previous
7 panelists and also current and future
8 panelists, if you have your testimony in
9 writing, please send that to my office
10 so that way we can use that going
11 forward to try to publish all of the
12 testimony working with the Office of
13 Sustainability, so people who are not
14 able to attend or have to leave early,
15 we can see the information that's been
16 provided this afternoon. I just want to
17 thank all of you for your patience and
18 your information to add to today's
19 conversation in making it a robust
20 dialogue.

21 With that, Mr. Iannuzzi, if you
22 could call the next panel.

23 THE CLERK: Logan Welde, Staff
24 Attorney and Director of Legislative
25 Affairs for Clean Air Council; Adam

1 Nagle, Campaign Manager for PennFuture;
2 Flora Cardoni, Field Director for
3 PennEnvironment; and Tom Shuster who is
4 the Clean Energy Program Director for
5 Sierra Club PA Chapter who provided his
6 testimony but had to leave. I'll make
7 sure that that gets circulated to the
8 members of both Committees.

9 COUNCILMAN GREEN: Okay. In
10 that --

11 MR. SHUSTER: I'm actually
12 still here for --

13 THE CLERK: My apologies.

14 MR. SHUSTER: I have to leave
15 at 4:00.

16 COUNCILMAN GREEN: Okay. So if
17 we could have each person based on what
18 was stated by Mr. Iannuzzi. State your
19 name for the record and then proceed
20 with your testimony.

21 MR. WELDE: Tom, do you want to
22 go first so that you can get your time
23 in?

24 MR. SHUSTER: If that's all
25 right.

1 COUNCILMAN GREEN: That's fine.

2 If that's okay with the panel, please
3 proceed. Thank you.

4 MR. SHUSTER: All right. Thank
5 you. Good afternoon. My name is Tom
6 Shuster. I'm the Clean Energy Program
7 Director for the Sierra Club
8 Pennsylvania Chapter. Sierra Club
9 recognizes that time is running out to
10 address the climate crisis and that we
11 must reduce our greenhouse gas emissions
12 by 50 percent by 2030 and eliminating
13 them by 2050.

14 We're pleased that the City and
15 PGW are exploring options for
16 decarbonizing the gas utility, but the
17 final report and its recommendations
18 lack the urgency and the ambition that
19 the climate crisis demands. Despite
20 acknowledging on Page 4 that the
21 necessary scale of the transformation
22 indicating that near-term action is
23 required in order to achieve net zero
24 emissions by 2050.

25 In order to remedy this, we

1 urge the City to do the following
2 without delay: First, design and
3 implement an actual network geothermal
4 pilot project. Philadelphia's specific
5 feasibility study could be useful, but
6 the completion of such a study should
7 not be a prerequisite for initiating a
8 real world pilot project. In fact, one
9 or more pilots would prove to be very
10 informative to such a study, and I think
11 based on comments earlier that may be
12 the direction that we're headed, but we
13 need to move quickly.

14 Second, immediately address the
15 report's Page 5 finding, the PGW's
16 existing legal and regulatory structure
17 and cost recovery mechanism does not
18 position the utility to be able to
19 support achievement of the City's carbon
20 neutrality goal.

21 Utility must have the
22 flexibility to provide services other
23 than gas delivery and collect revenue
24 services for those services. And third,
25 set interim mandatory GHD reduction

1 targets for PGW for each five-year
2 interval between now and 2050. Such
3 goals and progress reports toward them
4 are critical to ensure near-term action
5 that the report recognizes is necessary.

6 We also urge the City not to be
7 distracted by so-called decarbonized gas
8 in the near term. As the report notes,
9 its projected expense is exorbitant and
10 its use will only spur electrification
11 and defection from PGW's gas system. In
12 addition, the emissions benefits is
13 intentionally generating additional
14 methane from biological sources are
15 suspect, as even modest leaks during
16 production storage or distribution and
17 delivery will cancel out the climate
18 benefits of displacing of fracked gas.

19 Biomethane is still methane.
20 It is very damaging to the climate. And
21 therefore, the use of decarbonized gas
22 should be limited to end uses that prove
23 particularly difficult or expensive to
24 electrify, which should happen much
25 later, if at all.

1 We fully support the
2 recommendation to ramp up existing
3 weatherization programs to reduce gas
4 consumption, particularly by low-income
5 customers. However, we're very
6 concerned about the so-called novel
7 financing opportunities and they expose
8 low-income customers to additional
9 finance of risk or even service
10 termination.

11 The City should look to expand
12 the availability of grant funding to
13 cover expanded weatherization programs.
14 Unfortunately, there are new possible
15 sources of funding emerging, including
16 allowance proceeds from regional
17 greenhouse gas initiative and the
18 federal bipartisan infrastructure law.
19 Thank you very much for your time today,
20 and that is all I have.

21 COUNCILMAN GREEN: Okay. Thank
22 you for your testimony.

23 If the next witness can state
24 their name and then proceed with their
25 testimony.

1 MR. WELDE: Good afternoon,
2 everyone. Logan Welde and I am
3 Legislative Director and staff attorney
4 at the Clean Air Council. The Council
5 is a nonprofit health organization
6 headquartered in Philadelphia with the
7 mission of protecting everyone's rights
8 to a healthy environment, and the
9 Council and its members share a direct
10 interest in the long-term viability of
11 the City-owned utility, including its
12 workforce and I will note here that my
13 grandfather was a proud career PGW
14 employee.

15 The Council has submitted more
16 detailed comments so please review those
17 as well as listening to my testimony
18 today. The Council strongly supports
19 continuing to meet on this topic and
20 encourages the Committees on Finance and
21 Transportation and Public Utilities to
22 hold additional joint hearings to the
23 need for PGW to diversify its operations
24 beyond fossil gas.

25 We're happy to see that the

1 study was undertaken and E3's
2 presentation highlighted a few very
3 promising proposals, but the Council
4 believes there are issues with the
5 study. The most glaring flaw in the
6 study is its underlying assumption that
7 the City-owned utility must continue to
8 operate primarily as a gas utility. And
9 Mr. Shapiro's testimony today did not
10 allay these fears. It was essentially
11 an infomercial for continuing to use
12 gas.

13 And the statement from Keith
14 Holmes, President of PGW's union, "There
15 can be no dispute that if the City were
16 to somehow eliminate natural gas as a
17 source of energy, all of these good jobs
18 would be lost and could not be replaced
19 with a viable alternative." This
20 appears that one of the most important
21 players in the potential transition and
22 hopeful transition has already made
23 their decision to oppose anything but
24 business as usual.

25 And as Susan Phillips stated in

1 the headline of her article, Is PGW on
2 Board. And at this point, it's worth
3 noting PGW has advocated for a statewide
4 law that would severely limit
5 Philadelphia's ability to reduce its
6 carbon use from gas use and make it
7 unlawful to do any of the proposed
8 alternatives outlined in this study.

9 Mr. Shapiro did not admit to
10 lobbying for it, but Councilmember Gym
11 asked some very good questions in
12 contrary to Mr. Shapiro's testimony.
13 They did convey their support of the
14 preemption bill through the Energy
15 Association of Pennsylvania's testimony
16 at the state's hearing, and more than a
17 dozen emails were exchanged between
18 PGW's executives and the bill sponsor's
19 office Senator Yaw. In defending the
20 sunshining of communication, PGW
21 executive said "My communications with
22 PGW's lawyer reflect strategy used to
23 develop or achieve successful adoption
24 of Senate Bill 275, in that they analyze
25 particular language in the bill and

1 similar laws." That sounds a lot like
2 advocating for that bill, not just
3 providing technical support or technical
4 information.

5 Mr. Shapiro mentioned all the
6 emails and said that it's inappropriate
7 to point to a few statements in them,
8 but they're pretty damning. And there
9 were other forms of communication very
10 likely that weren't discovered through
11 freedom information, right-to-know
12 requests. Clean Air Council has called
13 for City Council to investigate this
14 action and what laws may have been
15 violated, and we would ask that you
16 demand that PGW cut ties with the
17 outside lobbying organizations like AGA.
18 Spend that money on Philadelphia
19 infrastructure and Philadelphians.

20 I wanted to address another
21 issue that was brought up. Yes, we use
22 gas in our electricity supply, but
23 that's not a reason to continue using
24 gas in our City. There is a big
25 difference, so please don't fall for

1 this false argument in support of
2 continuing to use gas in Philadelphia.
3 The grid is cleaning up and it will be
4 predominantly renewable in the coming
5 decades.

6 But more importantly, as I'll
7 address in the comments, local gas usage
8 is dangerous to our health and safety
9 and is more expensive in the long run.
10 There is no justification for the
11 assumption that continuing business as
12 normal is the best path forward, and
13 starting with that premise substantially
14 limits future options for the City and
15 the City-owned utility. Unfortunately,
16 this results in a weak and unambitious
17 study.

18 The Council believes hearings
19 should result in mandating that OOS,
20 Office of Sustainability, quickly
21 commission a more rigorous study that
22 would move the City-owned utility away
23 from being mainly a gas utility.
24 However, there is enough in the study
25 for City Council to require PGW to

1 quickly begin diversifying its
2 operations.

3 In support of our views, we
4 offered the following points:

5 Transition away from fossil gas as
6 necessary to meet carbon reduction goals
7 and maintain the health of Philadelphia
8 citizens. You heard from a few
9 presenters today about indoor air
10 quality and its effects on citizens and
11 also, the methane leaks in Philadelphia
12 and explosions.

13 Diversify PGW's business, and
14 that's a more prudent strategy to manage
15 the financial risk that Philadelphia
16 residents will face should PGW continue
17 to exclusively operate as a gas company.
18 There are significant market and
19 regulatory risk now faced in the U.S.
20 gas industry. Gas utilities across the
21 United States are examining alternative
22 future business models as you've heard
23 from previous speakers today. The best
24 path for PGW to manage the risk facing
25 the gas industry is to substantially

1 diversify its operations.

2 In addition, decarbonization of
3 the existing fossil gas system will be a
4 transition of enormous complexity and
5 scale. PGW will better manage the
6 transition if it acts promptly and
7 deliberately. Also, avoid the need for
8 sudden and costly changes that a delay
9 would bring.

10 The study overlooks several
11 important aspects of PGW's gas
12 operations and the gas transition such
13 that the potential for alternative
14 business models to meet Philadelphia's
15 heating needs may, in fact, be greater.
16 In particular, the study does not
17 adequately incorporate the cost of gas
18 storage, the asymmetric risk to
19 Philadelphians from dependence on
20 renewable natural gas and the trend of
21 declining costs for heat pumps.

22 The Committee should build on
23 the study's recommendations and go
24 further to require specific and concrete
25 requirements for PGW to execute the

1 recommendations contained in the study.
2 The study is an important first step in
3 transitioning Philadelphia's fossil gas
4 heating system to a decarbonized future.
5 That's only the first step.

6 The Council submits for your
7 consideration the following: PGW should
8 develop a weatherization financing
9 service business. The Committee should
10 build on the study recommendations and
11 go further to require PGW to submit a
12 weatherization business plan within six
13 months.

14 PGW should immediately
15 undertake a pilot project for network
16 geothermal districts. Call on OOS to
17 commission a geothermal feasibility
18 study. Ask PGW to develop a site
19 selection process for the district. Ask
20 PGW to complete a cost estimate to
21 transition an existing neighborhood.
22 Ask OOS to complete a cost estimate to
23 construct housing utilizing a geo
24 district.

25 And I would mention here that

1 Susan Phillips again had another article
2 yesterday on geothermal, and it's an
3 important read if you haven't seen it,
4 which I assume you have. Should also
5 require PGW to develop organizational
6 capacity around a tactical thermal
7 transition to understand the key
8 reliability and revenue interactions
9 between gas and electric systems on a
10 block-by-block level. Require office of
11 sustainability to convene a regulatory
12 reform task that would specifically
13 analyze the obstacles to new business
14 models and systematically identify
15 possible solutions. Make approval of
16 the PGW operating and capital budgets
17 conditional on implementation of these
18 recommendations.

19 Councilmember Bass stated this
20 earlier, if it's not in the budget, it's
21 not just going to happen. So you have
22 the power of the budget and you should
23 use that. That's all for my comments
24 and I appreciate your time and welcome
25 any questions later.

1 COUNCILMAN GREEN: Thank you,
2 Mr. Welde, for your testimony.

3 I'm not sure if Ms. Cardoni or
4 Mr. Nagle is next, but please state your
5 name for the record and proceed with
6 your testimony.

7 MR. NAGLE: Council Chairperson
8 Green, my name is Adam Nagle and I am
9 the Philadelphia Campaign Manager for
10 Penn Future. I would also like to thank
11 you, Chairperson Green and Chairperson
12 Johnson, for taking the time to call
13 this Committee hearing, and I would like
14 to thank the other Committee members as
15 well.

16 PennFuture is a state-wide
17 environmental advocacy nonprofit. We
18 are leading the transition to a clean
19 energy economy in Pennsylvania and
20 beyond. We are protecting our air,
21 water and land and empowering citizens
22 to build sustainable communities for
23 future generations. We appreciate the
24 opportunity to discuss the
25 sustainability and diversification of

1 the Philadelphia Gas Works.

2 We believe that this hearing
3 has already provided and will continue
4 to provide all of us with important
5 information on the Diversification
6 Study, the recommendations contained in
7 that document and the urgent transition
8 of PGW away from its reliance on fracked
9 gas.

10 The Diversification Study makes
11 clear PGW's position as a gas utility
12 and its desire to remain one. This
13 should come as no surprise based on
14 PGW's testimony during City Council's
15 previous hearing on this topic in 2019.
16 In fact, we believe that a straight line
17 can be drawn from PGW's previous
18 testimony to much of the findings and
19 recommendations in the Diversification
20 Study we are hearing about today.

21 PGW's previous testimony
22 focused on the use of renewable natural
23 gas or RNG or decarbonized gas to reduce
24 its greenhouse gas emissions. Not
25 surprisingly, the study's third

1 recommendation calls for a
2 low-carbonized gas program where PGW
3 partners with other City departments to
4 convert waste into biomethane.

5 While replacing fracked gas
6 with biogas seems like an obvious
7 solution, it doesn't always work.
8 Biogas has a much lower methane content
9 and can contain much more CO2 along with
10 many other chemicals. It isn't the drop
11 in replacement we would like. That is
12 where RNG comes in. Because it is
13 biogas, it has been refined with a
14 better substitute for fracked gas.
15 Although it would seem safe to conclude
16 the burning of biofuel is better than
17 burning of fossil fuel. Trading fracked
18 gas for a lower emitting version is not
19 the ultimate goal.

20 The City's diligent climate
21 research makes clear that we must
22 transition PGW to a sustainable energy
23 that achieves net zero carbon as rapidly
24 as possible. RNG cannot play a leading
25 role in this transition because as the

1 study itself makes clear, it is more
2 expensive to produce, does not
3 contribute to air quality improvements
4 and it is limited in terms of
5 commercialization or total availability.

6 Incorporating hydrogen in the PGW's
7 operations presents many of the same
8 challenges as the other forms of RNG.

9 While it's technically possible to use
10 hydrogen instead of gas for heating,
11 cooking and other applications, it's
12 simpler and cheaper to electrify.

13 Because hydrogen is very tiny and like
14 molecules, it leaks at any opportunity.

15 Large scale use of hydrogen would
16 require we either retrofit or build out
17 entirely distribution networks both
18 under our City streets and in many
19 thousands of existing homes. That would
20 be prohibitively expensive.

21 Ultimately, the study's second
22 recommendation surrounding the use of
23 geothermal energy carries the most
24 promise as we have heard detailed
25 already today. PennFuture strongly

1 supports the pursued network geothermal
2 district systems to fully transition PGW
3 from fracked gas. We hope that the
4 proposed feasibility study is completed
5 quickly and a pilot program initiated so
6 that any potential barriers can be
7 identified and proposed solutions be set
8 in the motion with all possible speed.

9 Of course, PGW must play an
10 active work in this critical work, but
11 additional questions have been raised
12 regarding its commitment to the City's
13 climate pledges and this study of its
14 previous testimony on this topic of
15 2019, which I think we all can agree was
16 largely reiterated today by Mr. Shapiro.

17 Did PGW provide a statement on
18 the study upon its release? It did not.
19 Did PGW provide any substantive comments
20 on the study or the recommendations
21 contained therein prior to this hearing?
22 It did not. Did PGW work with oil and
23 gas industry insiders seeking to further
24 undermine the City's ability to identify
25 local solutions for local challenges

1 through preemption legislation currently
2 working its way through the General
3 Assembly in Harrisburg? It did so
4 unapologetically. Going so far as to
5 say that natural gas will continue to be
6 an essential tool for its carbon
7 reduction.

8 The consequences are numerous
9 from the continued denial, deflection
10 and delay embodied in PGW's statements
11 and actions, including Mr. Shapiro's
12 testimony today. Ratepayers who are
13 already energy-burdened will see their
14 bills increased as others seeks out
15 alternative energy sources independent
16 of the holistic transition.

17 The escalating impact of
18 climate change brought on by a reliance
19 on fossil fuels will grow worse, risking
20 further harm to the health and safety of
21 our most vulnerable communities from
22 warmer and wetter weather. Decisive
23 action is required to ensure minimal
24 disruption for PGW's workforce and its
25 ratepayers.

1 PennFuture requests the
2 following to be considered to undertake
3 this work: Set aside the RNG -- set
4 aside the RNG pilot program due to the
5 reasons set out above. Immediately
6 authorize work on the geothermal
7 feasibility study --

8 (Background interruption.)

9 COUNCILMAN GREEN: Excuse me,
10 Mr. Nagle. Please make sure your audio
11 is on mute please to not interrupt any
12 of our panelists.

13 Thank you, Mr. Nagle. Please
14 proceed.

15 MR. NAGLE: I'll start over
16 from the last section. PennFuture
17 requests the following be considered to
18 undertake this work: Set aside the RNG
19 pilot program due to the reasons set out
20 above. Immediately authorize work on
21 the geothermal feasibility study and we
22 would hope incorporating pilot program,
23 and require PGW to place far greater
24 emphasis on building an organization
25 that prioritizes sustainability to

1 better meet the needs of all
2 Philadelphians.

3 The game is not lost. There is
4 still time to forge the latest chapter
5 in PGW's long history and demonstrate
6 that innovation is the most logical path
7 towards a net zero carbon future. Thank
8 you again for the opportunity to speak
9 here today, and I'm happy to answer any
10 questions.

11 COUNCILMAN GREEN: Thank you,
12 Mr. Nagle.

13 Ms. Cardoni, please state your
14 name for the record and proceed with
15 your testimony.

16 MS. CARDONI: Hi, everyone. My
17 name is Flora Cardoni and I'm the Field
18 Director with PennEnvironment, the
19 statewide citizen-based environmental
20 advocacy nonprofit. Thank you all for
21 the opportunity to testify today on
22 behalf of thousands of our members
23 across the state and here in Philly who
24 are clamoring for real action to tackle
25 the climate crisis.

1 As some of my colleagues here
2 have stated, the science is very clear
3 that to stop the worst impacts of
4 climate change, we must reach net zero
5 greenhouse gas emissions by 2050 at the
6 latest and cut emissions in half by
7 2030.

8 I'm here to testify in support
9 of a full transition of PGW away from
10 gas and to 100 percent clean energy, and
11 to oppose any efforts that will make
12 that transition more difficult. Ending
13 our reliance on dirty dangerous fossil
14 fuels will help lower global warming
15 emission, clean up our air and protect
16 our health.

17 So PennEnvironment applauds PGW
18 for including a path forward promoting
19 geothermal energy and Philadelphia's
20 energy mix. Studying the opportunities
21 for geothermal is definitely a positive
22 first step. We're also in support of a
23 plan centered around full
24 electrification with PGW transitioning
25 completely off of gas to 100 percent

1 clean energy. And certainly, we
2 appreciate the emphasis on
3 weatherization and energy efficiency
4 which are critical pieces of all of
5 these plans.

6 With that being said, some of
7 the other options put forth by PGW in
8 this study will not address the City's
9 energy needs nor reduce our reliance on
10 fossil fuels and therefore our carbon
11 emissions. For example, so-called
12 decarbonized gas and fuel from hydrogen
13 which are really both pipe dreams that
14 still largely rely on using burning and
15 leaking methane gas which is a more
16 potent greenhouse gas than carbon
17 dioxide, don't improve air quality and
18 are relatively scarce and expensive.

19 I speak in much greater detail
20 about the problems with both of these
21 energy sources in the written testimony
22 I've provided, but the bottom line is
23 that electrification powered by clean
24 energy would be cleaner, more
25 sustainable, more cost-effective and

1 result in lower emissions than any
2 pathway that relies on expanding this
3 so-called decarbonized gas.

4 Another big question though
5 that I have today is how serious is PGW
6 about diversification in the first
7 place. I pose this question because as
8 Councilperson Gym and Logan both stated
9 there's been a lot of news coverage
10 about PGW's involvement in drafting this
11 legislation that would explicitly strip
12 Philadelphia's authority to implement
13 these or other policies that would
14 promote diversification of the City's
15 energy mix. This legislation, Senate
16 Bill 275 and its companion in the House,
17 HB 1947, go much further than just
18 electrification at the local level.

19 It would also have a chilling
20 effect on municipalities' ability to
21 promote solar, weatherization, energy
22 efficiency or any policies that would
23 have the effect of limiting gas use.
24 PGW responded that they're neutral on
25 the bill and reiterated that today. And

1 while that claim is questionable at best
2 given their clear involvement in
3 providing feedback to strengthen it, we
4 would think that PGW should have an
5 obligation to aggressively oppose this
6 attack on energy diversification if they
7 truly plan to diversify and help the
8 City meet its climate reduction goals.

9 So I'm here to directly call on
10 PGW to put their money where their mouth
11 is and come out against these bad bills,
12 House Bill 1947 and Senate Bill 275, and
13 ask the Philadelphia Delegation to
14 continue opposing these or similar
15 proposals. Ultimately, we owe it to our
16 children, our grandchildren and the
17 planet to address climate change with an
18 urgent and focused priority.

19 Promoting bills that tie our
20 hands and pedaling gas resilient energy
21 sources masquerading as renewable energy
22 will only exacerbate the problem. So I
23 urge PGW and the City to focus their
24 efforts into electrification and to 100
25 percent cleaner renewal energy to ensure

1 that future generations of
2 Philadelphians have a safe and livable
3 climate in the place that we call home.
4 Thank you.

5 COUNCILMAN GREEN: Thank you,
6 Ms. Cardoni, for your testimony. I want
7 to thank everyone on this panel for
8 providing your remarks this afternoon.

9 Are there any questions from
10 members of Council regarding any of the
11 comments that were made from this panel?

12 (No response.)

13 COUNCILMAN GREEN: Seeing none,
14 and hopefully if you had testimony that
15 was written -- I know Mr. Welde and
16 others if you had written testimony --
17 if you could make sure to get that to my
18 office, all of the testimony for those
19 who will not be able to attend can read
20 it later, but thank you all for your
21 participation. I know it's been some
22 time, but I think each person that has
23 testified so far has provided a robust
24 conversation for this topic for this
25 afternoon, so thank you.

1 Mr. Iannuzzi, can you read the
2 names of the witnesses for our next
3 panel.

4 THE CLERK: Emily Davis,
5 Representative from Geodelphia; Jordan
6 Teicher and Duncan Gromko are both
7 Members of Philadelphia Democratic
8 Socialists of America; Reverend Cheryl
9 Pyrch is a Representative of Interfaith
10 POWER; and Reverend Allen Drew is the
11 East Coast Regional Organizer for
12 Climate Witness Project.

13 COUNCILMAN GREEN: Okay. Thank
14 you, Mr. Iannuzzi, for those names.

15 If you can testify in that
16 order, we will start with Ms. Davis,
17 Mr. Teicher, Mr. Gromko, Reverend Pyrch
18 and Reverend Drew. If you can state
19 your name for the record and then
20 proceed with your testimony.

21 MR. DAVIS: Hi. My name is
22 Emily Davis and I represent Geodelphia.
23 We appreciate the opportunity to speak.
24 Network geothermal is one of the options
25 in the Diversification Study. We

1 suggest a full physical pilot rather
2 than just a study. A feasibility study
3 could be done at the same time. But
4 this is because geothermal is a proven
5 40-year-old technology. We have several
6 examples already in the City of
7 Philadelphia.

8 Network geothermal is also not
9 new. There are institutional as well as
10 residential examples of each of these,
11 but each one has a single owner. In
12 Philadelphia, we need a pilot --

13 (Background interruption.)

14 COUNCILMAN GREEN: Ms. Davis,
15 could you hold on one second. If we can
16 have everyone mute because it's
17 interrupting Ms. Davis' presentation,
18 and we want everyone to be fully heard
19 as they're making their presentation.

20 So, Ms. Davis, please proceed
21 with your testimony.

22 MS. DAVIS: In Philadelphia, we
23 need a pilot in which multiple property
24 owners are involved. Most individual
25 homeowners cannot afford to install a

1 close-loop system necessary for energy
2 exchange. And in Philadelphia, many
3 homeowners do not have the land
4 necessary to install a system of
5 geothermal. So geothermal must be a
6 utility in Philadelphia.

7 Geothermal could provide
8 heating and cooling, and PGW could sell
9 BTUs as well as maintenance for home
10 systems. Additionally, geothermal could
11 help PGW retain steel jobs and provide
12 PGW with a stable year-round revenue
13 system. Utility bill payers know that
14 heating and cooling are the most
15 expensive of the utilities. They become
16 more expensive without geothermal. Many
17 homes in Philadelphia do not have
18 cooling systems, but these are becoming
19 a necessity in our warming climate.

20 A geothermal system provides
21 efficient heating and cooling as other
22 speakers have mentioned. Energy
23 efficiency can be part of PGW's business
24 mix, but renewal natural gas is not
25 scalable and continues to pipe gas

1 through leaky pipelines emitting
2 climate-harming methane and unhealthy
3 indoor air pollution. Sustainable
4 geothermal technology is the best option
5 for PGW and the City of Philadelphia.

6 A full pilot of network
7 geothermal system must be part of the
8 diversification project. With PGW
9 trained and experienced to process it
10 for themselves, a public building like a
11 school or a recreation center as the hub
12 of the project and a heat island
13 neighborhood as the site, the pilot can
14 benefit PGW as well as Philadelphians.

15 Thank you very much for the opportunity
16 to speak.

17 COUNCILMAN GREEN: Thank you,
18 Ms. Davis.

19 If we can have the next witness
20 please state your name for the record
21 and proceed with your testimony.

22 MR. TEICHER: Thank you. My
23 name is Jordan Teicher. I'm a resident
24 of West Philadelphia and a member of
25 Philly DSA, a local chapter of the

1 Democratic Socialists of America. I
2 want to start by stating something
3 obvious. Philadelphia Gas Works is a
4 public utility. We the people of
5 Philadelphia own it. That means it
6 should serve us, but who is PGW serving
7 today.

8 Is it serving the people of
9 Philadelphia when its leaders are
10 coordinating with the American Gas
11 Association to lock us into fossil fuels
12 when they are in effect making a mockery
13 of the goals of this Diversification
14 Study? Is it serving us when it's
15 voting in lockstep with the American Gas
16 Association to vote down cleaner
17 building codes? Is it serving us when
18 it's failing to study the asset risk
19 that accompanies our City's commitment
20 to make reliance on natural gas obsolete
21 by 2050? And is it serving us when it's
22 being run by a nonprofit corporation
23 that does not publish minutes from its
24 meetings and releases very little
25 information about its activities? I

1 think we all know the answer.

2 It's time for PGW to start
3 serving the people of Philadelphia, and
4 what the people of Philadelphia want is
5 a PGW that acts like a public utility,
6 not a private business. We want a PGW
7 that acts boldly to address the climate
8 crisis. We want a PGW that expands
9 access to good union jobs, but that is
10 not the vision for PGW reflected in this
11 Diversification Study.

12 This study assumes that PGW
13 will remain primarily a gas utility. It
14 calls for investing in a renewable
15 natural gas pilot, which is
16 unsustainable, unscalable and unsafe.
17 It aims for a lower carbon future rather
18 than a zero carbon future we need to
19 live safely in the City and on this
20 planet. And it plans for still more
21 studies, more time to kick climate
22 action down the road.

23 So if the City is serious about
24 the climate crisis, it will immediately
25 remove PGW leaders, including Seth

1 Shapiro, who are working against our
2 climate goals. It will demand that PGW
3 stop paying hundreds of thousands
4 dollars in member dues and ratepayers
5 dues to gas industry trade groups, and
6 it will invite Philadelphians to
7 participate in a democratic process to
8 determine the future of our utility and
9 our City. Thank you.

10 COUNCILMAN GREEN: Thank you
11 for your testimony.

12 Mr. Gromko, I believe you are
13 next.

14 MR. GROMKO: Hi. Good
15 afternoon. My name is Duncan Gromko.
16 I'm a member of Philadelphia DSA and a
17 resident of South Philly. PGW and the
18 City that governs it need to get serious
19 about climate solutions that put workers
20 first. Referred from many other
21 speakers, RNG is not a serious scalable
22 solution to PGW's transition.

23 On the other hand, the
24 Diversification Study showed that
25 piloting network geothermal as well as

1 electrification investments and programs
2 like cities Built to Last program are
3 the most meaningful way that the City
4 can reduce its gas. Public investment
5 in our City's future will also create
6 good union jobs for gas workers,
7 electricians and many other building
8 trade unions in the City.

9 We've heard from experts today
10 that many of the skills needed for
11 geothermal are similar to those that gas
12 workers already have. Rather than take
13 action, there will be another study that
14 our City has to beg for private money to
15 conduct and will take years to complete.
16 We need the Gas Commission, City Council
17 and the Mayor to show leadership and
18 govern our public utility for the public
19 good. Instead PGW continues to operate
20 without accountability with employees
21 advocating for a preemption bill in
22 Harrisburg.

23 Speaking of accountability,
24 this hearing itself was made
25 inaccessible. The announcement of the

1 hearing went out only a week ago. It's
2 extremely hard for working people to
3 attend an hour's long hearing during the
4 middle of the day with such short
5 notice. This is not acceptable for such
6 an important public process.

7 I'm calling for the following
8 public control: PGW needs to be
9 directly accountable to all
10 Philadelphians. Green union jobs, PGW's
11 future must expand green union jobs in
12 transition to a new model and type
13 collaboration with the gas workers
14 union. Renewables and electrification,
15 PGW must pilot geothermal and deploy
16 renewable energy technology and
17 electrification to replace its entire
18 gas business, provide a detailed roadmap
19 with clear goals to ensure that we
20 transition off gas.

21 Protect low-income ratepayers,
22 starting by providing transparent
23 information about shut-offs in the City
24 and the status of people who have lost
25 their gas. Fire Shapiro and PGW

1 executives who have been responsible for
2 contributing to push the preemption
3 bill. And finally, City Council must
4 hold more public hearings and community
5 outreach about this transition of our
6 publicly-owned utility. Thank you very
7 much. Good afternoon.

8 COUNCILMAN GREEN: I believe
9 Reverend Pyrch; is that the correct
10 pronunciation of your last name?

11 REVEREND PYRCH: (Muted).

12 COUNCILMAN GREEN: I'm sorry.
13 You're on mute. You're on mute.

14 REVEREND PYRCH: (Muted).

15 COUNCILMAN GREEN: You're still
16 on mute.

17 REVEREND PYRCH: I keep on
18 muting. Now I'm okay?

19 COUNCILMAN GREEN: You're good.
20 Just state your name for the record and
21 then proceed with your testimony. Thank
22 you.

23 REVEREND PYRCH: Thank you. My
24 name is Cheryl Pyrch. I live in the
25 Northwest section of Philadelphia and

1 I'm the Pastor at Summit Presbyterian
2 (inaudible) --

3 COUNCILMAN GREEN: Reverend
4 Pyrch, did we lose you?

5 REVEREND PYRCH: It looks --
6 okay, congregations in Philadelphia, and
7 it's a locally rooted organizing force
8 for racial and economic justice on a
9 livable planet. Like everyone, we
10 believe multiple crises we're facing for
11 call for an all-out, all-hands-on-deck
12 effort.

13 The climate crisis is
14 accelerating and everything is becoming
15 more extreme. 70 percent of our City's
16 greenhouse gas emissions come from
17 buildings. And at the same time, we're
18 aware that huge numbers of
19 Philadelphians live in homes that
20 urgently need repair and struggle with
21 unaffordable energy bills and shut-offs
22 there in our congregation. And
23 meanwhile the use of natural gas inside
24 our building subjects us to toxic air
25 pollution in a city where 21 percent of

1 the children has asthma.

2 And finally, PGW and its
3 workers faced the threat of a vicious
4 circle of falling sales and rising
5 prices as people have noted as the shift
6 away from gas is gathering pace. And
7 PGW executives have refused to take
8 seriously the need for the company to
9 reinvent itself. Our faith traditions
10 teach us that each human being has
11 infinite and equal value. So to build a
12 world in which everyone is truly valued,
13 we must move as quickly as possible to
14 limit the scale of climate catastrophe,
15 guarantee everyone has the energy they
16 need at an affordable price, make sure
17 everyone has a safe and healthy home and
18 that everyone can obtain a safe, living
19 wage job with union representation.

20 We have been excited by the
21 growing push across the country for gas
22 utilities to build and operate network
23 geothermal heating and cooling systems,
24 and we believe along with many of the
25 other panelists that this is the most

1 promising for PGW. It's fossil-free, it
2 uses thermal energy infrastructure,
3 using public property and PGW could lead
4 the way in decarbonizing our City.

5 With long-term investment in
6 the safest, most efficient, most
7 resilient technology available, PGW
8 could ensure affordability, protect
9 union jobs and create new jobs for the
10 long-term. We were disappointed that
11 the Business Diversification Study
12 included minimal analysis of this
13 option, and it does recommend a
14 feasibility study about geothermal
15 networks. But in 2022, another report
16 is not enough. We need action. Gas
17 utilities in other states are developing
18 network geothermal pilot projects now.
19 And so, we encourage PGW to do the same
20 and to fully include members of the gas
21 workers union who want to participate.

22 We also agree that the pilot
23 projects on renewable natural gas would
24 not be helpful, and we also have
25 concerns about on-bill financing for

1 weatherization, although of course we
2 support weatherization. So finally, we
3 say City Council should require PGW to
4 begin testing not nearly studying the
5 option, which would enable PGW to play a
6 role in transforming our energy system
7 and to thrive for decades to come. It's
8 time to plan and build network
9 geothermal pilot projects and POWER
10 hopes to work with PGW, union, City
11 Council, the Office of Sustainability
12 and also others to achieve this critical
13 goal. Thank you very much for this
14 hearing and allowing us to testify.

15 COUNCILMAN GREEN: Thank you,
16 Reverend Pyrch, for your testimony. One
17 thing you stated, although it's really
18 beyond the scope of this conversation,
19 the significant amount of fossil fuel
20 energy that's used for our buildings.
21 Just to let people know, we had passed
22 legislation some time ago regarding
23 C-PACE or the Commercial Properly
24 Assessed Clean Energy initiative that
25 allows us to have our commercial

1 buildings to be more sustainable.

2 There is legislation moving
3 through the General Assembly that will
4 allow C-PACE to apply to residential or
5 multi-family properties, and we're
6 looking to introduce legislation to
7 enable that to pass here in the City of
8 Philadelphia, so thank you for bringing
9 up that point because I think sometimes
10 it's lost that our buildings are
11 actually responsible for a core portion
12 of the sustainability and fossil fuel
13 issues that we have.

14 With that, we'll have Reverend
15 Drew and then take any questions from
16 members of City Council, and then we'll
17 go into our next panel.

18 REVEREND DREW: Great. Thanks
19 very much, Mr. Green. I'll state my
20 name. My name is Reverend Allen Drew.
21 I'm an Ordained Pastor in the Christian
22 Reform Church and the East Coast
23 Regional Organizer for the Climate
24 Witness Project and an 18-year resident
25 of Northwest Philadelphia. I'm also the

1 organizer for the Hunting Park Community
2 Solar Initiative or HPCSI, and I'm a
3 20-year partner and 10-year member of
4 Spirit & Truth Fellowship Church in
5 Hunting Park, a neighborhood that's very
6 close to me.

7 In my work with HPCSI and our
8 partners, we're constantly witnessing
9 the challenges of crumbling homes and
10 high energy burdens for our low- to
11 moderate-income neighbors. Because they
12 are low income, their energy costs take
13 up a very substantial percentage of
14 their total revenue, which we all know
15 is their energy burden.

16 Furthermore, because they don't
17 have extra cash, they can't afford the
18 necessary repairs to their homes which
19 in turn makes them less energy
20 efficient, leaking hot air in the winter
21 and cool air in the summer and costing
22 them more money on energy, which makes
23 things even harder for them. Added is
24 the fact that Hunting Park experiences
25 summer heat wave temperatures 22 degrees

1 Fahrenheit hotter than cooler parts of
2 the City due to numerous factors related
3 to historic and racist disinvestment.

4 Having heating during the
5 winter and cooling during extreme heat
6 matters of survival, I think we can
7 agree on that, and yet so many people in
8 my neighborhood and others like it are
9 living by a thread trying to keep from
10 having these services cut off, and some
11 are already sinking.

12 Now, what will happen to them
13 if PGW continues as was so clear
14 presented by Mr. Shapiro to resist our
15 society's urgent calls in our City's
16 commitments and to have it rapidly and
17 strategically transitioned away from
18 fossil fuels and into clean energy.

19 What will happen inevitably is what we
20 call the death spiral. And the death
21 spiral will devastate my low-income
22 neighbors in Hunting Park. It'll
23 devastate them.

24 So what is the death spiral?
25 Well, the social and political pressures

1 to decarbonize have grown massively just
2 over the last few years and will only
3 increase as storms, floods, droughts and
4 refuge crises continue to grow in our
5 world. So there is most certainly no
6 future for PGW as a natural gas heating
7 company. It's not a future for them.
8 That will end in the near term whether
9 through a strategic transition to a new
10 clean energy system based or through a
11 catastrophic implosion based on
12 collective foolishness and the greed of
13 a powerful few.

14 The catastrophic implosion is
15 the death spiral. So right now more and
16 more people who can afford to do it are
17 electrifying their heating. I'm one of
18 them. I switched to an air source heat
19 pump system this past summer and haven't
20 turned on my gas to heat all winter.
21 Next will be my stove and my hot water
22 heater and then I will separate
23 completely from PGW. It's cheaper, it's
24 nontoxic, and it fights climate change.

25 Then this movement that I'm a

1 part of is growing and it will continue
2 to grow. But as this happens, PGW will
3 lose more and more revenue, which will
4 lead it to raise rates on the people who
5 are still paying. Those people will be
6 the ones who can't afford to electrify,
7 people like my neighbors in Hunting
8 Park. They will then go into default.
9 Maybe they'll get some help for a time
10 with taxpayer money, but eventually
11 they'll be shut off.

12 And as this cycle continues,
13 PGW's current model will become
14 impossible to sustain and it will
15 collapse in on itself leaving its union
16 workers without work, the City without
17 heat and the taxpayers with a massive
18 cleanup to fund. Everyone will lose and
19 the most vulnerable will suffer the
20 most.

21 The other option, I'm almost
22 done here, is to transition urgently and
23 systemically towards a network
24 geothermal system. Plenty of other
25 testifiers have explained why this is

1 the best way forward so I won't spend
2 any time on that. But what is
3 absolutely not a way forward for PGW,
4 its workers, the poor or our City as a
5 whole is continued use of natural gas.
6 That season is over. We need to
7 acknowledge it.

8 PGW can adapt and we can thrive
9 together or PGW can continue to bury its
10 head in the sand and cause all of us to
11 suffer together. So my question for
12 City Council today is will you rise to
13 the occasion in this very urgent moment
14 to defend the poor and oppressed,
15 protect the workers and secure our
16 City's future by forcing PGW to do what
17 it needs to do because it is our
18 utility. It belongs to us, and you
19 oversee it as City Council as our
20 representative. So we all know that
21 words are cheap. It's actions that
22 matter and we need action.

23 I just want to thank all of the
24 leaders here we've been hearing from who
25 are working with urgency on this. I

1 want to acknowledge it and really
2 appreciate it, and I thank you for the
3 opportunity to speak.

4 COUNCILMAN GREEN: Thank you,
5 Reverend Drew. Your articulation of the
6 death spiral, although I haven't used
7 that actual phrase, is specifically the
8 reason why this hearing is so important
9 to educate people in the City of
10 Philadelphia regarding this concern.
11 Because if you look at the data from
12 everyone, PGW's customers are using less
13 and less gas.

14 And when I used that analogy
15 regarding my sister with her electric
16 vehicle, the concern I have is that more
17 and more people that have the resources
18 will get off of PGW because they have
19 the ability to do so. And although I
20 talked about this for some time, I saw
21 the first commercialization of that
22 during the Christmas holiday with a
23 company that was advertising on a
24 station how you can use solar and use it
25 as a backup generator as well as provide

1 energy for your home.

2 So that issue is going to
3 become more and more prevalent as more
4 and more companies start to
5 commercialize the ability to provide
6 solar energy on homes and it's for the
7 very customers and the citizens of the
8 City of Philadelphia why we need to look
9 at these conversations, and that's while
10 we'll have a follow-up hearing on this
11 issue to give other people the
12 opportunity to testify, but also to
13 delve in to look at a more detailed way
14 regarding the geothermal pilot and
15 weatherization and bring some of the
16 other City departments in to talk about
17 that conversation as well. So thank you
18 for articulating the real urgency of
19 this conversation. We need to educate
20 many more Philadelphians about this
21 concern. So thank you for your
22 testimony.

23 With that, we're going to have
24 Mr. Iannuzzi read the names for the next
25 witnesses and next panel.

1 THE CLERK: Lynn Robinson,
2 Representative from Neighbors Against
3 the Gas Plants; Shawn Hogan, Member of
4 Philly DSA; Vaughn Campbell; Gail
5 Mershon; Beatrice Zovich; Steve
6 Greenspan; Joanna Ward; Lisa Hastings;
7 Morgan Sarao who's a Research Assistant
8 for the Energy Rights Project; Russell
9 Hicks; and Mitch Chanin.

10 COUNCILMAN GREEN: Okay. Let's
11 start with -- I didn't get all the
12 names, but many of the people I do know,
13 but we'll start with Ms. Robinson.
14 State your name for the record and then
15 proceed with your testimony.

16 MS. ROBINSON: Good afternoon.
17 My name is Lynn Robinson. I'm speaking
18 as an Environmental and Human Rights
19 Activist, Director of Neighbors Against
20 the Gas Plants and retired Philly
21 teacher. Thank you very much for the
22 opportunity to speak.

23 The PGW Business
24 Diversification Study was done for a
25 City with a dominant economy often

1 referred to as Eds and Meds. Yet the
2 Diversification Working Group excluded
3 academics, local health organizations
4 and local environmental groups. This
5 exclusion may explain why the executive
6 summary begins by using the adjective
7 "ambitious" when mentioning our nation's
8 return to the Paris Agreement and
9 Philadelphia's 2050 climate goals.

10 ITCC reports published after
11 the Paris Agreement revealed, the
12 agreement to be not ambitious enough.
13 If we don't cut greenhouse gas emissions
14 in half by 2030, climate change will be
15 irreversible. The City's 2050 goal for
16 carbon neutrality is therefore highly
17 unambiguous because it focuses on a
18 clear -- it lacks focus on a clear
19 benchmark for 2030.

20 For those still fuzzy on this,
21 the EPA science fact about natural gas
22 is that methane is 84 to 86 times as
23 warming to the atmosphere as carbon
24 dioxide in the first 20 years of release
25 into the air. Gas combustion or burning

1 is cleaner than coal, but using gas is
2 actually worse for the climate than
3 burning other fossil fuels because of
4 leaks from drill sites to transport to
5 end-use.

6 The executive summary also
7 tosses the adjectives complicated and
8 complex up into the air before
9 approaching any substance. These words
10 sound a warning bell and set the tone of
11 inertia. Some outsiders call that PA
12 conservatism. The complicated nature of
13 Philadelphia owning PGW can be summed up
14 by saying that Philly residents have
15 been completely disenfranchised from its
16 governance. That needs to change.

17 Nevertheless, the conclusions
18 of the study are what matter most. Four
19 paths forward are identified in the
20 executive summary on Page 4. One,
21 decarbonize gas is flagged as too
22 expensive and Philly's leaky pipes make
23 it inadequate for environmental
24 protection. Someone already mentioned
25 Footnote 19.

1 Two, electrification of
2 buildings will improve air quality, yes.
3 But then the study imagines a financial
4 disaster resulting in many "stranded PGW
5 assets potentially resulting in bill
6 increases for customers that do not
7 electrify." Page 41 in PGW's needed
8 revenue section elaborates, "with
9 declining utilization comes increasing
10 average costs." A disaster like this
11 can only happen in chaos due to zero
12 planning with PGW forced to maintain all
13 of its current pipelines for less and
14 less gas customers, but PGW can
15 methodically electrify in areas of the
16 City with leaking pipes, eliminate
17 maintenance costs in those areas and
18 provide electrification subsidies for
19 low-income residents.

20 Three, hybrid electrification.
21 Just as impractical, who wants two
22 heating systems in one house and who
23 wants a gas plant next to your house.
24 On Page 41, the gas industry's bias
25 sneaks the hybrid model into both

1 electrification and geothermal scenarios
2 saying they both need gas backup, which
3 they don't.

4 Number four, network
5 geothermal, yes, great idea. And here's
6 why gas backup is not needed for
7 geothermal. It pumps water up from the
8 ground at a constant 55 degrees no
9 matter what the outdoor weather is. The
10 best pilot project on Page 6 for the
11 long-term is network geothermal.
12 Weatherization is needed which rely on
13 grants, not loans, to low-income people
14 who may go into debt.

15 In conclusion, Philadelphia
16 needs to change PGW's name and make it a
17 renewable energy provider with
18 transparent and democratic governance.
19 That means shut down PFMC and fire any
20 PGW employees who have worked counter to
21 the City's climate and general welfare.
22 PFMC is a board of seven mayoral
23 appointees that conducts closed door
24 meetings and gets the rubber stamp of
25 the Philadelphia Gas Commission, which

1 is the democratic face of PGW. The City
2 needs to create an energy provider that
3 is run by and serves the people of
4 Philadelphia. Thank you for your time.

5 COUNCILMAN GREEN: Thank you,
6 Ms. Robinson.

7 The next witness, please state
8 your name for the record and proceed
9 with your testimony.

10 MS. HOGAN: Good afternoon. My
11 name is Shawn Hogan. I'm Chair of
12 Philly Chapter of Democratic Socialists
13 of America. I'm here today cautiously
14 optimistic about the opportunity we have
15 as a city to lead the way on climate
16 justice, not because PGW has provided
17 any reason for optimism, but because the
18 organizers and experts who have
19 testified today represent the incredible
20 people power fighting for our collective
21 future.

22 It's clear from the E3 PGW
23 Business Diversification Study that the
24 City of Philadelphia has a truly unique
25 opportunity to shift a massive

1 organization and set of assets towards
2 climate justice with a big impact. I'm
3 concerned, however, that the study
4 misses the mark on assessing this
5 opportunity.

6 The study assumed in every
7 scenario that PGW must continue to make
8 its fossil fuel infrastructure alongside
9 diversification strategies. We must
10 build a fossil-free just world. A lower
11 carbon future just isn't good enough for
12 that world. The E3 study needed to
13 asses a better future which all
14 Philadelphians, one in which PGW acts on
15 a plan to shed those fossil fuel assets.

16 Another key assumption of the
17 study is that ratepayers continue to
18 bear all costs for diversification.
19 There's no need to put the burden on
20 diversification on low-income
21 Philadelphians when we can save money by
22 decommissioning fossil fuel
23 infrastructure and fund new
24 infrastructure that we need by taxing
25 the rich.

1 We must unlock a PGW that moves
2 boldly towards a future where workers
3 are guaranteed good union jobs, where
4 ratepayers are guaranteed affordable
5 heat in the winter and where all of us
6 can breathe easy knowing that
7 Philadelphia led the way to climate
8 justice. Potential solutions certainly
9 need more study and as mentioned a lot
10 of times today, the best way to study
11 something is by seeing it operate in the
12 real world in a relevant context.

13 As such, I implore the City to
14 develop a pilot for a network geothermal
15 project now. The potential of this
16 technology is massive. And as the study
17 says, we need to know more about it.
18 The City must also figure out which
19 regulations need to change and which
20 funding streams to access such that the
21 full cost of transitioning is not borne
22 solely by ratepayers. The City should
23 also take active steps to end payments
24 from PGW to fossil fuel associations to
25 free up more money for pilot projects.

1 While we need studies to create
2 plans, time is running out to address
3 the climate crisis, so the City must
4 commit to action alongside any
5 additional studies to build a new future
6 for PGW. As City Council continues to
7 assess the E3 study and consider how to
8 move forward, remember our shared future
9 and that your decisions affect all of
10 us, PGW workers, customers and
11 Philadelphians for generations to come.
12 Thank you so much for your time.

13 COUNCILMAN GREEN: Thank you
14 for your testimony.

15 The next witness, if you can
16 state your name for the record. I
17 believe that is Vaughn Campbell,
18 followed by Gail Mershon, Beatrice
19 Zovich and Steve Greenspan.

20 MR. CAMPBELL: Hi. My name is
21 Vaughn Campbell. I am having some audio
22 issues on my end so I'm going to turn my
23 video back off. And hopefully, you can
24 hear me. My name is Vaughn Campbell. I
25 live in Mantua and I'm here as a member

1 of Clean Air Council and Reclaim.

2 I'm here to second what others
3 have said and farther push for the City
4 to move PGW out of the gas business
5 entirely. This must be done with either
6 a move to geothermal networks or a push
7 for full electrification. There is
8 simply no other alternatives that are in
9 keeping with Philadelphia's climate
10 goals.

11 Renewable natural gas has been
12 proving a myth time and time again.
13 Studies on the subject from California
14 around other transitions away from
15 traditional fossil gas have found that
16 even apart from the cost of "renewable
17 gas," there does not exist enough of it
18 to make even the smallest dent in the
19 utilities gas delivery to fully
20 transition. Between 1 and 5 percent of
21 fossil gas can be replaced at most in
22 that study. This is not scalable.

23 Decarbonized gas, as someone
24 pointed out earlier, the term used in
25 the Diversification Study quite simply

1 does not exist. It was mentioned
2 earlier that the E3 admits this.
3 Renewable and biogases are in no way
4 decarbonized. They still have
5 significant emission over their
6 lifespan. Moreover, unburned fossil gas
7 itself is a greenhouse gas many times
8 more potent than carbon dioxide. And a
9 recent Drexel study revealed that PGW's
10 up to 150-year-old pipes are leaking
11 more times as much methane as previously
12 thought, which dramatically spikes PGW's
13 emissions both now and either until gas
14 or much of the pipe system is replaced.

15 So-called decarbonized gas will
16 not help the City decarbonize at all,
17 and I hope that the City will not sink
18 millions of ratepayer and taxpayer
19 dollars into testing and trying a
20 technology that we already know will not
21 achieve our goals. PGW's representative
22 shared a lot of statistics about the
23 grid earlier.

24 And no, Penn's electricity is
25 not yet completely carbon-free. But

1 according to the New York Times, in 2020
2 it's already nearly 40 percent carbon-
3 free between renewables and nuclear.
4 Those are statistics from today. Much
5 gas infrastructure is built with 30- or
6 40-year useful lifespans in mind. So
7 any gas infrastructure that we continue
8 to invest in today will be just as
9 carbon-intensive in 2050 or 2060 as it
10 is now, while our heat if we change will
11 only get cleaner as our grid improves or
12 if we expand these geothermal networks.

13 Frankly, when it's becoming
14 more and more common around the country
15 for cities to ban new fossil gas hookups
16 entirely, it's embarrassing that a
17 Philly-run organization continues to
18 oppose decarbonization efforts at the
19 state and push residents' businesses and
20 even Independence Park to add new gas
21 hookups. That's not in keeping with
22 Philadelphia's climate goals.

23 It's not responsible for the
24 City financially to continue in a fossil
25 gas business that can't be made viable

1 and will only get less sale. I urge the
2 Council and PGW to pursue the Philly
3 geothermal works plan laid out in the
4 Diversification Study, as it holds the
5 highest promise to deliver a
6 legitimately carbon-free source of heat
7 to Philadelphians at acceptable rates
8 and with the most reasonable transition
9 for PGW's current workforce. Thank you
10 for your time.

11 COUNCILMAN GREEN: Thank you
12 for your testimony.

13 The next witness, please state
14 your name for the record and proceed
15 with your testimony.

16 (No response.)

17 COUNCILMAN GREEN: Is that
18 Ms. Mershon?

19 (No response.)

20 COUNCILMAN GREEN: Okay. We'll
21 call her name again. Beatrice Zovich.

22 (No response.)

23 COUNCILMAN GREEN: Okay. I
24 don't see her. I know Mr. Greenspan is
25 here. If you could state your name and

1 proceed with your testimony.

2 MR. GREENSPAN: Sure. Thank
3 you. Thank you for the opportunity to
4 testify. My name is Steve Greenspan.
5 I'm a resident of Philadelphia and a
6 grandfather. I also volunteer at POWER.
7 My career as a scientist and Vice-
8 president of a Fortune 500 software
9 company was focused on researching
10 emerging technologies and social trends
11 and helping them embrace change.

12 I care deeply about
13 Philadelphia, this planet and climate
14 justice. Four years ago a friend
15 purchased a condominium in Philadelphia.
16 A major selling point was that the
17 building used only electricity for space
18 heating, water heating and cooking. The
19 units were quickly sold. All electric,
20 no gas. This anecdote illustrates a
21 vital truth not fully captured in the
22 PGW Diversification Study.

23 Electrification has already
24 begun without PGW. There will be more
25 and more homes and buildings without gas

1 heating. PGW can either embrace change
2 or ignore it. If they ignore it, if
3 they continue with business as usual,
4 customers will pay more to maintain
5 infrastructure that fewer and fewer use.
6 This will be hardest on low-income
7 customers who can't afford to switch.

8 As this revenue dwindles, good-
9 paying union jobs will be lost. This is
10 the death spiral that's been mentioned
11 before or PGW can embrace change and
12 diversify in ways it's sustaining in
13 jobs, support climate goals and lower
14 customer bills through efficient,
15 innovative infrastructure and business
16 models that don't place the burden of
17 transformation on those least able to
18 afford it.

19 Piloting the falsely named
20 decarbonized gas would waste our money.
21 It would not be environmentally
22 sustainable, not the least cost option
23 for consumers and not provide new
24 knowledge. On the other hand, network
25 geothermal systems should be piloted

1 with community and third party
2 engagements. Understanding the
3 feasibility of network geothermal
4 systems for Philadelphia and the
5 required job skills at exploring heat as
6 a service business model would be
7 valuable to City and PGW planners. This
8 is the option that can preserve jobs and
9 support climate justice.

10 The legal and other obstacles
11 can be overcome. However, transforming
12 a company like PGW requires executives
13 who are fully committed to the vision,
14 who can provide clarity and transparency
15 and who can lead with compassion for
16 workers and low-income customers. In
17 the past year, PGW executives have not
18 demonstrated the values and leadership
19 that are needed. Every industry goes
20 through transformations. Kerosene lamps
21 were replaced by electric bulbs and coal
22 furnishes were replaced with gas.
23 Electrification with heat pumps is
24 inevitable with or without PGW. Whether
25 PGW will be a leader in this

1 transformation or a niche player with
2 diminishing revenues is up to the City.
3 Thank you for your time.

4 COUNCILMAN GREEN: Thank you
5 for your testimony, Mr. Greenspan.

6 We had stated there were a few
7 other people that wanted to testify, and
8 I called their names earlier that were
9 on our list. That was Gail Mershon,
10 Beatrice Zovich. If they are here,
11 please indicate as such. But there are
12 others that have signed up to testify.
13 I'll call their names at this time.

14 Lisa Hastings, Mitch Chanin,
15 Morgan Sarao and Russell Hicks have also
16 signed up to testify. If you all could
17 come on screen so you can testify on
18 this topic that we're discussing today.
19 I see Mr. Chanin. I know I saw
20 Ms. Hastings who's also still signed
21 in --

22 MS. HASTINGS: I'm trying to
23 find myself.

24 COUNCILMAN GREEN: Okay. We'll
25 give you a moment. Also, I know Russell

1 Hicks had signed up, but I don't see him
2 as -- okay, Mr. Chanin is telling me
3 he's not here. Also, Morgan Sarao who I
4 believe is also still here.

5 I believe, Ms. Hastings, that
6 was you speaking -- okay, I see you're
7 trying to get yourself together. If you
8 are ready --

9 MS. HASTINGS: Yes, I'm ready.

10 COUNCILMAN GREEN: Or if you
11 need a moment, we can go with Mr. Chanin
12 and then come to you, because I know you
13 came on the screen and then off the
14 screen.

15 MS. HASTINGS: Okay. Mitch can
16 talk first.

17 COUNCILMAN GREEN: All right.
18 Mr. Chanin, please state your name for
19 the record and then proceed with your
20 testimony, and then we will go to our
21 next witness.

22 MR. CHANIN: Sure. Thanks very
23 much for the opportunity to testify. My
24 name is Mitch Chanin. I have leadership
25 roles in the Climate Justice and Jobs

1 team at POWER as well as the Climate
2 Justice Caucus at Reclaim Philadelphia,
3 but I'm going to be speaking for myself,
4 but just did want to state those
5 affiliations.

6 I don't want to repeat too much
7 of what's already been said. I am fully
8 aligned with the cause for immediate
9 moves to pilot network geothermal
10 heating and cooling systems by PGW, and
11 also want to make sure to echo the
12 concerned opposition on bill financing
13 for weatherization through PGW. I'm
14 going to just divert from what I
15 prepared to say because a lot of it is
16 very repetitive, and just wanted to
17 bring forward a couple of other points
18 reflecting on things that I have heard
19 from Mr. Shapiro and from the other
20 witnesses who have spoken today.

21 I was thrilled to hear
22 Mr. Shapiro say that he would like to
23 see PGW invest in network geothermal. I
24 don't believe I've ever heard that from
25 him before and it seems to contradict

1 some of the other statements that he's
2 made questioning the environmental
3 benefits of electrification, for
4 example. So that's great.

5 At the same time, I believe
6 it's really critical for City Council to
7 take strong leadership in directing the
8 evolution of PGW because I do not
9 believe that the current executive team
10 at PGW has proven themselves to be
11 trustworthy or to be upholding the
12 values and goals that we've been
13 discussing today.

14 The facts that were brought to
15 light about PGW's role in developing the
16 preemption bill was extremely important.
17 I wanted to name one other really
18 important event that took place in the
19 past couple years where PGW voted
20 against upgrades, improvements to the
21 International Building Code that the
22 City of Philadelphia and the Office of
23 Sustainability favored in 2019. I can
24 submit an article about that as written
25 testimony later, but they voted with and

1 directed their representatives to vote
2 for the positions that the American Gas
3 Association had developed, which were
4 things like, you know, opposing stronger
5 energy efficient standards for gas
6 boilers, improved electric codes to
7 allow electrification for example, and
8 that's really unacceptable.

9 If I'm correct, I believe there
10 will be another opportunity for folks to
11 vote on the building codes in 2022. I
12 think it's every three years. And I'm
13 not 100 percent -- I'm not an expert on
14 this and I wasn't planning to talk about
15 this, but it's really important that
16 there be extremely close scrutiny of all
17 of the actions and expenditures of PGW.
18 City Council has the ability to do that
19 when it reviews PGW's capital budget as
20 does the Gas Commission over the next
21 few months. And I think we really need
22 to understand exactly what is being done
23 and for City Council to exercise very
24 strong leadership in holding them
25 accountable.

1 I was just looking at
2 advertising from a few years ago when
3 PGW was putting up adds on bus shelters
4 talking about the virtues of liquefied
5 natural gas. That expenditure is
6 inappropriate and should not be
7 permitted. One other thing I wanted to
8 say along those lines just to make sure
9 to double correct the record,
10 Mr. Shapiro was earlier repeatedly
11 saying we have to understand what he
12 called the facts and saying that
13 electrification would increase
14 greenhouse gas emissions rather than
15 decreasing them. That is not the
16 finding of the Business Diversification
17 Study.

18 There's a chart on Page 29 that
19 clearly lays out their analysis, which
20 shows that electrification with our grid
21 as it is right now would reduce
22 greenhouse gas emissions. And so, his
23 continued repeating of fossil fuel
24 industry talking points is extremely
25 concerning to me, and that's one other

1 reason why I think it's absolutely
2 critical that City Council lead the way
3 in holding them accountable and ensuring
4 that PGW does what is needed to
5 transform themselves into a provider of
6 affordable heating and cooling services
7 without any greenhouse gas emissions and
8 in a way that protects and creates good
9 union jobs, so I'll leave it there.

10 Thank you very much.

11 COUNCILMAN GREEN: Thank you,
12 Mr. Chanin, for your testimony.

13 Ms. Hastings, are you able to
14 join us?

15 MS. HASTINGS: Yes. Can you
16 hear me?

17 COUNCILMAN GREEN: We can hear
18 you. So if you want to put on your
19 video, feel free to do so. But if not,
20 we can also hear you and you can proceed
21 with your testimony.

22 MS. HASTINGS: Okay. Great.
23 I'm Lisa Hastings, and I'm a
24 Philadelphian who was opposed to selling
25 PGW a few years ago because I wanted to

1 preserve union jobs and because I
2 believed that the public should have
3 control over future energy decisions.

4 Sadly, keeping PGW public in
5 name only under the management control
6 of private management that opposes the
7 changes that need to be made isn't
8 working. Keeping things the same may
9 also be a dead-end for the union jobs of
10 the future. Before I go into that, I
11 also support implementing geothermal
12 projects which I think should be
13 publicly funded, not based on loans.

14 And I suggest that geothermal projects
15 be initiated quickly for public schools
16 and in all City-approved or funded low
17 income for public housing developments.

18 I urge City Council to either
19 end the management agreement or to
20 change the management agreement with
21 FM -- with FM -- PMFC to --

22 COUNCILMAN GREEN:

23 Ms. Hastings, take your time. Go ahead.

24 MS. HASTINGS: Okay.

25 Basically, PFMC is a public entity.

1 They claim that they're not subject to
2 oversight. They're not subject to the
3 Sunshine Act because they're private,
4 but they're running a public utility.
5 We either need to get rid of that
6 management document or revise it so that
7 it reflects current priorities,
8 including public transparency, public
9 information and environmental needs.

10 PGW needs to be managed as a
11 public entity with emphasis on providing
12 needed energy while maximizing the
13 public interest and operating in concert
14 with, not in conflict with the City's
15 stated environmental goals. That needs
16 to be in a written document and a reason
17 to sever management. PGW is responsible
18 to the City and its residents, not to
19 the natural gas industry.

20 City Council can also take
21 action right now while they're working
22 on the new management agreement to
23 reduce car pollution and reduce future
24 stranded assets by requiring PGW now to
25 stop spending money on expanding natural

1 gas infrastructure -- we have plenty of
2 current ones to fix -- and to stop
3 soliciting entities to convert from
4 either steam or even electric to natural
5 gas and otherwise working to increase
6 the use of natural gas in the City.

7 This is the equivalent of binging on
8 junk food before going on a healthy diet
9 or binging on alcohol and drugs before
10 committing to sobriety.

11 Please increase geothermal and
12 other climate renewable energy in the
13 City and stop the City from binging on
14 natural gas now. If PGW cannot legally
15 or otherwise transition to generation
16 and supply of renewable energy, then
17 perhaps the City should consider
18 starting a different totally noncarbon
19 renewable energy utility. I'd like to
20 keep energy in the public sector, but it
21 needs to be renewable. Thank you.

22 COUNCILMAN GREEN: Thank you,
23 Ms. Hastings. I'm now going to call for
24 anyone else that is here that would like
25 to testify regarding this resolution.

1 Please come on -- there we go.

2 Thank you. We called you
3 earlier. State your name for the record
4 and then proceed with your testimony.

5 MS. SARA0: Yep. My name is
6 Morgan Sarao, and I'm speaking to you as
7 Research Assistant and the Fieldwork
8 Lead for the Energy Rights Project, and
9 that is a federally-funded ethnographic
10 project that's based out of Drexel
11 University, and it's tasked to study
12 energy vulnerability in the Mid-Atlantic
13 region.

14 Our team has conducted
15 interviews with 336 energy users during
16 the pandemic and 237 interviewees who
17 are recruited from energy conservation
18 workshops held in community centers
19 across Philadelphia. And my testimony
20 is supported by data collected through
21 these interviews.

22 As PGW explores options to
23 decarbonize, it is imperative that
24 Philadelphians with the highest energy
25 burdens are prioritized to ensure that

1 they maintain reliable access to
2 affordable energy. Out of our
3 respondents, 62.5 percent reported that
4 they are struggling paying their gas
5 bill currently. And although so many
6 Philadelphians are struggling, more than
7 half of our respondents have never
8 applied for energy assistance for a
9 myriad of reasons, namely, not being
10 eligible for available assistance
11 programs and not knowing about
12 assistance programs that exist.

13 Although the Diversification
14 Study states that protections need to be
15 in place for low-income customers when
16 PGW decarbonizes, the projections that
17 were outlined in the study are
18 disconnected from the realities that
19 low-income customers face.

20 PGW's Customer Responsibility
21 Program or CRP was frequently cited in
22 the study as a mechanism which will
23 prevent energy and inequalities during
24 PGW's transition. However, many
25 customers who are currently struggling

1 to afford their gas bill reported that
2 they are ineligible for CRP because of
3 the program's rigid income guidelines.

4 And during an interview with a
5 woman who lives in the Strawberry
6 Mansion neighborhood with her family, we
7 asked if she's aware of energy
8 assistance programs that her utility
9 company provides, and the following
10 response is one example of many that our
11 team has had regarding CRP:

12 "Yes, but some of the programs
13 we can't go on because my husband is the
14 only -- he has the only income in the
15 household and that kind of sucks, and
16 we're not documented yet so that kind of
17 sucks too. So basically, everything has
18 to come out of pocket. I think only one
19 program that we are on is the CAP
20 program and that's with the electricity,
21 and we're trying to get on the CRP
22 program, but they say he makes too much
23 money, but it's one of him. I mean,
24 it's only him in the household working
25 so how does he make too much if -- I

1 don't know. It's just confusing."

2 I was also concerned to see
3 that the Diversification Study proposed
4 to onbill financing for low-income
5 energy upgrades as an alternative
6 business model. And though low-income
7 households of Philadelphia are
8 desperately in need of energy upgrades
9 as many have mentioned, customers are
10 already struggling with their monthly
11 gas bills and other expenses and should
12 not have their options reduced to a
13 massly higher utility bill in order to
14 address their home's energy
15 deficiencies.

16 Our team supports another
17 option that was outlined in the study
18 which is close to PGW's current business
19 model, where PGW receives funding from
20 state and federal sources to act as a
21 weatherization service provider and
22 extends its weatherization services that
23 it offers to low-income customers to
24 include all of its customers and with
25 more proficient and community-tailored

1 outreach efforts. We also propose that
2 PGW expand eligibility criteria for CRP
3 so that more households are able to
4 afford their gas bills. Thank you.

5 COUNCILMAN GREEN: Thank you
6 for your testimony.

7 Are there any other individuals
8 here who would like to testify on this
9 resolution? Okay. I see I believe
10 that's Ms Ward.

11 MS. WARD: Yes.

12 COUNCILMAN GREEN: Please feel
13 to come on camera and state your name
14 for the record, and then begin with your
15 testimony.

16 MS. WARD: I am on camera.

17 COUNCILMAN GREEN: Okay. We
18 see you now. Feel free to state your
19 name and proceed with your testimony.

20 MS. WARD: I'm Joanna Ward. I
21 returned to Philadelphia to retire and
22 I'm having second thoughts with the new
23 information I'm discovering from my
24 research. So good afternoon and thank
25 you for this opportunity to speak to

1 you. As a health care professional, I
2 understand how the invaluable clean air
3 and water are for each of us to be able
4 to live a long and healthy life.

5 I've been seeing and learning
6 too many discouraging facts about the
7 air quality here as a result of the
8 shale boom. You know what they do,
9 frack gas with toxins and millions of
10 gallons of water for natural gas, right.
11 The process is very toxic to communities
12 with increased cancer rates, asthma and
13 that happens -- they're collateral
14 damage for the clean energy that clean
15 LNG gas that burns.

16 From a recent air quality study
17 in Pennsylvania by Mueller at Carnegie
18 Mellon, we now know that citizens living
19 in Pittsburgh and Philadelphia have
20 shortened lifespans as a result of the
21 shale boom in our state. He also
22 concluded that the cost benefit was not
23 worth it since the money to those dirty
24 low-paying jobs don't stay -- it doesn't
25 stay in Pennsylvania.

1 We must move away from dirty
2 fossil fuel because it is detrimental to
3 our health, and methane is such a
4 powerful greenhouse gas that warms our
5 atmosphere for nine years after it is
6 released, if not longer. This is what's
7 worsening our climate crisis that we're
8 at a serious point with it, as evidenced
9 by increasing numbers of devastating
10 fires and floods killing people all over
11 the world.

12 Pennsylvania is the second
13 highest polluter for methane in our
14 union, in the United States, in our
15 nation. Dozens of large homes and
16 buildings already use geothermal,
17 including the City's police academy and
18 the German Society of Pennsylvania. Now
19 is the time to make amends and use the
20 natural gas infrastructure for clean,
21 efficient, renewable geothermal energy
22 as it's successfully being done in
23 Boston and New York.

24 Infrastructure money will help
25 replace weak gas lines that have blown

1 up homes and their residents. That
2 won't happen with geothermal. It will
3 also make a grid for all renewable
4 energy that is our future. To save us
5 and our planet, we don't have to frack
6 with millions of gallons of water loaded
7 with toxins for methane or to burn coal,
8 fossil fuel gas or oil.

9 Geothermal is efficient,
10 renewable and less costly, especially
11 combined with wind and solar for our
12 electric energy source. Geothermal
13 produces only about one-sixth of the
14 carbon dioxide that a clean natural
15 gas-fueled power plant produces and very
16 little, if any, of the nitrous oxide or
17 sulfur-bearing gases.

18 One Independence Place
19 buildings are all electric with
20 efficient packaged terminal air
21 conditioners and heat pumps for heating
22 and cooling. We would appreciate a grid
23 that accommodates wind and solar energy.
24 Our new garage owner is also looking to
25 a better future with plans for charging

1 stations for electric cars. That will
2 be the new 21st century norm along with
3 electric trucks.

4 The study is totally obsolete
5 for the 21st century. It should be
6 ignored. We need to move to geothermal
7 and renewable energy, and natural gas is
8 not renewable energy. Philadelphia, a
9 city without noise from transportation,
10 sirens and pollutants, that's the
11 future. I pray that Philadelphia,
12 Pennsylvania becomes a leader in
13 transitioning out of all fossil fuel
14 before it's too late because we don't
15 know where the turning point is, so
16 there's no return, but a tripping point.
17 And that means we have to do this now,
18 not in 2050. We have to do it now.

19 We must use the new
20 desperately-needed infrastructure money
21 wisely for electric charging stations
22 and public transportation too. And
23 thank you in advance for making
24 Pennsylvania clean by transitioning to a
25 clean energy and bringing with it new

1 green jobs.

2 And I can answer that

3 Councilman's question about what it

4 means to freeze. That person, Josh --

5 Mr. Shapiro did not tell you the truth

6 about what's happening, the plans for

7 this state by water, not by us, that I

8 just learned, we own this. This should

9 be Philadelphia Green Works. That's the

10 new name and we shouldn't wait five

11 years, as soon as we get that

12 infrastructure money. Because when you

13 frack the methane with all these toxins

14 that are causing cancer in those

15 communities at higher rates and asthma

16 and early death, and then you frack

17 that, you take that dirty methane and

18 they're planning on doing this in a

19 place north of Scranton, freezing it,

20 and when they freeze it so that they can

21 ship it to other countries, raising our

22 prices for it and making profits for it

23 in other countries as we are collateral

24 damage.

25 That's why I don't want to stay

1 here. I fought it in the south of
2 Texas, in the Gulf Coast. And since
3 Trump -- since Biden came, he stopped
4 the Trump thing and evaluated it and
5 that's hopefully not going to happen.
6 That's the last pristine area in Texas.
7 And so, when they freeze that, it causes
8 birth defects, it causes cancer. I
9 mean, they put all nitrous oxide, they
10 put so many carcinogens in the air. We
11 already have PFAS in our drinking water.
12 That should never go through a municipal
13 treatment plant, and the national NRDC
14 would have done studies about all this,
15 and it's detrimental. And hopefully,
16 the DRBC, who I reported comments from
17 them, will stop fracking Pennsylvania
18 forever. So please let's look at
19 geothermal. We already have some of the
20 infrastructure. Don't make it better
21 for gas. Make it better for geothermal.
22 It's the same system under the ground.
23 You can do that and be committed for the
24 people. Let's make this really -- turn
25 it around from one of the worst

1 polluting states in the nation to one of
2 the best. Thank you.

3 COUNCILMAN GREEN: Thank you
4 for your testimony. I'll make one last
5 call if anyone else who's here that
6 would like to testify on this topic?

7 (No response.)

8 COUNCILMAN GREEN: This last
9 panel provided some good information, in
10 particular Morgan's testimony really
11 provided some perspective as well as
12 others about why this is such an
13 important issue, because we're dealing
14 with a very complex issue of how do we
15 provide efficient and fair affordable
16 energy to the City of Philadelphia, 1.6
17 million residents, roughly that's close
18 to about 500,000 ratepayers and we're
19 doing that within a complex regulatory
20 structure.

21 You heard about some of the
22 issues with the PUC and our ability to
23 even do some alternative energy
24 opportunities and doing that with a
25 unionized labor force that provides

1 great safety to our constituents by
2 having well-trained employees that are
3 working on and working with and at
4 Philadelphia Gas Works.

5 So this is a complex issue, and
6 it's an issue that we will continue to
7 delve in. That's why we will have
8 another round of hearings on this topic.
9 And hopefully, in that second round be
10 able to spend a little bit more time on
11 some of the pilot ideas that came out of
12 the study and bring in some other
13 departments that can also provide some
14 perspective on those issues as well.

15 So without seeing any
16 additional witnesses to testify, and I'm
17 not sure if there's any closing comments
18 from any members of Council and if they
19 do, please indicate as such. I know
20 this has been a very long hearing, and I
21 want to commend our stenographer for
22 being here from the very beginning. I
23 apologize for not asking if we needed to
24 take a break earlier, but I want to
25 thank you for being here throughout the

1 entire hearing as well as all the other
2 participants and attendees.

3 Seeing no additional comments
4 from members of Council or additional
5 witnesses, we will recess this hearing
6 to the call of the Chair, which is
7 myself and Councilmember Johnson who is
8 the Chair of the Committee of
9 Transportation and Public Utilities, and
10 we will continue to work with our
11 colleague Councilmember Gilmore
12 Richardson, who is the Chair of the
13 Committee on Environment, to have these
14 Committees come together once again to
15 have another conversation regarding this
16 very important topic of diversification
17 of Philadelphia Gas Works.

18 I want to thank everyone for
19 your time and attendance this afternoon
20 for such a robust and engaged
21 conversation concerning such an
22 important topic. Thank you and have a
23 great day.

24 (Joint Committees on Finance
25 and Transportation and Public Utilities

concluded at 4:58 p.m.)

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.

TANEHA CARROLL
Court Reporter - Notary Public

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