

Committee on the Environment
February 25, 2020

COUNCIL OF THE CITY OF PHILADELPHIA
COMMITTEE ON THE ENVIRONMENT

Room 400, City Hall
Philadelphia, Pennsylvania
Tuesday, February 25, 2020
1:15 p.m.

PRESENT:

COUNCILWOMAN KATHERINE GILMORE RICHARDSON - CHAIR
COUNCILWOMAN CINDY BASS - VICE
COUNCILWOMAN KENDRA BROOKS
COUNCILMAN DEREK S. GREEN
COUNCILWOMAN HELEN GYM

ALSO PRESENT:

COUNCILWOMAN CHERELLE L. PARKER

BILLS: 200090

1 - - -

2 COUNCILWOMAN RICHARDSON: Good

3 afternoon. This hearing is called to order.

4 This is the Public Hearing of the City

5 Council Committee on the Environment. The

6 purpose of the Public Hearing is to hear

7 testimony on Bill No. 200090. I recognize the

8 presence of a quorum of Committee Members. And

9 Members of the Committee in attendance are to my

10 left, our Majority Leader Councilwoman Parker,

11 Councilmember Helen Gym, Councilman Derek Green

12 and Councilmember Kendra Brooks. Thank you all

13 so much for being here.

14 Do any of my colleagues have any opening
15 remarks?

16 Seeing none, I would like to say this is

17 our first Committee on Environment Hearing in

18 the new term and my first as Chair of the

19 Committee on the Environment. So, we are really

20 excited to be hosting this hearing today.

21 The clerk will, please, read the title

22 of the bill being considered today.

23 THE CLERK: An Ordinance amending

24 Chapter 9-3400 of The Philadelphia Code,

25 entitled "Energy Conservation," by amending

1 Section 9-3403, entitled "Solar Panel
2 Incentives," amending certain definitions, under
3 certain terms and conditions.

4 COUNCILWOMAN RICHARDSON: Okay. Thank
5 you. The clerk will, please, call the first
6 witness to testify on this bill.

7 THE CLERK: Christine Knapp, Office of
8 Sustainability.

9 (Approaches Witness Table.)

10 MS. KNAPP: Good afternoon.

11 COUNCILWOMAN RICHARDSON: Good
12 afternoon. Please, state your name for the
13 record and proceed with your testimony.

14 MS. KNAPP: Good afternoon, Chairman
15 Gilmore Richardson, Members of the Committee.
16 My name is Christine Knapp. I'm the Director of
17 the Office of Sustainability for the City of
18 Philadelphia. I'm here to testify in support of
19 Bill No. 200090, which makes technical
20 amendments to the Solar Incentive Program
21 established through legislation last year. The
22 Office of Sustainability works to improve
23 community quality of life and prepare
24 Philadelphia for a hotter and wetter future due
25 to climate change.

1 In Philadelphia, almost 80 percent of
2 our carbon emissions come from buildings and
3 industry, which is why it's so important to
4 focus our efforts on making our buildings more
5 energy efficient and to move them towards using
6 clean energy. Providing renewable electricity
7 to Philadelphians is one of the most effective
8 mechanisms for combating climate change.
9 However, solar energy usage has several other
10 co-benefits.

11 As solar generation becomes more
12 affordable, it will become easier to add
13 Philadelphia homes in every neighborhood to
14 lower energy bills and to provide clean power.
15 Citywide solar will help displace fossil fuel
16 generation from our regional electricity grid,
17 reducing air pollution making its way into
18 Philadelphia and installing solar generation
19 Citywide will generate new local job
20 opportunities, including those for students of
21 the Bright Solar's Future Initiative run by the
22 School District and the Philadelphia Energy
23 Authority.

24 We were happy to support the passage of
25 the original legislation to create the Solar

1 Panel Incentive Program. However, some of the
2 technical definitions would have prohibited some
3 properties that were intended to be included
4 from being eligible to participate. Bill No.
5 200090 provides greater clarity on these
6 properties in order to ensure that more types of
7 solar installations are able to benefit from the
8 program. Therefore, we are happy to provide
9 support for Bill No. 200090.

10 Thank you for the opportunity to
11 testify. Thank you for taking on the Chair of
12 this Committee. We look forward to working with
13 you more in the future. And I will be happy to
14 answer any questions.

15 COUNCILWOMAN RICHARDSON: Great. Thank
16 you for your testimony.

17 Are there any questions or comment from
18 Members of this Committee for this witness?

19 The Chair recognizes Councilmember
20 Green.

21 COUNCILMAN GREEN: Thank you, Madam
22 Chair. Thank you Ms. Knapp for being here to
23 testify on this bill that I sponsored along with
24 Chair's Committee Katherine Gilmore Richardson
25 as cosponsor.

1 I wanted to just get a perspective on
2 the fact that, you know, one of the biggest
3 producers of carbon emissions are buildings.
4 And you know, we have done work on the
5 residential properties with the -- this
6 amendment and some of the work we have done with
7 the Energy Authority over the years on Solarized
8 Philly and some of the other programs. But one
9 of my major concerns are commercial buildings.

10 We have -- and I introduced in past
11 legislation last term regarding CPACE. And we
12 made some amendments to grow that. The Energy
13 Authority has been really reaching out to a lot
14 of property owners to explain to them the
15 benefits of solar installation on commercial
16 buildings.

17 I believe the CPACE Legislation, which
18 the enabling legislation came through to
19 Governor Wolf's Office -- other states have
20 similar legislation, but we have not done
21 anything here locally -- will help to promote
22 additional commercial property owners to
23 realized the benefits of solar panels, solar
24 installation on their properties because now the
25 payback time is more aligned with the general

1 ownership time of a property.

2 But I was curious from your perspective,
3 are there additional steps that we can do to get
4 more, especially in the commercial property
5 side, entities to participate in ways to reduce
6 carbon emissions and reduce some of the concerns
7 and causes of climate change.

8 MS. KNAPP: Yeah. I think the CPACE
9 Legislation was certainly a really welcome and
10 helpful step. So, thank you for that leadership
11 on that front.

12 Also last session, Council passed the
13 Building Energy Performance Legislation which
14 will require the largest commercial buildings in
15 the City to either achieve a high performance
16 building standard or to tuneup their building
17 every five years in order to make sure that they
18 are operating efficiently in reducing energy
19 use. We think that's going to be a really
20 impactful program for cutting carbon from that
21 commercial sector of buildings.

22 I think we also have some
23 non-legislative ways that we can work on moving
24 that sector. One is the Climate Collaborative
25 that we launched in October. Councilmember Gym

1 came to the launch. That is really a voluntary
2 effort for large institutions, businesses,
3 others who have sort of an outside impact on
4 producing carbon to sort of voluntarily set
5 goals and work together to find solutions.

6 So that group that met in October was
7 immediately invited to participate in a workshop
8 on how to do solar power purchase agreements.

9 Which, as you know, the City did and Council
10 approved the contract for that. Twenty-five or
11 so of those forty companies came to that
12 workshop. And now we are hearing from a number
13 of different attendees -- I don't want to give
14 anyone's news away -- but a number of attendees
15 who are ready to announce their own solar power
16 purchase agreements.

17 So, we think there is something to be
18 said about sharing best practices with each
19 other and pushing folks to do the right thing
20 when we know it's going to be good for the
21 economy, good for saving them energy costs and
22 sort of creating more action towards climate,
23 so.

24 COUNCILMAN GREEN: And recently,
25 Governor Wolf proposed the budget for the

1 Commonwealth of Pennsylvania. Probably in the
2 range of 33, 34 billion dollars. I had a chance
3 to kind of briefly look at various aspects of
4 the budget, but have not had a chance to look at
5 it from a lens regarding climate change.

6 From your either information or
7 observations, are there additional initiatives
8 coming from the Governor's Office or additional
9 resources being put into existing initiatives
10 that can help with some of the concerns that are
11 being addressed in this legislation?

12 One of the things I know you and I have
13 talked and also myself and Ms. Schapira from the
14 Energy Authority, if we can have CPACE on
15 multi-family buildings, which would be a very,
16 very big opportunity to further reduce climate
17 change. Because not only commercial buildings
18 are big producers of carbon emissions, but you
19 know, multi-family properties, especially when
20 you look at the impact of the development over
21 the past number of years, the construction
22 industry and a number of the highrises that have
23 been, you know, constructed in the City of
24 Philadelphia.

25 MS. KNAPP: Yeah.

1 COUNCILMAN GREEN: So having the ability
2 to have CPACE on those type of properties would
3 also be beneficial to address climate change.

4 MS. KNAPP: Yup.

5 COUNCILMAN GREEN: Curious if you have
6 seen anything in the Governor's budget address
7 that's either new or additional resources or new
8 executive branch initiatives to address this
9 issue from your observation?

10 MS. KNAPP: I haven't dug into it deeply
11 as of yet either. But I know that the -- that.
12 RGGI, the Regional Greenhouse Gas Initiative,
13 proposal that the Governor has put forward is a
14 huge step forward. You know, this is a program
15 that other states surrounding us have all been
16 participating in for a number of years and have
17 seen success in terms of reducing greenhouse gas
18 emissions via this program.

19 So, I am really happy to see the
20 Governor stepping forward and trying to pursue
21 RGGI for Pennsylvania. It's long overdue.

22 I think there's a number of other
23 possible legislative actions that we have been
24 wanting to see out of Harrisburg for a number of
25 years. One would be updating the Alternative

1 Energy Portfolio Standard, which passed in 2005
2 was really forward thinking and really made a
3 big dent in growing a renewable energy sector in
4 Pennsylvania. But in 2020 is -- you know, does
5 not really being effective policy to get us
6 where we need to go. So, we need to see the
7 solar carve out of that APS Bill, you know,
8 dramatically increased.

9 Under Governor Rendell, there was also a
10 Sunshine Program that helped to sort of as the
11 Solar Panel Incentive locally is doing, helped
12 to provide direct grants and rebates for folks
13 who were installing solar. So, I think more
14 dollars allocated at the state level would also
15 be helpful given that the Federal Tax Credit
16 will sort of be stepping down this year and the
17 next several years going forward.

18 So, those are a few additional things.
19 I haven't seen, again, the policy details to see
20 other than RGGI. I know the Governor is
21 pursuing where some of the other APS or
22 Sunshine, sort of, dollars may -- may go.

23 COUNCILMAN GREEN: So, no Growing
24 Greener part three from your observation?

25 MS. KNAPP: Perhaps. Perhaps.

1 COUNCILMAN GREEN: All right.

2 Thank you, Madam Chair.

3 COUNCILWOMAN RICHARDSON: Thank you,
4 Councilmember Green.

5 (Councilwoman Parker mumbles out of ear
6 shot.)

7 MS. KNAPP: Those were the days.

8 COUNCILWOMAN RICHARDSON: The Chair
9 would like to recognize the presence of the Vice
10 Chair of the Committee on Environment,
11 Councilmember Cindy Bass.

12 Yes. Would you like to have any
13 remarks?

14 COUNCILWOMAN BASS: Well, I just want to
15 thank the bill sponsors, really, for the clarity
16 that the bill provides and the opportunity for,
17 you know, for us to make sure that -- that we
18 are doing everything that we can in the City of
19 Philadelphia to be more sustainable. So you
20 know, there are a lot of challenges ahead of us.
21 Obviously, global warming is one of them. It's
22 real. We haven't had snow.

23 But beyond all of that, whatever we can
24 do to minimize or reverse effects has to be
25 done. So, I just really wanted to, you know,

1 thank you for your support of the bill, the
2 Administration for their support, and also the
3 bill sponsor and cosponsor, Madam Chair.

4 Thank you.

5 COUNCILWOMAN RICHARDSON: Thank you.
6 Thank you so much, Councilmember Bass.

7 Is there anyone else in chambers here to
8 testify on this bill? Anyone else?

9 Okay. Seeing none, that concludes the
10 Public Hearing on the bill before the Committee
11 today.

12 (Public Hearing Adjourns.)

13 - - -

14 (Public Meeting Commences.)

15 COUNCILWOMAN RICHARDSON: We will now go
16 into the Public Meeting to consider the action
17 to be taken on Bill No. 200090.

18 The Chair recognizes our Vice Chair
19 Councilmember Bass for a motion on Bill No.
20 200090.

21 COUNCILWOMAN BASS: Thank you, Madam
22 Chair. I move that Bill No. 200090 be reported
23 from this Committee with a favorable
24 recommendation; and further move, that the Rules
25 of Council be suspended to permit first reading

1 of this bill at the next session of Council.

2 COUNCILWOMAN RICHARDSON: Thank you.

3 It has been moved and properly seconded
4 that Bill No --

5 COUNCILWOMAN BASS: I --

6 (Duly seconded.)

7 COUNCILWOMAN RICHARDSON: It has been
8 moved and properly seconded that Bill No. 200090
9 be reported from this Committee with a favorable
10 recommendation; and further move, that the Rules
11 of Council be suspended to permit first reading
12 of this bill at the next session of Council.

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

15 (Ayes.)

16 COUNCIL PRESIDENT CLARKE: Those
17 opposed?

18 (No opposition.)

19 COUNCILWOMAN RICHARDSON: The ayes have
20 it and the motion carries.

21 Bill No. 200090 will be reported from
22 this Committee with a favorable recommendation
23 with a request that the Rules of Council be
24 suspended to permit first reading at the next
25 session of Council.

Committee on the Environment
February 25, 2020

Page 15

1 Okay. That concludes our Public
2 Meeting. Thank you.

3 (Public Meeting of Committee on the
4 Environment adjourned at 1:27 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.

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

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

Committee on the Environment
February 25, 2020

Page 1

A	3:9	7:21 9:15	CLARKE	2:22	2:11	Environment	generation
ability 10:1	approved	9:17	14:16	constructed	details 11:19	1:2 2:5,17	4:11,16,18
able 5:7	8:10	businesses	clean 4:6,14	9:23	development	2:19 12:10	Gilmore 1:10
accurately	APS 11:7,21	8:2	clerk 2:21,23	construction	9:20	15:4	3:15 5:24
16:4	aspects 9:3	C	3:5,7	9:21	different	especially 7:4	give 8:13
achieve 7:15	attendance	C 16:1,1	climate 3:25	contained	8:13	9:19	given 11:15
action 8:22	2:9	call 3:5	4:8 7:7,24	16:4	direct 11:12	established	global 12:21
13:16	attendees	called 2:3	8:22 9:5,16	contract 8:10	16:17	3:21	go 11:6,22
actions 10:23	8:13,14	carbon 4:2	10:3	control 16:17	Director 3:16	evidence 16:4	13:15
add 4:12	Authority	6:3 7:6,20	co-benefits	correct 16:6	displace 4:15	excited 2:20	goals 8:5
additional	4:23 6:7,13	8:4 9:18	4:10	cosponsor	District 4:22	executive	going 7:19
6:22 7:3	9:14	carries 14:20	Code 2:24	5:25 13:3	doing 11:11	10:8	8:20 11:17
9:7,8 10:7	aye 14:14	carve 11:7	Collaborati...	costs 8:21	12:18	existing 9:9	good 2:2 3:10
11:18	ayes 14:15,19	causes 7:7	7:24	Council 1:1	dollars 9:2	explain 6:14	3:11,14
address 10:3	B	certain 3:2,3	colleagues	2:5 7:12	11:14,22	F	8:20,21
10:6,8	Bass 1:10	certainly 7:9	2:14	8:9 13:25	dramatically	F 16:1	Governor
addressed	12:11,14	certification	combating	14:1,11,12	11:8	fact 6:2	6:19 8:25
9:11	13:6,19,21	16:13	4:8	14:16,23,25	due 3:24	favor 14:13	10:13,20
adjourned	14:5	certify 16:3	come 4:2	Councilman	dug 10:10	favorable	11:9,20
15:4	believe 6:17	certifying	coming 9:8	1:11 2:11	Duly 14:6	13:23 14:9	Governor's
Adjourns	beneficial	16:19	Commences	5:21 8:24	E	14:22	9:8 10:6
13:12	10:3	Chair 1:10	13:14	10:1,5	E 16:1	February25	grants 11:12
Administra...	benefit 5:7	2:18 5:11	comment	11:23 12:1	ear 12:5	1:6	Great 5:15
13:2	benefits 6:15	5:19,22	5:17	Councilme...	easier 4:12	Federal	greater 5:5
affordable	6:23	12:2,8,10	commercial	2:11,12	economy	11:15	Green 1:11
4:12	best 8:18	13:3,18,18	6:9,15,22	5:19 7:25	8:21	find 8:5	2:11 5:20
afternoon 2:3	beyond 12:23	13:22	7:4,14,21	12:4,11	effective 4:7	first 2:17,18	5:21 8:24
3:10,12,14	big 9:16,18	Chair's 5:24	9:17	13:6,19	11:5	3:5 13:25	10:1,5
agreements	11:3	Chairman	Committee	Councilwo...	effects 12:24	14:11,24	11:23 12:1
8:8,16	biggest 6:2	3:14	1:2 2:5,8,9	1:10,10,11	efficient 4:5	five 7:17	12:4
ahead 12:20	bill 2:7,22 3:6	challenges	2:17,19	1:12,15 2:2	efficiently	focus 4:4	Greener
air 4:17	3:19 5:4,9	12:20	3:15 5:12	2:10 3:4,11	7:18	folks 8:19	11:24
aligned 6:25	5:23 11:7	chambers	5:18,24	5:15 12:3,5	effort 8:2	11:12	greenhouse
allocated	12:15,16	13:7	12:10	12:8,14	efforts 4:4	foregoing	10:12,17
11:14	13:1,3,8,10	chance 9:2,4	13:10,23	13:5,15,21	either 7:15	16:5,13	grid 4:16
Alternative	13:17,19,22	change 3:25	14:9,22	14:2,5,7,19	9:6 10:7,11	forty 8:11	group 8:6
10:25	14:1,4,8,12	4:8 7:7 9:5	15:3	Court 16:11	electricity	forward 5:12	grow 6:12
amending	14:21	9:17 10:3	Commonw...	CPACE 6:11	4:6,16	10:13,14,20	growing 11:3
2:23,25 3:2	billion 9:2	Chapter 2:24	9:1	6:17 7:8	eligible 5:4	11:2,17	11:23
amendment	bills 1:17	CHERELLE	community	9:14 10:2	emissions 4:2	fossil 4:15	Gym 1:12
6:6	4:14	1:15	3:23	create 4:25	6:3 7:6	front 7:11	2:11 7:25
amendments	branch 10:8	Christine 3:7	companies	creating 8:22	9:18 10:18	fuel 4:15	H
3:20 6:12	briefly 9:3	3:16	8:11	Credit 11:15	enabling 6:18	fully 16:4	Hall 1:5
and/or 16:18	Bright 4:21	Cindy 1:10	concerns 6:9	curious 7:2	energy 2:25	further 9:16	happy 4:24
ANGELA	Brooks 1:11	12:11	7:6 9:10	10:5	4:5,6,9,14	13:24	5:8,13
16:11	2:12	City 1:1,5 2:4	concludes	cutting 7:20	4:22 6:7,12	14:10	10:19
announce	budget 8:25	3:17 7:15	13:9 15:1	D	7:13,18	future 3:24	Harrisburg
8:15	9:4 10:6	8:9 9:23	conditions	days 12:7	8:21 9:14	4:21 5:13	10:24
answer 5:14	building 7:13	12:18	3:3	deeply 10:10	11:1,3	G	hear 2:6
anyone's	7:16,16	Citywide	Conservati...	definitions	ensure 5:6	gas 10:12,17	hearing 2:3,4
8:14	buildings 4:2	4:15,19	2:25	3:2 5:2	entities 7:5	general 6:25	2:6,17,20
apply 16:15	4:4 6:3,9	clarity 5:5	consider	dent 11:3	entitled 2:25	generate 4:19	8:12 13:10
Approaches	6:16 7:14	12:15	considered	Derek 1:11	3:1		13:12

Committee on the Environment
February 25, 2020

Page 2

Helen 1:12 2:11 help 4:15 6:21 9:10 helped 11:10 11:11 helpful 7:10 11:15 high 7:15 highrises 9:22 homes 4:13 hosting 2:20 hotter 3:24 huge 10:14	6:10 invited 8:7 issue 10:9	lot 6:13 12:20 lower 4:14	9:22 10:16 10:22,24	10:16 passage 4:24 passed 7:12 11:1 payback 6:25 Pennsylvania 1:5 9:1 10:21 11:4 percent 4:1 performance 7:13,15 permit 13:25 14:11,24 perspective 6:1 7:2 Philadelphia 1:1,5 2:24 3:18,24 4:1 4:13,18,22 9:24 12:19 Philadelphi... 4:7 Philly 6:8 please 2:21 3:5,12 policy 11:5 11:19 pollution 4:17 Portfolio 11:1 possible 10:23 power 4:14 8:8,15 practices 8:18 prepare 3:23 presence 2:8 12:9 PRESENT 1:9,14 PRESIDENT 14:16 Probably 9:1 proceed 3:13 proceedings 16:3 producers 6:3 9:18 producing 8:4 program 3:20 5:1,8	7:20 10:14 10:18 11:10 programs 6:8 prohibited 5:2 promote 6:21 properly 14:3,8 properties 5:3,6 6:5 6:24 9:19 10:2 property 6:14,22 7:1 7:4 proposal 10:13 proposed 8:25 provide 4:14 5:8 11:12 provides 5:5 12:16 Providing 4:6 Public 2:4,6 13:10,12,14 13:16 15:1 15:3 16:11 purchase 8:8 8:16 purpose 2:6 pursue 10:20 pursuing 11:21 pushing 8:19 put 9:9 10:13	ready 8:15 real 12:22 realized 6:23 really 2:19 6:13 7:9,19 8:1 10:19 11:2,2,5 12:15,25 rebates 11:12 recognize 2:7 12:9 recognizes 5:19 13:18 recommen... 13:24 14:10,22 record 3:13 reduce 7:5,6 9:16 reducing 4:17 7:18 10:17 regarding 6:11 9:5 regional 4:16 10:12 remarks 2:15 12:13 Rendell 11:9 renewable 4:6 11:3 reported 13:22 14:9 14:21 reporter 16:11,19 reproduction 16:15 request 14:23 require 7:14 residential 6:5 resources 9:9 10:7 reverse 12:24 RGGI 10:12 10:21 11:20 Richardson 1:10 2:2 3:4,11,15 5:15,24 12:3,8 13:5 13:15 14:2	14:7,19 right 8:19 12:1 Room 1:5 RPR 16:11 Rules 13:24 14:10,23 run 4:21
I immediately 8:7 impact 8:3 9:20 impactful 7:20 important 4:3 improve 3:22 Incentive 3:20 5:1 11:11 Incentives 3:2 included 5:3 including 4:20 increased 11:8 industry 4:3 9:22 information 9:6 Initiative 4:21 10:12 initiatives 9:7 9:9 10:8 installation 6:15,24 installations 5:7 installing 4:18 11:13 institutions 8:2 intended 5:3 introduced	J job 4:19	M M 16:11 Madam 5:21 12:2 13:3 13:21 major 6:9 Majority 2:10 making 4:4 4:17 matter 16:6 means 16:16 mechanisms 4:8 Meeting 13:14,16 15:2,3 Members 2:8 2:9 3:15 5:18 met 8:6 minimize 12:24 motion 13:19 14:13,20 move 4:5 13:22,24 14:10 moved 14:3,8 moving 7:23 multi-family 9:15,19 mumbles 12:5	O O 16:1 observation 10:9 11:24 observations 9:7 Obviously 12:21 October 7:25 8:6 Office 3:7,17 3:22 6:19 9:8 Okay 3:4 13:9 15:1 opening 2:14 operating 7:18 opportunities 4:20 opportunity 5:10 9:16 12:16 opposed 14:17 opposition 14:18 order 2:3 5:6 7:17 Ordinance 2:23 original 4:25 outside 8:3 overdue 10:21 owners 6:14 6:22 ownership 7:1	P p.m 1:6 15:4 Panel 3:1 5:1 11:11 panels 6:23 Parker 1:15 2:10 12:5 part 11:24 participate 5:4 7:5 8:7 participating	Q quality 3:23 questions 5:14,17 quorum 2:8	R R 16:1 range 9:2 reaching 6:13 read 2:21 reading 13:25 14:11,24	S S 1:11 saving 8:21 saying 14:14 Schapira 9:13 School 4:22 seconded 14:3,6,8 Section 3:1 sector 7:21 7:24 11:3 see 10:19,24 11:6,19 Seeing 2:16 13:9 seen 10:6,17 11:19 session 7:12 14:1,12,25 set 8:4 sharing 8:18 shot 12:6 side 7:5 signify 14:14 similar 6:20 snow 12:22 solar 3:1,20 4:9,11,15 4:18,25 5:7 6:15,23,23 8:8,15 11:7 11:11,13 Solar's 4:21 Solarized 6:7 solutions 8:5 sort 8:3,4,22 11:10,16,22 sponsor 13:3 sponsored 5:23 sponsors 12:15 standard 7:16 11:1

Committee on the Environment
February 25, 2020

Page 3

state 3:12 11:14	7:10 12:2,3 12:15 13:1	witness 3:6,9 5:18	8				
states 6:19 10:15	13:4,5,6,21 14:2 15:2	Wolf 8:25 Wolf's 6:19	80 4:1				
stenographic 16:5	thing 8:19 things 9:12	work 6:4,6 7:23 8:5	9				
step 7:10 10:14	11:18 think 7:8,19	working 5:12 works 3:22	9-3400 2:24 9-3403 3:1				
stepping 10:20 11:16	7:22 8:17 10:22 11:13	workshop 8:7 8:12					
steps 7:3	thinking 11:2	X					
students 4:20	three 11:24	Y					
success 10:17	time 6:25 7:1	Yeah 7:8 9:25					
Sunshine 11:10,22	title 2:21 today 2:20,22	year 3:21 11:16					
supervision 16:18	13:11 transcript 16:6,14	years 6:7 7:17 9:21					
support 3:18 4:24 5:9 13:1,2	trying 10:20 Tuesday 1:6 tuneup 7:16	10:16,25 11:17 Yup 10:4					
sure 7:17 12:17	Twenty-five 8:10	Z					
surrounding 10:15	type 10:2 types 5:6	0					
suspended 13:25 14:11,24	U	1					
Sustainabil... 3:8,17,22	updating 10:25	1:15 1:6 1:27 15:4					
sustainable 12:19	usage 4:9 use 7:19	2					
T	V	200090 1:17 2:7 3:19 5:5,9 13:17 13:20,22 14:8,21					
T 16:1,1 Table 3:9 taken 13:17 16:5	various 9:3 Vice 1:10 12:9 13:18 voluntarily 8:4	2005 11:1 2020 1:6 11:4					
talked 9:13 Tax 11:15 technical 3:19 5:2	voluntary 8:1 W	3					
term 2:18 6:11	want 8:13 12:14 wanted 6:1 12:25	33 9:2 34 9:2					
terms 3:3 10:17	wanting 10:24 warming 12:21	4					
testify 3:6,18 5:11,23 13:8	way 4:17 ways 7:5,23 welcome 7:9 wetter 3:24	400 1:5 5					
testimony 2:7 3:13 5:16		6					
thank 2:12 3:4 5:10,11 5:15,21,22		7					

