

COMMONWEALTH OF PENNSYLVANIA
HOUSE OF REPRESENTATIVES

CONSUMER AFFAIRS
COMMITTEE HEARING

STATE CAPITOL
HARRISBURG, PA

MAIN CAPITOL BUILDING
ROOM 140

WEDNESDAY, SEPTEMBER 2, 2015
9:30 A.M.

PRESENTATION ON
HOUSE BILL 1349 AND NET METERING

BEFORE:

HONORABLE ROBERT GODSHALL, MAJORITY CHAIRMAN
HONORABLE SHERYL M. DELOZIER
HONORABLE ELI EVANKOVICH
HONORABLE WARREN KAMPF
HONORABLE THOMAS H. KILLION
HONORABLE TINA PICKETT
HONORABLE TINA DAVIS
HONORABLE PETER SCHWEYER

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*Pennsylvania House of Representatives
Commonwealth of Pennsylvania*

ALSO IN ATTENDANCE:

HONORABLE DAVID H. ZIMMERMAN

COMMITTEE STAFF PRESENT:

AMANDA RUMSEY

MAJORITY COUNSEL; MAJORITY EXECUTIVE DIRECTOR

STEPHEN BALDWIN

MAJORITY RESEARCH ANALYST

JANE HUGENDUBLER

MAJORITY LEGISLATIVE ADMINISTRATIVE ASSISTANT

NED SMITH

MAJORITY LEGISLATIVE AIDE

ELIZABETH ROSENTEL

DEMOCRATIC EXECUTIVE DIRECTOR

JAMIE MACON

DEMOCRATIC LEGISLATIVE ASSISTANT

JERRY LIVINGSTON

DEMOCRATIC RESEARCH ANALYST

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SUBMITTED WRITTEN TESTIMONY

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(See submitted written testimony and handouts online.)

1 P R O C E E D I N G S

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3 MAJORITY CHAIRMAN GODSHALL: Good morning. The
4 hour of 9:30 having arrived, I'd like to call the meeting
5 to order.

6 This is a hearing on House Bill 1349 sponsored by
7 Representative Zimmerman and the net metering provisions of
8 the Alternative Energy Portfolio Standards Act. First, I'm
9 going to call on David Zimmerman, who's the prime sponsor
10 of 1349. David, it's all yours.

11 REPRESENTATIVE ZIMMERMAN: Good morning, and it's
12 good to be here. Thanks for joining us. Thank you,
13 Mr. Chairman and Members of the Committee. I appreciate
14 the opportunity to speak about my legislation, House Bill
15 1349, which would enact important protections for
16 Pennsylvania's farms and landfills as it relates to the
17 Alternative Energy Portfolio Standards Act.

18 As you know, last year, the Public Utility
19 Commission began a rulemaking process to restrict the size
20 of alternative energy systems, including anaerobic
21 digesters. This rule would significantly reduce the
22 current benefits afforded farm families that utilize
23 anaerobic digesters throughout Pennsylvania, threatening
24 the Chesapeake Bay watershed and creating additional and
25 unnecessary financial burdens for agricultural operations.

1 The Lancaster County Delegation, along with many
2 other Members of the General Assembly, as well as the
3 Departments of Environmental Protection and Agriculture,
4 all filed comments discouraging the PUC from pursuing this
5 wrong-headed rule. Anaerobic digesters turn farm and
6 municipal waste -- biomass, sewage, and plant byproducts --
7 into electricity. By doing so, digesters prevent excess
8 nutrients running off into waterways, limit what is put
9 into landfills and provide renewable electricity to the
10 grid for public use. Digesters prevent nutrients from
11 being spread in fields and washed into the Chesapeake Bay.
12 The farms that can make use of digesters are fairly large
13 and generally have a number of animals. Digesters allow
14 these farms to meet the mandatory nutrient management plans
15 that must be approved by the conservation district.

16 It really is a win-win. Digesters help farms
17 meet environmental regulations and really improve the water
18 quality of our streams, rivers, and tributaries. Without
19 the digesters, these farms would need to spread more
20 nutrients over their fields, leading to runoff, which we
21 all know is harmful to the Bay.

22 When the General Assembly passed the Alternative
23 Energy Portfolio Standards Act, or AEPS, which was enacted
24 by a strong bipartisan vote of 161 to 35 back in 2004, the
25 intent was to encourage the development of environmentally

1 responsible energy and provide additional power to our
2 grid. The green energy portfolio includes digesters, wind
3 power, and solar power and is needed to meet Federal
4 requirements.

5 However, the PUC, under the current rulemaking,
6 is seeking to undo the progress we have made. They want to
7 reduce how much farmers are getting paid and have
8 determined the best way to do that is to limit the size of
9 the digesters. The Commission has said that there are
10 farmers "acting like a utility or merchant generator" and
11 that they are reaping "excessive retail rate subsidies."
12 However, what the PUC is attempting to do is to rewrite the
13 AEPS without going through the legislative process. By
14 doing so, they are usurping the jurisdiction of the General
15 Assembly.

16 I maintain the PUC does not have the authority to
17 restrict the size of these alternative energy systems
18 because AEPS sets forth the maximize size limitations. If
19 the PUC wishes to reduce those limits, the most appropriate
20 way to do that is not through a rulemaking that creates
21 additional limits and not supported by the law. The
22 appropriate method is to come to the Members and to the
23 Committee and all the elected Members of the General
24 Assembly and make their case for why changes are necessary.
25 In fact, I will note that the PUC each year submits a

1 report to the General Assembly on the AEPS.

2 Increasingly enough, the Commission has never
3 once raised the digester size as an issue which deserved to
4 be addressed. Let's take a practical look at the real-life
5 impacts of the PUC's action. Columbia Borough in Lancaster
6 County is looking to replace its aging sewer treatment
7 plant with a digester. So instead of building another
8 costly treatment plant, the borough's elected leaders
9 believe a digester would be the best use of taxpayer money,
10 as it not only provides energy and revenue to the borough,
11 but it could also utilize biomass from nearby operations
12 such as Turkey Hill Dairy. But the borough mayor has told
13 me that the PUC's misguided efforts have put those plans on
14 hold.

15 Digesters also keep many family farms
16 economically viable by enabling them to produce their own
17 power to run their operations or sell to the grid. In
18 Mount Joy, a thousand-plus acre farm run by Mike and Tony
19 Brubaker is known for its environmental innovation,
20 including its waste-to-energy manure digester and solar
21 panels that produce net energy gains. They are concerned
22 that if the PUC is successful in restricting digesters, it
23 could imperil many of the family-owned farms that are a
24 source of pride for Lancaster County and across
25 Pennsylvania.

1 The whole idea behind AEPS was to diversify our
2 energy portfolio by encouraging individuals and private
3 business to embrace renewable energy. In that respect,
4 AEPS has not only been very successful, it has allowed
5 family farms to survive and thrive. It makes no sense that
6 the PUC would try to undermine it like this.

7 In fact, on June 10, the Environmental Protection
8 Agency (EPA) issued an interim report on the progress of
9 the District of Columbia and the six States -- Delaware,
10 Maryland, New York, Pennsylvania, Virginia, and West
11 Virginia -- that are tasked with reducing pollutants into
12 the Bay. Specifically, the report was on these
13 jurisdictions meeting their 2012 through 2013 Milestones
14 and Watershed Implementation Plan goals. Of the six States
15 plus Washington, D.C., that are in the Bay's watershed,
16 Pennsylvania is the only one lagging behind. Specifically,
17 the EPA report flags Pennsylvania for failing to hit goals
18 in the agriculture and stormwater areas. To stay on task,
19 the EPA has said farms would have to greatly reduce
20 nitrogen pollution this year. That measure needs more
21 digesters, not less.

22 I respectfully ask the Committee to study House
23 Bill 1349 and move it to the full House at the earliest
24 opportunity. Thank you.

25 MAJORITY CHAIRMAN GODSHALL: At this point I'd

1 like to introduce my co-Chairman here today, Representative
2 Tina Davis. So congratulations on being --

3 REPRESENTATIVE DAVIS: Oh, I'm the only one that
4 showed up? Oh, Peter did.

5 REPRESENTATIVE SCHWEYER: Thank you.

6 MAJORITY CHAIRMAN GODSHALL: And she's an --

7 REPRESENTATIVE DAVIS: Thank you.

8 MAJORITY CHAIRMAN GODSHALL: -- expert on
9 digesters coming from Philadelphia, I'm sure.

10 REPRESENTATIVE DAVIS: Actually, I do have a
11 question. Are we going to start or are we --

12 MAJORITY CHAIRMAN GODSHALL: No, we're going
13 to --

14 REPRESENTATIVE DAVIS: Can I ask or do you --

15 MAJORITY CHAIRMAN GODSHALL: Yes.

16 REPRESENTATIVE DAVIS: -- want to wait until --

17 MAJORITY CHAIRMAN GODSHALL: Yes, you can.

18 REPRESENTATIVE DAVIS: Is this bill strictly for
19 farms or will the local governments have a chance to weigh
20 in on this if this is passed for like operations along the
21 waterfront or anything like that?

22 REPRESENTATIVE ZIMMERMAN: In response to that,
23 each farm is required to have a nutrient management plan
24 that the conservation districts would actually approve. So
25 what this bill would do is assure that there's no limits on

1 those plans and digester size.

2 REPRESENTATIVE DAVIS: Right, but is this just
3 limited to farms?

4 REPRESENTATIVE ZIMMERMAN: Anaerobic digesters
5 are primarily on farms. They use manure. They can use
6 food waste and some other things. There are digesters in
7 some of the municipalities like York City, for example, has
8 one and there's others across Pennsylvania.

9 REPRESENTATIVE DAVIS: So [inaudible]?

10 REPRESENTATIVE ZIMMERMAN: It does, yes.

11 MAJORITY CHAIRMAN GODSHALL: The first testifier
12 is the Energy Association of Pennsylvania, Donna Clark,
13 Vice President and General Counsel, accompanied by Terry
14 Fitzpatrick.

15 MS. CLARK: For support.

16 MR. FITZPATRICK: It's a team approach,
17 Mr. Chairman.

18 MS. CLARK: Good morning, Chairman Godshall,
19 Representative Davis, and other Members of the House
20 Consumer Affairs Committee. I am Donna Clark, Vice
21 President and General Counsel of the Energy Association of
22 Pennsylvania, a trade organization comprised of the major
23 regulated electric and gas public utilities operating in
24 the Commonwealth.

25 Today, I am here with my colleague Terry

1 Fitzpatrick, who is the President and CEO of the Energy
2 Association, to address three points on behalf of our
3 electric distribution company members. We'll speak to the
4 net metering under the AEPS Act. We'll also discuss
5 changes to the net metering provisions of the AEPS Act,
6 which we support. And then we'll address House Bill 1349.

7 Thank you for providing this opportunity to
8 address industry support for, and concerns with, net
9 metering as it currently stands in Pennsylvania and to
10 offer our perspective on House Bill 1349.

11 Enacted in 2004, the Alternative Energy Portfolio
12 Standards Act promotes the development of alternative
13 energy in Pennsylvania in two fundamental ways. First, the
14 AEPS Act mandates a greater reliance on identified
15 alternative energy sources; and second, the AEPS Act
16 encourages the growth of distributed generation such as
17 solar panels and small-scale, onsite power sources by
18 enabling customer generators to net meter and interconnect
19 with the distribution system of an electric distribution
20 company.

21 The Act has been amended on two occasions, first,
22 by Act 35 of 2007; and second, by Act 129 of 2008. The
23 Pennsylvania Public Utility Commission is tasked with
24 implementing and enforcing the Act in cooperation with the
25 Pennsylvania Department of Environmental Protection, and

1 the Commission has promulgated a series of regulations to
2 implement the Act and its subsequent amendments. The
3 Commission has also issued a policy statement in 2012
4 supporting net metering by third-party-owned and -operated
5 alternative energy systems, and more recently in 2014, the
6 Commission initiated a rulemaking to update and revise
7 current regulations.

8 The PUC issues a number of reports in its role
9 under the AEPS Act, including an annual report, which it
10 prepares in cooperation with the Department of
11 Environmental Protection and a periodic report prepared by
12 the PUC's Bureau of Technical Utility Services.

13 Information in the TUS report reveals that the number of
14 customers net metered and interconnected to an EDC
15 distribution system as of May 31st, 2011, had almost
16 doubled by May 31st, 2014, and that over 94 percent of
17 those customer generators had installed a Tier I Solar PV
18 alternative energy system.

19 Our testimony today supports changes to net
20 metering and interconnection provisions of the AEPS Act
21 based on our members' concerns that the current law results
22 in excessive credits and subsidies for the electric power
23 produced from net-metered customer generators. These
24 issues are not unique to Pennsylvania and are under
25 consideration in a number of States across the country. In

1 fact, this year Arkansas, Arizona, West Virginia, and
2 Nevada have passed statutes which impact net metering and
3 deal with the amount of money paid for excess generation.

4 EAP contends that reimbursing or crediting
5 customer generators for excess generation at the full
6 retail rate is in need of reexamination in Pennsylvania.
7 EDCs are required to buy this power at the full retail rate
8 under the current statute even though it would generally
9 cost less for electric distribution companies to buy the
10 power on the wholesale market from other electricity
11 providers. The full retail electricity rate currently paid
12 to customer generators in Pennsylvania represents all costs
13 involved in generating, transporting, and delivering power
14 to the retail customer.

15 The Association believes that payment for excess
16 generation should be at the wholesale electricity rate.
17 The wholesale electricity rate includes the cost of the
18 fuel used to generate electricity and the cost of buying
19 the power in the competitive wholesale market. Wholesale
20 electricity rates do not reflect the EDC cost of
21 transporting and delivering the electricity through the
22 electric grid to reach the customer.

23 Paying the customer generator the full retail
24 rate for excess generation allows the customer generator to
25 avoid paying the EDC cost of maintaining the grid and other

1 infrastructure required to transport and deliver power to
2 retail customers and to avoid the cost of the distribution
3 grid used by the customer generators. Today, those costs
4 are paid by other customers who do not net meter.

5 The Association recognizes that net metering is
6 one of the tools identified in the AEPS Act to achieve the
7 goal of increasing the amount of electric energy from
8 renewable sources. We believe, however, that increasing
9 the amount of energy generated by these sources must be
10 weighed against the subsidies provided to the customer
11 generator who net meters and the costs expended by the EDC
12 to accommodate the alternative energy system.

13 Alternative energy systems are already subsidized
14 at both the State and Federal level. Solar PV systems in
15 particular are eligible for various grants and the Federal
16 solar investment tax credit. The statute itself promotes
17 solar PV systems as a preferable form of alternative energy
18 by mandating a carve-out for solar PV which in turn impacts
19 the value of the solar REC. These subsidies are in
20 addition to the annual payment at full retail value that
21 the net-metered customer generator receives for excess
22 generation.

23 The United States Energy Information
24 Administration reported in March of 2015 that renewables,
25 with the exception of biofuel, received 72 percent of the

1 electric subsidies and support in fiscal year 2013 even
2 though renewables only accounted for 13 percent of the
3 total electric generation for that year. Wind received the
4 largest share of direct Federal subsidies, accounting for
5 37 percent, while solar received 27 percent of the direct
6 Federal subsidies. Further analysis by EIA demonstrated
7 that wind energy contributed only 1.9 percent of electric
8 generation in fiscal year 2013, while solar energy made up
9 0.4 percent of the generation mix.

10 The Association contends that there is no need to
11 continue certain of the subsidies under the AEPS Act:
12 excessive value for generation at the full retail rate and
13 cost-shifting where ample financial support for alternative
14 energy systems exists by way of Federal subsidies and other
15 State grants. While net metering can be used to offset
16 power that would otherwise be supplied to the customer by
17 its EDC and can provide broader benefits, it should not be
18 used to generate revenue for the customer generator at the
19 expense of other ratepayers who do not net meter or at the
20 expense of operating and maintaining an efficient, safe,
21 and reliable electric distribution grid.

22 Pennsylvania's EDCs recognize the need to balance
23 these two crucial public policies, 1) to encouraging
24 renewables; and 2) to supply adequate, efficient, safe, and
25 reasonable electric service to customers. And in addition

1 to testifying today, look to engage with all stakeholders
2 to determine how best to plan for a future where an
3 increasing number of customer generators may wish to sell
4 energy back to the grid.

5 Issues concerning excessive payment for energy
6 generated by alternative sources, cost-shifting, and cross-
7 subsidization are not unique to Pennsylvania and it is
8 instructive that a number of other States are currently
9 addressing these same concerns. Notably, legislatures and
10 public utility commissions in Arizona, California, and
11 Hawaii are tackling concerns that the continued growth of
12 net metering alternative energy systems, particularly
13 solar, have created grid access, operation, and maintenance
14 costs which are not fairly allocated among ratepayers.

15 Further, and similar to the concerns expressed
16 here by the Association, both utilities and consumer
17 representatives in those States are also expressing concern
18 that continued payment for excess generation at retail
19 value results in an unfair subsidy of those customers who
20 net meter by those customers who do not or cannot afford to
21 own and operate alternative energy systems.

22 While penetration rates for alternative energy,
23 particularly solar PV, are higher in those States than in
24 Pennsylvania, now is the time to consider and resolve these
25 issues of unfair cost allocation and cross-subsidization so

1 as to better prepare for the continued growth of
2 alternative energy systems in Pennsylvania. The
3 Association asks the General Assembly to amend the AEPS Act
4 to provide that excess generation from net-metered
5 customers shall be compensated at the wholesale rate rather
6 than at the current full retail value.

7 The Association further supports changes that
8 would provide the Commission with the authority and
9 direction to approve cost-recovery mechanisms or fees for
10 technologies and facilities that assure that the
11 distribution grid can accommodate alternative energy
12 systems now and in the future and that cover the cost of
13 operating and maintaining the distribution system.

14 Turning to the amendment proposed by House Bill
15 1349, we would reiterate the caveats concerning net
16 metering by customer generators, which we have outlined
17 here this morning. House Bill 1349 does not address
18 concerns relating to the fair recovery and allocation of
19 EDC costs necessary to maintain, operate, and update the
20 electric distribution grid to accommodate interconnection
21 and net metering. And, by prohibiting any limitations on
22 the size and production of electrical power from
23 biologically derived methane gas, passage of House Bill
24 1349 would result in an increase of the subsidies already
25 paid by those customers who do not net meter.

1 The unintended consequence would be an unlimited
2 increase in the production of electricity by such
3 alternative systems with payment for excess at the
4 statutorily mandated full retail rate, the costs of which
5 would be shifted to other customers. EAP does not believe
6 that a carve-out or exception for systems which generate
7 electrical power from biologically derived methane gas is
8 the best solution. We are supportive, however, of the goal
9 that House Bill 1349 seeks to reach, namely, how to
10 encourage the use of anaerobic digesters as one way to meet
11 environmental goals, particularly those relating to
12 improvement of water quality in the Chesapeake Bay.

13 We believe that the Commission is well-suited to
14 determine reasonable limitations on the size of alternative
15 energy systems so as to encourage this form of alternative
16 energy while balancing the concerns of the Association
17 expressed here today. Reasonable limits imposed by the
18 Commission via the regulatory process would both meet the
19 intent of the General Assembly to promote renewable energy
20 and would prevent merchant generators from becoming
21 customer generators under the Act.

22 Additionally, the Association believes that other
23 markets for the sale of electricity generated from
24 biologically derived methane gas exist and are available to
25 the particular classes of customer generators identified in

1 House Bill 1349. An additional solution might be for those
2 generators who can build systems that exceed a size
3 appropriate for interconnection with the distribution grid
4 to sell their excess electrical power into a market more
5 specifically designed to accommodate and compensate for
6 this type of production. We maintain that wholesale
7 transactions within PJM or PURPA-style contracts, where the
8 alternative energy system is a qualifying facility under
9 Federal law, would provide a fair solution and would avoid
10 additional subsidy or cost-shifting.

11 The Association and its member EDCs look forward
12 to engaging in additional discussions with this Committee
13 and other stakeholders on the legislation and to discuss
14 other issues surrounding current net metering policies
15 following the hearing today.

16 Thank you for this opportunity to appear before
17 you, and we would be happy to answer any questions.

18 MAJORITY CHAIRMAN GODSHALL: Just a comment on
19 testimony. One point you have in here in one of the
20 footnotes, "between State and Federal Government and
21 current utilities incentives, there are 80 energy and
22 energy-efficiency programs in Pennsylvania today," bottom
23 of page 7.

24 MS. CLARK: That's between State and Federal
25 Government. There are more than 80 subsidies, grants

1 available for alternative energy systems but that's not
2 just in Pennsylvania. It includes also Federal.

3 MAJORITY CHAIRMAN GODSHALL: Eighty? That's an
4 awful lot. I was just wondering if that was a mistake or
5 if that was an actual number. But it's just awful high
6 that there are 80 energy and energy efficiency programs
7 available. But that's a given fact?

8 MS. CLARK: Yes, it is.

9 MAJORITY CHAIRMAN GODSHALL: Thank you.
10 Representative Evankovich.

11 REPRESENTATIVE EVANKOVICH: Thank you,
12 Mr. Chairman. And thank you, Mrs. Clark.

13 In your testimony you had mentioned a few times
14 about the cost of transmission, the cost of getting the
15 power to the customers and how the current arrangement kind
16 of reimburses the generator of this biological derivative
17 gas, fuel-produced electricity, that the current rates
18 reimburse them for those costs but they're not really
19 incurring those costs, et cetera. Can you help the
20 Committee understand what those costs are on a marginal
21 basis? I understand if you don't have the information
22 right now, but if you could help the Committee understand
23 what those costs are exactly of transporting that
24 electricity, transmitting that electricity through the
25 clients that you represent and the Association, the EDCs,

1 what that cost is of transmitting that electricity.

2 MS. CLARK: Okay. Well, initially, the costs are
3 not just for net metering by anaerobic digesters. We're
4 talking about any sort of alternative energy system,
5 particularly solar, that is interconnected to the
6 distribution grid. And those are the costs of transmitting
7 and distributing electricity to the end user. They're the
8 costs that we all pay for electricity delivered to our
9 homes and businesses.

10 And with respect to specific numbers, we could
11 get you that information later. I don't have that.

12 REPRESENTATIVE EVANKOVICH: The numbers are what
13 I was interested in.

14 MS. CLARK: Okay.

15 REPRESENTATIVE EVANKOVICH: Thank you.

16 MAJORITY CHAIRMAN GODSHALL: I would be
17 interested in the same. Say if your kilowatt is 10 cents,
18 what portion of that is the generation and what portion of
19 that is the cost of maintaining the grid. It would be
20 something that we really should look at. So I would
21 appreciate that.

22 I would like to also acknowledge Representative
23 Evankovich, Representative Kampf, and Representative
24 Killion have joined us.

25 And there being no further questions, I thank you

1 for your testimony. And see if you can get us that cost
2 information on an average basis. Thank you.

3 And at this point I'd like to call the
4 Pennsylvania Public Utility Commission, Gladys Brown.

5 MS. BROWN: Good morning, Chairman Godshall, and
6 good morning, Representative Davis and the Members of the
7 Consumer Affairs Committee. I would like to introduce two
8 staff persons that I have with me. To my left, to your
9 right is Chris Brown from our Law Bureau and to my right,
10 to your left, is Joe Sharrick from our Bureau of Technical
11 Utility Services. Because we are in the middle of a
12 rulemaking, I thought it was very important to bring staff
13 with me, as well as legal counsel.

14 So it's always interesting going after the Energy
15 Association because usually they're giving part of my
16 testimony. So I thank Donna Clark for the history part of
17 it. And I know you have my full testimony and I'll just
18 get into the heart of my testimony.

19 So the present status of net metering, net
20 metering, a vast majority involving solar facilities,
21 continues to grow in Pennsylvania, as we have heard. In
22 fact, over the past four years, the number of net-metered
23 facilities across the State has almost doubled from about
24 4,500 in 2011 to more than 8,700 at present. Combined, the
25 State's entire net-meter fleet has a total estimated

1 capacity of just over 200 megawatts.

2 Based on our experience implementing that
3 metering, the Commission believes it is necessary to make
4 changes to the current regulations, including updating and
5 revising these regulations to comply with Act 35 of 2007
6 and Act 129 of 2008, as well as clarifying certain issues
7 of law, administrative procedure, and policy that have come
8 to our attention through informal inquiries or formal
9 complaints. Many of the questions focused on who may
10 qualify as a customer generator and obtain net metering,
11 and I want to touch upon a couple of examples.

12 The AEPS Act defines customer generator as "a
13 non-utility owner or operator of a net-metered distribution
14 generating system with a nameplate capacity of not greater
15 than 50 kilowatts if installed at a residential service or
16 not larger than 3,000 kilowatts at other customer service
17 locations." But the Act does not define what a non-utility
18 is or what constitutes a service location. The Act also
19 permits systems up to 5 megawatts to net meter, provided
20 that they "make their system available to operate in
21 parallel with the electric utility grid during grid
22 emergencies, as defined by the regional transmission
23 organization," which is known as PJM. But the Act does not
24 specify the type of "grid emergencies" contemplated by the
25 Act or what qualifies as "making an alternative energy

1 system available to operate in parallel with the electric
2 utility grid."

3 Additionally, the Commission has received
4 inquiries into what constitutes properties owned or leased
5 and operated by a customer generator that may qualify for
6 virtual meter aggregation. The electric distribution
7 companies and various stakeholders have interpreted these
8 terms in their net metering application processes. Some
9 have sought informal guidance from commission staff, while
10 others have interpreted the terms themselves.

11 Unfortunately, the absence of regulations has resulted in
12 inconsistent application of these net-metering provisions
13 across the EDC service territories.

14 To provide regulatory certainty, the Commission
15 proposed to define these various terms and set conditions
16 that all EDCs are to apply in processing net-metering
17 applications. These definitions and conditions will also
18 serve to inform potential customer generation when and how
19 to qualify for net metering. Most importantly, the
20 proposed regulations will ensure that the net-metering
21 rules are consistent throughout the Commonwealth.

22 It is important to note that the Commission has
23 also proposed some limits on qualifications of systems
24 eligible for net-metering payments in order to ensure that
25 the rates paid by the consumers to subsidize customer

1 generators are just and reasonable.

2 Looking at House Bill 1349, which was introduced
3 by Representative Dave Zimmerman, that bill unfortunately
4 refers to the Commission's proposed rulemaking as an
5 attempt to limit the size or the nameplate capacity of
6 electric generating systems that burn methane from the
7 process of anaerobic digestion. This is incorrect in our
8 interpretation. In fact, the Commission's proposed
9 rulemaking, in part, only seeks to limit the size of
10 systems that attempt to take advantage of the public
11 subsidy provided via net metering. No limitations in size
12 are proposed for any systems whereby the system owner
13 intends to interconnect to the electric grid without
14 availing themselves to the net-metering subsidy.

15 Further, the reference in Representative
16 Zimmerman's introduction memo and ensuing legislation
17 language is extended beyond just farm digesters to also
18 include all anaerobic digesters, such as from sewage
19 treatment plants and landfill methane gas projects. As
20 previously explained, the Commission's proposed rulemaking
21 does not impact the size of systems being designed or built
22 but does effect the size of systems wishing to take full
23 advantage of the net-metering subsidy.

24 House Bill 1349 makes no specific reference to
25 net metering, and, as written, the bill may be interpreted

1 as having no impact on the Commission's proposed
2 rulemaking. Still, due to certain ambiguities within the
3 language of the bill, there exists the potential for an
4 interpretation that this bill removes all nameplate
5 capacity limits on biologically derived methane gas
6 generation facilities, including landfill gas facilities
7 such that the net-metering subsidy could be applied to
8 biologically derived methane gas systems of an unrestricted
9 size, beyond even the uppermost threshold of 5 megawatts of
10 capacity currently allowed under statute.

11 Under this interpretation, when considering only
12 current and some planned landfill methane gas projects, the
13 costs currently borne by consumers for net-metering
14 subsidies could increase by approximately \$87 million per
15 year. By contrast, the Commission's proposed rulemaking
16 for net metering, in part, seeks to limit new customer-
17 generator systems that qualify for net-metering subsidies
18 to a nameplate capacity that produces no more than 200
19 percent of their historical load or energy consumption.

20 This proposed qualifying limit applies to all new
21 systems seeking to net meter, with the specific exception
22 of systems that utilize biologically derived methane gas
23 when that system is used to comply with the Department's
24 Pennsylvania Chesapeake Watershed Implementation Plan or is
25 an element for compliance with the Nutrient Management Act.

1 This exceptional language was crafted with input from the
2 Pennsylvania Departments of Agriculture and Environmental
3 Protection in recognition of the comments received from the
4 agricultural community during our initial public comment
5 period.

6 As I stated, we are still in the middle of a
7 rulemaking. We had opened up public comment period again
8 in the final stage so we did an advanced final rulemaking
9 and opened it up for additional public comments. We are
10 reviewing all those public comments, some of them which
11 were already expressed today by some of the Members here.
12 And so when I answer any questions or any questions that
13 you have of me, you may hear me say or staff say that
14 because we are in the middle of this rulemaking and they
15 have not made a final recommendation for the Commissioners
16 to decide, we may not be able to answer some of your
17 questions.

18 But at this point, I do say I'm very happy to
19 testify before you today, and if you have questions for us,
20 we will be happy to try to answer them.

21 MAJORITY CHAIRMAN GODSHALL: I know you're in the
22 process of the rulemaking because I've corresponded with
23 you pertaining to that. And when is that period going to
24 be over?

25 MS. BROWN: In terms of the public comments?

1 MAJORITY CHAIRMAN GODSHALL: Yes.

2 MS. BROWN: The public comment period is over and
3 the staff is reviewing all the different comments, and then
4 they will make a recommendation to the Commissioners to
5 decide on. We don't have a date in terms of when that will
6 be but it will be at a public hearing.

7 MAJORITY CHAIRMAN GODSHALL: Okay. But you don't
8 know approximately when that final meeting will be?

9 MS. BROWN: We're hoping it will be in the fall
10 but we're allowing our staff to have the opportunity to
11 review all the different comments and make a recommendation
12 to us.

13 MAJORITY CHAIRMAN GODSHALL: I have one question
14 here. Under this interpretation on "considering only
15 current and some planned landfill methane gas projects, the
16 costs currently borne by consumers for net-metering
17 subsidies could increase by approximately \$87 million per
18 year." This is "could increase" to that amount. What are
19 we currently paying out for net metering?

20 MS. BROWN: I don't know if we have the exact --

21 MAJORITY CHAIRMAN GODSHALL: Approximately.

22 MS. BROWN: I don't know if we have the exact
23 figures for that. We can get you that. But I believe that
24 the calculation in terms of what they could pay
25 additionally is based upon the limitation that would be

1 removed from House Bill 1349.

2 MR. SHARRICK: Mr. Chairman, most of those
3 landfills are not net metering currently but would be
4 allowed to net meter under the proposed legislation.

5 MAJORITY CHAIRMAN GODSHALL: Okay. If you get
6 any real figures, I would appreciate that going forward to
7 the Committee.

8 MS. BROWN: We can do that.

9 MAJORITY CHAIRMAN GODSHALL: Thank you. There's
10 apparently no further questions. And we thank you again
11 for your participation.

12 MS. BROWN: Thank you, Mr. Chairman.

13 MAJORITY CHAIRMAN GODSHALL: The next presenter,
14 the Chesapeake Bay Commission, Ann Swanson, who is the
15 Executive Director. Whenever you're ready.

16 MS. SWANSON: Mr. Chairman, Members of the
17 Committee, thank you very much for this opportunity to
18 testify.

19 My name is Ann Swanson and I've served for the
20 last 29 years as the Executive Director of the tri-state
21 Chesapeake Bay Commission. Marel King, our Pennsylvania
22 Director, would be here but her husband is in surgery so
23 she also joins me in thanking you for this opportunity to
24 testify on what the Commission at the tri-state level
25 thinks is a very important issue.

1 A bit of background about the Chesapeake Bay
2 Commission, the Chesapeake Bay Commission is a tri-state
3 legislative commission created by law in all three of our
4 member States, Maryland, Pennsylvania, and Virginia. Those
5 three States make up about 90 percent of the pollutant load
6 going into the Chesapeake Bay and about 80 percent of the
7 landmass in the watershed.

8 Each delegation is made up of seven members, 21
9 members in total. And in Pennsylvania, as in all of the
10 States, five of them are House and Senate Members, one is
11 the Governor or his or her appointed designee, and one is a
12 prominent citizen. In Pennsylvania our seven-member
13 Pennsylvania Delegation is chaired by Representative Garth
14 Everett, and our Vice Chair is Representative Mike Sturla.
15 In addition, the remaining members in the Pennsylvania
16 Delegation are Senator Rich Alloway, Senator Gene Yaw,
17 Representative Keith Gillespie. Your citizen member is
18 Warren Elliott. And Secretary John Quigley represents
19 Governor Wolf.

20 Clearly, the Chesapeake Bay Commission is a
21 bipartisan commission, as represented in your own
22 delegations but also at that interstate level. By complete
23 accident and no mandate, 12 of the members are Democratic
24 and 11 of the members are Republican, so truly a mix.

25 In its 35-year history, the Commission's taken on

1 many, many groundbreaking policy initiatives, from the
2 joint management of the blue crab that now occurs across
3 State lines -- and is so important I might add, to
4 Pennsylvanians in their culinary expertise -- and to the
5 cost-effectiveness of different practices to meet water
6 quality. And all the while, what we try to do is provide
7 science-based information to our legislative members and
8 our agency partners.

9 Over the years, it should be no surprise that
10 we've tried to tackle nutrient management and all that goes
11 on in terms of our livestock growing in the watershed and
12 our management of that important manure resource. And it
13 became very, very clear to us that we needed a lot more
14 than the simple spreading of manure to be able to better
15 deal with the manure and the associated nutrients that are
16 a component part of that valuable resource.

17 And so for the past I would say now five to eight
18 years, the Commission has been very, very strongly involved
19 in manure-to-energy systems throughout the watershed of
20 trying to deploy them at both the small and the large
21 scale, better understand the opportunities and the
22 limitations and also what would facilitate their successful
23 and widespread deployment. And so we're really coming to
24 you today to talk to you about net metering, to talk to you
25 about the caps, and to offer our support for this piece of

1 legislation.

2 First, a bit of background about the Bay to put
3 it in a context and then the TMDL, the total maximum daily
4 load that we're operating under, and how this piece of
5 legislation, while not obvious initially, is actually an
6 integral part of meeting some of those pollutant-reduction
7 loads. And then I'll close with a few specific policy
8 recommendations.

9 So Pennsylvania, let's talk about Pennsylvania.
10 Pennsylvania agriculture is the largest source of nutrients
11 and sediments to the Chesapeake Bay, and manure nutrients
12 are the largest share of that agricultural load. I want to
13 emphasize that's a matter of scale. When you look at
14 Chesapeake Bay and Pennsylvania overall, Pennsylvania makes
15 up 40 percent of the 64,000 square-mile watershed. It also
16 has more livestock than any of the six States that are a
17 part of that watershed. There are 83,000 farms in the
18 Chesapeake Bay watershed; 40,000 of them -- half -- are in
19 Pennsylvania. So while you are one of six States, you're a
20 very different State in terms of defining Chesapeake Bay
21 and its health, its productivity, and also its challenges.

22 So the other thing I should say is just to again
23 emphasize that most of your 40,000 farms involve livestock,
24 and so again, looking at livestock is really an important
25 part of looking at Pennsylvania's contributions.

1 The other thing I should mention is that not all
2 nutrients in raw manure are available immediately to the
3 crop. That's really important to understand. And so no
4 matter how much you are applying manure, there's always
5 going to be a certain percentage that runs off. Also, for
6 the most part for green up you want nitrogen. That's what
7 triggers green up. But the ratio of nitrogen to phosphorus
8 in manure is 1 to 4, and so if you need one part nitrogen,
9 by default you have to apply four parts phosphorus. So
10 there are issues associated with unintended consequence, as
11 the prior speaker spoke about. But in this context, it's
12 the unintended consequence of pollution that comes with
13 trying to farm right.

14 So the result of that is there's a nutrient
15 imbalance. More nutrients are imported into the region
16 than are exported or used to grow new crops. We basically
17 have to bring in additional nutrients to feed our animals
18 and then of course we have excess nutrients beyond what the
19 crops need. So the cycle in some ways is broken. All of
20 you, we gave you a report on manure-to-energy that the
21 Commission produced, and on page 6 it really illustrates
22 that imbalance and how it's coming from the Midwest in the
23 way of feed and then we of course deal with the excess load
24 in our region.

25 The other point I want to make is that we used to

1 feel that soils could bind the phosphorus. They could
2 simply bind it. But now we realize that after you put so
3 much nutrients on soil, it can no longer hold those
4 nutrients. I want you to think about it like a magnet with
5 points where you can actually bind a particle, and after a
6 point all those points where phosphorus could bind to the
7 soil are basically filled. And as a result, then, the
8 phosphorus can flow off in solution. Why am I talking
9 about all this? Because when you do manure-to-energy and
10 when you use digesters or other forms of manure-to-energy
11 facilities, you're basically dealing with the component
12 parts of manure. You're better managing the nitrogen, the
13 phosphorus, not necessarily getting rid of it but rather
14 breaking it into its component parts so you can better
15 manage and direct its use.

16 So let me spend a minute about the TMDL.
17 Pennsylvania and the other States are working for three
18 decades to reduce pollution, and what you've done has been
19 important. But after three decades we basically realized
20 that we couldn't proceed and deliver clean water without
21 Federal regulatory oversight. And as a result, not only
22 due to Federal law but also to court orders, we are now
23 operating under what's called a total maximum daily load
24 where we must, by law, reduce our pollutant load to a
25 certain level and then live with it. It's really not

1 different from a Weight Watchers diet where you can only
2 consume a certain number of calories and you've got to
3 stick by it any way you can. So similar to a Weight
4 Watchers diet, you can choose whether you're going to eat
5 ice cream or carrots and it all makes sense with how much
6 you are actually going to consume.

7 Well, in terms of manure-to-energy, Pennsylvania,
8 in its program that it developed to address its pollutant
9 load reductions, targeted innovation and things like
10 manure-to-energy as critically important pieces to its
11 watershed implementation plan, to its approach to reduce
12 pollutant loads in Pennsylvania. And so the manure-to-
13 energy systems, they not only are reducing nutrients in all
14 the ways that I've described but they're also directly
15 addressing commitments that the Commonwealth of
16 Pennsylvania has made in law.

17 In 2011 the Chesapeake Bay Commission co-hosted a
18 manure-to-energy summit that was focused on manure-to-
19 energy. And we attempted to look at different policies
20 that were critical to promote its conveyance. Part of this
21 reason for having this summit was Pennsylvania's interest
22 in deploying manure-to-energy facilities in a very
23 meaningful way. And at that summit where 145 invited
24 experts attended, three policies emerged, three sets of
25 policies. One was startup funding and the critical

1 importance, one was market entry, and one was sustainable
2 revenue. And net metering, the subject of today's hearing,
3 is very important to all three of those component parts.

4 So, first, startup funding is more likely to be
5 available if there are reliable income streams to pay back
6 the load. And that net metering allows a farmer to
7 understand the income stream potential. Second, the
8 process of connecting to the grid is only worth it if
9 there's sufficient and reliable economic benefit from the
10 sale of electricity. And third, the long-term viability of
11 the manure-to-energy system also depends on a reliable
12 source of revenue.

13 One thing that became clear after talking to the
14 manure-to-energy leaders from across the watershed and the
15 country, quite frankly, that attended this summit was that
16 offsets of on-farm electricity use was not enough to make
17 manure-to-energy systems viable. It wasn't enough to just
18 be able to sell the byproducts, the ash or digestate that's
19 phosphorus-rich. And so what you ended up needing -- nor
20 was it good enough to just sell the electricity itself. It
21 was really the combination of all of those things that's so
22 important and why the Chesapeake Bay Commission has
23 testified on the number of pieces of legislation at the
24 State and Federal level that deal not only with net
25 metering or caps but also the sale of byproducts and other

1 things.

2 So let me conclude with three points about
3 policy. First of all, we really appreciate the latest
4 version of the net metering regulations and the fact that
5 it would exempt farms from the net metering limit to 200
6 percent of electricity consumption. That's actually what
7 we negotiated in the law in Maryland. But it's only when
8 the Department of Environmental Protection certifies that
9 the facility is "integral" to the Commonwealth's Chesapeake
10 Bay efforts. As stated earlier, farms who install manure-
11 to-energy systems do so for manure management, too.
12 They're doing it for multiple benefits on farms.

13 We would caution against adding an additional
14 regulatory steps to the process, especially one that puts
15 DEP in the position of determining what exactly "integral
16 to farm management" is. Our goal is to have choices
17 available to allow farmers to decide what's right for them.
18 Outcomes that are the product of choice are often the most
19 effective, we've found.

20 Another feature of net metering that must be
21 available is the ability to aggregate meters. We address
22 this issue in legislation in Virginia. We address this
23 legislation in Maryland. And in Pennsylvania, that
24 aggregation of meters is really important. Farms often
25 consist of geographically distinct farm properties and

1 electricity use from these multiple properties should be
2 able to be aggregated for the purposes of net metering.

3 And so we support House Bill 1349 but would
4 strongly suggest that the impact not just be limited to
5 methane digesters. Digestion is just one type of energy
6 generation, particularly on farms, and it tends to deal
7 with the manure that's heavy, the manure that's rich in
8 liquid like hogs or dairy.

9 But let me illustrate to you why gasification,
10 for example, is critically important for the lighter-weight
11 manure. So think chicken, think turkey. If you look at
12 the millions of pounds of manure generated in Pennsylvania,
13 dairy and beef, it's about 150 million pounds. This is to
14 give you a context. Hogs is about 20 million. But if you
15 look at pullets, layers, and broilers, it's 60 million.
16 It's a lot. And turkeys is another 10. So if you look at
17 the birds, it's 70 million pounds, and so you need to be
18 dealing with that manure stream as well. And manure-to-
19 energy is one of many options in your toolbox.

20 So in your testimony we've offered some changes
21 to the legislation that could help to amend that, and we
22 would ask that you would at least consider it because of
23 the significant opportunity in your State.

24 Finally, the timing is really important on this
25 issue. Pennsylvania is significantly behind, as you heard

1 from an earlier speaker, in Chesapeake Bay progress. I'm
2 sorry to say they're the furthest behind. But I'm also
3 happy to tell you that, because there is so much
4 opportunity in Pennsylvania because of the size and
5 magnitude of your landscape and your farm operations, you
6 stand to make the biggest gain with small decisions in some
7 ways for change. And so this is one small but significant
8 contribution to that change. Manure-to-energy systems
9 should be embraced, and the net metering and capacity of
10 the farmers to access the grid should really be embraced.

11 So I thank you very much for this opportunity and
12 hope that you take our suggestions quite seriously. Thank
13 you.

14 MAJORITY CHAIRMAN GODSHALL: You mentioned that
15 there were a number of -- hundreds I believe -- experts
16 that were called to develop. Were any of these experts
17 farmers?

18 MS. SWANSON: Absolutely. Absolutely.

19 MAJORITY CHAIRMAN GODSHALL: I mean the farming
20 community was included in the --

21 MS. SWANSON: Oh, absolutely. And not only that,
22 a number of them were speakers at the summit. And the
23 speakers were from Pennsylvania.

24 MAJORITY CHAIRMAN GODSHALL: Okay. I just wanted
25 to check to make sure the agriculture community was

1 included.

2 MS. SWANSON: Absolutely. We've worked hand-in-
3 glove with them for the last six years, have worked with
4 many of the farmers. I know Luke Brubaker was mentioned
5 earlier, but there's any number of farmers that have
6 deployed in all three States, and we have relationships
7 with them really across the watershed. Manure-to-energy is
8 not going to happen without full partnership and
9 understanding of the ag community.

10 MAJORITY CHAIRMAN GODSHALL: Well, agriculture is
11 our number-one industry in Pennsylvania and --

12 MS. SWANSON: Absolutely.

13 MAJORITY CHAIRMAN GODSHALL: -- agriculture,
14 needless to say, depends on the farmers. And if we --

15 MS. SWANSON: Absolutely.

16 MAJORITY CHAIRMAN GODSHALL: -- don't have
17 farmers, we don't have agriculture community; we have
18 housing developments.

19 MS. SWANSON: That's right.

20 MAJORITY CHAIRMAN GODSHALL: And --

21 MS. SWANSON: Well, the other thing I would say
22 is you cannot protect the environment of Chesapeake Bay
23 without the agricultural community. I don't believe it can
24 be done. And so in terms of partners, they should be and
25 are one of the Commission's greatest partners.

1 MAJORITY CHAIRMAN GODSHALL: Okay. I thank you
2 very much for your testimony and appreciate you coming up
3 here. Thank you again.

4 And I'd like to call at this time the
5 Pennsylvania Farm Bureau, Grant Gulibon, Director of
6 Regulatory Affairs.

7 MR. GULIBON: Good morning, Mr. Chairman. Good
8 morning, Representative Davis, Members of the Committee.
9 Thank you all very much for the opportunity to testify
10 today on net metering issues in general and House Bill 1349
11 in particular.

12 My name is Grant Gulibon. I am the Director of
13 Regulatory Affairs for the Pennsylvania Farm Bureau.
14 Pennsylvania Farm Bureau is a general farm organization
15 with a membership of more than 61,400 farm and rural
16 families across the Commonwealth. Since 1950, the Farm
17 Bureau has provided support, advocacy, and informational
18 and professional services for agriculture and farm
19 families, including those operating Tier I energy
20 generation systems on farms. Our organization includes 54
21 local organizations or County Farm Bureaus, and we are
22 active in 64 of Pennsylvania's 67 counties.

23 I think most people would agree that House Bill
24 1349 is a legislative response to the Alternative Energy
25 Portfolio Standards Act regulations that are under

1 development currently by the Public Utility Commission, and
2 these regulations, of course, as previously stated, will
3 determine who among homegrown generators of electricity
4 will qualify for net-metering treatment.

5 Eligibility of on-farm electrical generation
6 systems for net metering is a very important issue for
7 numerous farmers who have and operate these systems. And
8 it will become an even more important issue for
9 Pennsylvania agriculture in the future, as today's farm
10 families work to keep their farms viable for future
11 generations.

12 Essentially, the PUC is proposing to establish a
13 single standard for determining who qualifies for net
14 metering based strictly on the generating system's capacity
15 for making electricity. That standard will be applied
16 across the board to all homegrown generating systems,
17 including systems developed and operated on farms. While
18 better than what was first proposed, the PUC's proposed net
19 metering eligibility standard is strictly based on the
20 generating capacity of the system being operated.

21 We understand that the primary purpose behind the
22 PUC's regulations is to prevent public utilities or other
23 entities that are truly in the business of generating
24 electricity from receiving net-metering treatment through
25 some legal loophole. But the PUC's strict sense of the

1 "capacity" standard doesn't make sense in situations where
2 systems are developed and operated on working farms, and
3 application of this standard may significantly hurt their
4 future ability for Pennsylvania's farm families to adapt
5 their operations and keep their operations viable.

6 There are three main types of generating systems
7 that farmers have primarily developed and operate on farms,
8 which have qualified for net-metering treatment: methane
9 digestion, solar energy, and wind energy. Size and
10 environmental management are the key reasons why many
11 farmers have decided to develop and operate an electrical
12 generation system. Generally, these farmers don't want to
13 be in the electric-generation business. They want to be in
14 the business of farming and want to make their profits
15 through agricultural operation, not through electricity
16 generation.

17 However, development of on-farm electrical
18 generation does help farmers to manage the overall cost of
19 operating their farms. Consumption of electricity is a
20 major component of cost in operating a viable farming
21 operation. So on-farm electrical generation helps farmers
22 reduce the net amount of electricity they consume, and the
23 rate applied to the generated electricity under net
24 metering provides a fair and equitable credit to the net
25 volume of electricity that they ultimately consume and then

1 have to pay for.

2 It should be pretty obvious to you that it's
3 expensive to have and operate one of these systems on a
4 farm. Indeed, farmers need to make substantial on-farm
5 income to repay the significant debt that's incurred in the
6 construction and operation of these systems. Lenders give
7 serious consideration of the farm's overall ability to
8 generate income in determining whether or not to approve
9 loans for on-farm projects. Net metering plays an
10 important role, not only in increasing farmers' ability to
11 show potential financiers that the generation system will
12 improve the farm's income potential, but also in allowing
13 the farmer to obtain more feasible terms for the repayment
14 and financing of that debt.

15 Last, but certainly not least, on-farm electrical
16 generation systems contribute significantly to the ability
17 of those operating larger farms to specifically meet legal
18 obligations established under State and Federal
19 environmental laws and generally be more effective
20 environmental stewards.

21 The U.S. Department of Agriculture, U.S.
22 Environmental Protection Agency, and the U.S. Department of
23 Energy have recognized the many environmental benefits and
24 opportunities that on-farm anaerobic methane digesters in
25 particular provide for effective environmental management

1 of animal manure generated on farms, and have instituted
2 programs -- particularly those in the Chesapeake Bay
3 Watershed, as previously referenced in earlier testimony --
4 to help farmers build, operate, and finance on-farm
5 digestion systems.

6 For many larger farms, the biggest reason for
7 installing or increasing the capacity of the farm's methane
8 digestion system is environmental, not economic. These
9 systems are critical components of nutrient and manure
10 management planning that farmers must propose, implement,
11 and have approved by reviewing agencies in order to comply
12 with environmental laws and maintain environmental
13 integrity.

14 It is also important to remember that those farms
15 located in the Chesapeake Bay Watershed are, as previously
16 mentioned, subject to requirements for reduction of
17 nitrogen and phosphorus imposed under the Federal EPA's
18 total maximum daily load for the Bay Watershed. So farmers
19 in the watershed have even more incentive than those in
20 other watershed areas to improve their environmental
21 management through methane digestion.

22 For farms predominantly engaged in crop
23 production, development of solar and wind energy systems
24 also provide farmers with the opportunity to manage and use
25 marginally productive, high-erosion land areas in an

1 economically and environmentally efficient manner. Use of
2 these lands for solar and wind generation makes these areas
3 economically productive and allows the farmer to direct the
4 growing of crops to more fertile, less erodible areas,
5 which should provide greater yield and income from field
6 crop production.

7 The PUC regulations, as proposed, essentially
8 limit farmers' ability to qualify for net metering. An on-
9 farm system will no longer qualify for net metering if that
10 system's generating capacity is more than 200 percent of
11 the farm's consumption of electricity. This limitation
12 seriously impedes farmers' ability to use on-farm
13 electrical generation systems and provide all of the
14 agricultural benefits that I've just described that make
15 that farm more viable, both now and in the future. When a
16 larger farm reaches or gets close to that capacity cap,
17 that farm's opportunity to adapt size and operation and
18 manage increased economic and environmental challenges
19 through use of the generation system will be seriously
20 reduced, and the family operating that farm will have much
21 more difficulty in maintaining the viability of that farm
22 for the future.

23 House Bill 1349 would prohibit the PUC from
24 imposing caps or similar limitations on eligibility of
25 farmers and others who develop and operate systems that

1 generate electricity through anaerobic methane digestion.
2 The Farm Bureau strongly supports legislative action that
3 will ensure that on-farm methane digestion systems
4 generating electricity qualify for net metering without
5 exception. So to that extent the Farm Bureau supports
6 House Bill 1349's specific objective.

7 But we also believe that the scope of on-farm
8 systems that qualify for net metering without limitation
9 should be broader than what is proposed in House Bill 1349.
10 As I mentioned earlier, farmers who have also have built
11 and operate solar and wind generation systems on their
12 farms, and in many cases the reasons for farmers' operating
13 these systems on their farms are the same as those for
14 farmers who operate anaerobic methane digestion systems.
15 They're driven by desires to improve viability of their
16 operation as a working farm and improve the farm's
17 environmental quality and compliance with environmental
18 standards.

19 We believe that any legitimate farm operating on-
20 farm systems generating electricity from any Tier 1
21 resource should receive net-metering treatment, not just
22 methane digesters. The Farm Bureau recommends that the
23 Committee amend House Bill 1349 to, in effect, establish
24 this agricultural exemption from limitation in eligibility
25 of these on-farm generation systems to qualify for net

1 metering.

2 Once again, Farm Bureau thanks the Committee for
3 the opportunity to testify today and share our views on
4 this critically important issue and will continue to work
5 with all interested parties on regulatory and legislative
6 policy that encourages Pennsylvania farmers' continuing
7 efforts to be good stewards of the land, implement projects
8 that provide substantial environmental benefits, and also
9 support the goal of increasing the generation of clean,
10 renewable energy.

11 At this time I would be happy to answer any
12 questions that Members may have. Thank you.

13 MAJORITY CHAIRMAN GODSHALL: Not being critical,
14 but at the same time having an agriculture background of my
15 own, you mention that the farmers would like to farm --

16 MR. GULIBON: Yes.

17 MAJORITY CHAIRMAN GODSHALL: -- period, and not
18 get involved with this solar, wind generation, and so
19 forth, but at the same time, the rest of your testimony you
20 specifically mention the value of these added resources to
21 the farm, which you originally said the farmer wants to
22 farm. Does the farmer want to farm or is the farm to be
23 used for wind generation and solar generation?

24 MR. GULIBON: Well, the farmer wants to --

25 MAJORITY CHAIRMAN GODSHALL: I mean I know the

1 farm situation myself. If it's an add-on, it's an add-on
2 to subsidize the farm. But you're not saying that in here,
3 this sort of subsidy to the farmer.

4 MR. GULIBON: Well, the farmer wants to farm but
5 the farmer has to take into account, a whole bunch of other
6 factors in being able to execute whatever farm operation is
7 in place. And again, as noted throughout the testimony,
8 one of the major things that you've got to worry about is
9 meeting environmental standards that are ever-increasing
10 and proliferating all the time, especially from farms in
11 the Bay Watershed.

12 So I think to refer back to Ms. Swanson's
13 testimony, it's a matter of providing options for all those
14 related but still integral parts of operating a viable
15 farm. And you can't have a viable farm if you're not in
16 environmental compliance, and farmers want to be in
17 compliance. Farmers want to do their part for the
18 environment. They'd like to have all the possible tools
19 available that they possibly can whenever they're engaging
20 in whatever type of operation they might have. These types
21 of alternative generation systems are a big part in that
22 toolbox as far as being able to take care of those related
23 and no less integral parts of the farm operation.

24 MAJORITY CHAIRMAN GODSHALL: I just don't look at
25 that as a natural farm activity, and when you use the word

1 "farmer" and "farms," I immediately wondered how that
2 became a natural farm activity.

3 The other thing I wonder, the big thing here is
4 should this be wholesale or retail as far as the subsidy
5 goes that's paid to the farmer? I mean somebody wants to
6 put up a huge, huge, huge -- I mean they could put up
7 practically an electric-generating facility and be paid at
8 the retail rate. And should that be wholesale or should it
9 be retail?

10 MR. GULIBON: Well, I think, first of all, to go
11 to the second part of your question, I think that most of
12 the systems that are being put in place on farms I think
13 it's pretty easy to tell whether someone is putting in a
14 generation system on an actual farm. There are a lot of
15 different standards through various State and Federal
16 programs that determine what a legitimate farm is and what
17 is that façade for just masking the implementation of the
18 massive generating system that's not intended for anything
19 but more economic rates.

20 Our position has been that we have noted that the
21 way that the system is currently set up, we're not
22 advocating changing that as far as that part goes. What we
23 are talking about, though, is being able to make sure that
24 we have viable types of options available to farmers who
25 want to be good stewards, and that I think would encompass

1 almost all farmers in Pennsylvania would have, and to that
2 end, to be able to have the capacity to manage a generation
3 system in such a way that the electricity component, the
4 environmental component, they can all be managed
5 successfully and allow that farm to continue in operation
6 and be passed on to future generations should that be the
7 desire of the farm owner.

8 MAJORITY CHAIRMAN GODSHALL: I can understand
9 that, but it comes back to a generating facility today has
10 developed electricity. It's their cost. And then that
11 electricity is sent out to Philadelphia, to Montgomery
12 County, and around the State, and there are costs connected
13 with the sending of that electricity to the homes in those
14 areas. And the question comes back to should these -- in
15 this net metering, should this be at cost or should it be
16 the cost or at wholesale? In other words, if it's at net,
17 then I'm paying for some of that cost to send that
18 electricity from the farmer out to the retail market.

19 MR. GULIBON: But I think you also have to take
20 into account the benefits environmentally that these
21 digestion systems are putting in place. This has been
22 something that's had bipartisan support going back to the
23 Rendell Administration, through the Corbett Administration,
24 digesters in particular being a major source of
25 environmental compliance.

1 As was mentioned in earlier testimony,
2 Pennsylvania has a long way to go and a lot of work to do
3 still to meet the targets under the Federal TMDL. This is
4 I think one of the better ways that has been proposed and
5 has been implemented to try to meet those very real costs.
6 These are running into the billions and billions of dollars
7 from what local sewage treatment plants have had to spend
8 to upgrade to the other types of stormwater management
9 facility upgrades that municipalities are having to put
10 into place.

11 Given the amount of pollution that needs to be
12 reduced and the cost associated with reducing the
13 pollution, this seems to have been one of the avenues that
14 has been proposed and implemented that gets the most bang
15 for the buck for the Pennsylvania taxpayer and ratepayer.
16 And I think that compared especially to the cost of
17 upgrading sewage treatment plants and upgrading stormwater
18 management facilities, both of which are important, this
19 addresses a much larger source of nutrient pollution,
20 sediment pollution, and also does so at a lower cost. It's
21 a better value for the Pennsylvania taxpayer to meet
22 environmental obligations that we are required to take on
23 and have in place.

24 MAJORITY CHAIRMAN GODSHALL: There being no
25 further questions, I appreciate your testimony.

1 MR. GULIBON: Thank you very much.

2 MAJORITY CHAIRMAN GODSHALL: And at this point
3 we'd like to call, from TeamAG, John Williamson.

4 MR. WILLIAMSON: Chairman Godshall,
5 Representative Zimmerman, and Members of the Committee,
6 thank you very much for this opportunity. I'm John
7 Williamson. I'm with TeamAg, but I also come from the
8 Professional Dairy Managers of Pennsylvania. And speaking
9 for them, for TeamAg, and also family dairies and livestock
10 operations, we're grateful for this opportunity to provide
11 testimony today to you in support of House Bill 1349.

12 Last February, the Public Utility Commission
13 introduced a proposal, docket, as I mentioned there, for
14 "Proposed Net Metering Changes." If it was approved, it
15 would limit the amount of excess energy that a farm or any
16 customer generator can sell to utilities through net
17 metering. The purpose of the proposed changes is to level
18 the playing field among retail renewable energy sellers and
19 payers. Farm-based anaerobic digesters are included in the
20 category and were considered collateral damage as a result,
21 along with solar- and wind-powered distributed energy
22 generators. Our main concern with the original proposed
23 requirement was that the alternative energy system must be
24 sized to generate no more than 110 percent of the farm's
25 annual electric consumption.

1 Later, in April 2015, the Public Utility
2 Commission, after receiving many public comments, proposed
3 a net metering system size cap of 200 percent for onsite
4 generation. The PUC ended public comment, as mentioned
5 earlier, at the end of May, and according to their website,
6 the draft will be subject to 18 months of reviews by State
7 lawmakers and regulators before it is finalized.

8 I speak from experience of having been involved
9 with 11 anaerobic digesters in Pennsylvania, as well as a
10 gasification manure project in Adams County that was built
11 by EnergyWorks in 2011. In my testimony today I will first
12 explain the evolution of digesters and how they work, in
13 addition to how Pennsylvania family farms have been
14 affected from these. Next, I will outline some of the
15 environmental benefits from manure digesters. And at the
16 end, we will take a look into the future and the importance
17 that net metering has on the development of digesters to
18 mitigate important environmental challenges facing the
19 Commonwealth.

20 Anaerobic digestion is a simple technology that
21 has been around for 1,000 years. It basically consists of
22 a covered tank containing manure, food waste, sewage, or
23 any other organic material in conditions without oxygen.
24 The bacteria in the waste continue to digest the manure and
25 produces methane gas, which can be converted into energy by

1 means of an engine generator set. The digester in a way is
2 an extension of the cow's digestive process and continues
3 digesting the grain and feed.

4 The excreted manure contains a lot of undigested
5 feed, which, when in anaerobic conditions (without oxygen),
6 the feed continues to get broken down and digested by the
7 bacteria. Typically, this process takes approximately 25
8 to 30 days. The digestion process works best when the
9 temperature is constant at about 103 degrees, similar to
10 the temperature of a cow. The farm digester allows the
11 farm to extract maximum value from the investment and labor
12 that they make in their crop production.

13 The Commonwealth of Pennsylvania in 2004 began
14 promoting digesters through the Pennsylvania Energy Harvest
15 Grant Program administered by DEP. At about the same time,
16 the Alternative Energy Portfolio Standards Act was passed,
17 which provided the opportunity for net metering for
18 digesters and other alternative energy producers.

19 Simply put, net metering is a means by which a
20 utility producer, the customer, has a meter which flows in
21 either direction depending on whether electricity is
22 produced and sent into the utility grid or being consumed
23 and taken off the grid. The advantage is that basically
24 the same retail rate is applied both for production and
25 consumption of electricity.

1 Dairy farms in particular benefit from anaerobic
2 digesters. Dairies are already large consumers of
3 electricity. A 750-cow dairy, for example, may annually
4 pay approximately \$75,000 for electricity. With a
5 digester, a dairy can sell their excess not only used for
6 their own electricity where they then have savings, but
7 they can also sell excess electricity to the utility
8 company and receive a significant income. During a time of
9 price instability and volatility for their milk, a constant
10 source of revenue is most welcome.

11 Another benefit is the use of the fibrous manure
12 solids which is used for the bedding of cows, which has a
13 significant amount of phosphorus. When the manure has been
14 digested, nearly all of the pathogenic bacteria has been
15 killed and it then can be a clean source for bedding.
16 Another benefit is that the digested manure has very little
17 odor. This results in improved relationships with
18 neighbors.

19 In the U.S., Pennsylvania has the second-highest
20 number of manure anaerobic digesters (30), with the
21 majority (23) being located on family dairy farms. TeamAg
22 has been involved in 16 of these family farms. In the past
23 couple of years, there have been no new digesters coming
24 online, even though there still is a high interest. One
25 reason is the proposed rule change from the PUC, which

1 would limit the amount of electricity available for net
2 metering. This has created high uncertainty since farms do
3 not know what they can expect for annual revenue from the
4 sale of excess energy. The second reason is that
5 Pennsylvania has not provided grants to farm digesters for
6 the past two years.

7 Digesters may be a simple technology, but they
8 are still expensive to construct. The digester tank, which
9 is sized to hold 28 days' worth of manure, is built of
10 concrete. It has to be insulated and kept at a constant
11 temperature. This all requires pumps, piping, heat
12 exchangers, and electronic controls. There needs to be
13 safeguards for the methane gas. The engine and generator
14 has to be sized to handle all of the gas. The
15 interconnection with the utility has to be done according
16 to high standards of the utility. Often, three-phase
17 electric line needs to be brought to the farm. These
18 projects typically now cost \$1.5 to \$2.5 million, depending
19 on the size of the farm and the number of animals and other
20 site costs. Operation and maintenance costs for keeping
21 the digester running cost about 2 to 3 cents per kilowatt
22 hour of electricity produced.

23 I think a question was raised earlier, what is
24 the cost of transmission, manufacturing? Roughly, the
25 manufacturing cost I think is about the same amount, 2 or 3

1 cents per kilowatt hour, which represents about the same
2 cost for maintaining the digester and making the repairs of
3 the engine generator, taking care of the pumps and that
4 sort of thing.

5 The provision of net metering has been essential
6 for the development of digesters in the Commonwealth, as
7 well as keeping them in operation. Dairies realize that
8 the digester is an important source of income, similar to
9 their cows that produce milk. In a good year, a dairy
10 hopes to earn a net profit of about \$500 to \$800 per cow.
11 A digester, which is also using food waste, can earn up to
12 an additional \$200 per cow with net metering.

13 Due to this income, dairies are committed to
14 properly maintain the digester and keeping them
15 operational. Certain years such as 2009 and also what is
16 being predicted for 2016, due to global milk prices for
17 which dairies have no control, the price of milk has
18 "tanked." During these times in particular a dairy
19 appreciates the extra income received from the check
20 provided by the utility company through the sale of
21 electricity because of net metering.

22 There are various environmental benefits from
23 manure digesters that benefit the Commonwealth. The first
24 is the important impact on water quality. During the
25 treatment process with a digester, the organic forms of

1 nitrogen and phosphorus shift to inorganic forms which are
2 more readily available and more efficiently taken up by the
3 crops. Digesters convert organic nitrogen into ammonia,
4 which is more predictable and controlled than the less
5 controlled release of nitrogen from organic compounds into
6 the soil, thereby providing an improved water quality
7 benefit.

8 The second benefit is that digesters provide
9 significant support for the goals established in the
10 ongoing effort to restore the Chesapeake Bay, which we
11 heard earlier from Ms. Swanson.

12 Number three is digesters significantly reduce
13 odors. This is the best strategy for reducing odors from
14 all livestock operations, and it will offset complaints
15 from neighbors.

16 One point that has not been mentioned is that
17 anaerobic digesters reduce greenhouse gas emissions.
18 Greenhouse gas emissions reduction is critical in
19 mitigating climate change. Anaerobic digesters reduce
20 greenhouse gas emissions in two different ways:
21 substantially reducing uncontrolled methane gas from manure
22 storage facilities and by offsetting fossil fuels used in
23 the generating of electricity.

24 While other alternative energy producers such as
25 wind and solar, reduce greenhouse gas emissions through

1 providing "clean" energy, manure digesters have the added
2 advantage in that it reduces methane gas that comes from a
3 manure storage facility. Farm digesters capture and
4 destroy approximately four tons of carbon dioxide
5 equivalent per lactating cow per year, or the equivalent of
6 removing .72 cars from the road each year. Greenhouse gas
7 emissions being removed by the existing 30 Pennsylvania
8 anaerobic digesters is annually reducing over 55,000 tons
9 of carbon dioxide equivalence, or equivalent to removing
10 14,000 cars off the road.

11 The second way that digesters improve air quality
12 in Pennsylvania is through generating "clean" electricity.
13 A typical dairy with a digester that has 750 cows will
14 generate approximately 1,500 megawatt hours of clean
15 renewable energy in a year, meeting the consumption needs
16 of about 130 Pennsylvania households. This clean energy
17 removes the equivalent of 1,560 tons of carbon dioxide
18 equivalent from the atmosphere, which is being generated
19 from thermal or coal power plants.

20 The other thing I'd like to mention is that
21 digesters generate electricity 24 hours, seven days a week.
22 Basically, they have a capacity of about 95 percent, which
23 is unlike solar and wind. Solar only generates electricity
24 when the sun is shining. Wind only generates electricity
25 when the wind is blowing.

1 The other thing I want to point out is that farm
2 digesters in Pennsylvania are only generating about 5
3 megawatts of electricity. We heard earlier from earlier
4 testimony that the total net metering was 200 megawatts.
5 So in other words, what's being produced from digesters on
6 farms is a very small amount.

7 Let's look into the future. We want to look
8 strategically into the future at how several future trends
9 will affect the development of digesters and the importance
10 of net metering. The first trend is related to the
11 upcoming possible regulations directed towards livestock
12 operations related to greenhouse gases. The second trend
13 is the recently introduced EPA's Clean Power Plan. And
14 then another trend is the increased opportunity of organic
15 diversion of food waste to farms.

16 The EPA has identified that agriculture
17 contributes 9 percent of the total greenhouse gas
18 emissions. Methane gas coming off liquid manure storage
19 facilities account for 12 percent of that 9 percent.
20 Digesters capture the methane gas to produce renewable
21 energy. Will the EPA go after Pennsylvania's dairies and
22 livestock operations in order to reduce greenhouse gas
23 emissions? Only time will tell.

24 On August 3rd in 2015, President Obama and the
25 EPA announced the Clean Power Plan to reduce carbon

1 pollution from power plants. The Clean Power Plan gives
2 each State a choice as to how to meet those goals. The EPA
3 is providing a Clean Energy Incentive Program to reward
4 early investments in certain renewable energy and demand-
5 side energy efficiency projects that generate carbon-free
6 megawatt hours. Anaerobic digesters provide renewable
7 energy which can contribute to Pennsylvania's plan to
8 reduce its overall carbon pollution.

9 Several States -- Connecticut, Massachusetts, and
10 Vermont -- in our region already have regulations where
11 food waste is being diverted from landfills to farms where
12 it is treated by means of composting or anaerobic digestion
13 and then used as a soil amendment. Will Pennsylvania be
14 following this trend? Even without regulation, here in
15 Pennsylvania many companies such as Weis, McDonald's, Wal-
16 Mart already sending their food waste to digesters instead
17 of a landfill. Food waste diverted to digesters and then
18 land applied on farms not only build up soils but also
19 significantly reduce the volume of waste being sent to
20 landfills.

21 Pennsylvania was a leader in the development of
22 manure anaerobic digesters during the first decade of the
23 2000s with the Commonwealth's promotion strategy through
24 its Pennsylvania Energy Harvest Grants and through the net
25 metering provisions of the AEPS Act of 2004. Through these

1 two strategies, we have benefitted through cleaner air and
2 water.

3 Since the PUC's proposed rule change in 2014,
4 we've had no more new digesters. The uncertainty of farms
5 not knowing what price they can sell their electricity and
6 the possible limitations on the size of their generators is
7 the main cause attributed to the lack of development of new
8 digesters. Setting limits of 110 percent or even 200
9 percent caps of electricity production over consumption
10 hampers innovative uses of digesters for treating food
11 waste or for setting up digesters on small farms which can
12 take manure from several sources from nearby farms.

13 House Bill 1349, if it becomes law, will exempt
14 digesters and other sources of biologically derived methane
15 gas from Public Utility Commission's regulation of
16 electricity, allowing farms to continue to benefit from net
17 metering. This, along with providing grants for renewable
18 energy, will help dairies and livestock operations to both
19 improve their environmental stewardship and economic
20 performance. Digesters are the best practice to meet both
21 of these goals on a farm.

22 I just want to also point out I think you
23 received public testimony from Michael Brubaker of Brubaker
24 Farms. And Mike's a good friend of mine and I just want to
25 point out two quotes from what he wrote in his testimony:

1 "For farms like ours, the digester is an integral part of
2 the dairy system because it is one of the most effective
3 methods to address the environmental concerns and
4 obligations of animal agriculture. Until recently, we
5 never imagined our financial security with these digesters
6 would be at risk from rules made by the PUC.

7 Dairy families like mine, who have committed to
8 address environmental compliance with anaerobic digesters,
9 have done so based on the current AEPS standards, which
10 include net metering and do not cap excess selling power.
11 Participating farm families have risked millions of dollars
12 in capital investment and carried debt loads that far
13 exceed the volatile milk income to manage manure. If the
14 ability to get a return on investment and income to
15 maintain the system is prohibited, farms will be the
16 losers."

17 Thank you.

18 MAJORITY CHAIRMAN GODSHALL: I have a question.
19 On page 5 of your testimony you say "a typical dairy farm
20 with anaerobic digester of 750 cows" -- that's not in my
21 area; we don't have a lot of dairy farms with 750 cows --
22 but "which will generate approximately 1,500 megawatts of
23 clean renewable energy in a year meeting the consumption
24 needs of about so many households in Pennsylvania," what is
25 the actual need of the dairy farm with 750 cows? Of the

1 1,500, what do they need to operate the dairy farm?

2 MR. WILLIAMSON: As far as like a typical -- I
3 mean I just wanted to use a number, and so as far as
4 digesters, we've had digesters on farms as little as 100
5 cows plus a few hogs, so that's the smallest one that we've
6 been involved in. But typically, they do have to be sized
7 at least 4 or 500 cows.

8 As far as the amount of electricity that they
9 consume or that they use on a farm --

10 MAJORITY CHAIRMAN GODSHALL: Right.

11 MR. WILLIAMSON: -- it goes up and down,
12 especially during the summer when there's a high need of
13 ventilation and use of fans. But usually the annual cost
14 for electricity before a digester for a 750-cow farm is
15 estimated at \$75,000.

16 MAJORITY CHAIRMAN GODSHALL: Would be what? I'm
17 sorry.

18 MR. WILLIAMSON: \$75,000.

19 MAJORITY CHAIRMAN GODSHALL: How many megawatt
20 hours is that?

21 MR. WILLIAMSON: If you multiply it by -- I don't
22 know, 750,000 to a million megawatt hours. Actually, if
23 you go back to -- let me see. On line 257 toward the back
24 I had an appendix. I list three different farms that we've
25 been working with over the last year, and I don't want to

1 name those farms, but I do provide where they are. So if
2 you look at Farm 2, a farm in Lancaster with 950 cows,
3 their annual consumption was 753,000 kilowatt hours. And
4 with the digester in this case it would be producing about
5 twice that amount. And in this case this farm did not want
6 to take food waste. Do you see that table at the back?

7 MAJORITY CHAIRMAN GODSHALL: I have that table.

8 MR. WILLIAMSON: All right. I think that answers
9 your question.

10 MAJORITY CHAIRMAN GODSHALL: When we're figuring
11 out the revenue, say if you were getting food waste from
12 Wal-Mart or from who, the owner of the digester is paid to
13 take that food waste?

14 MR. WILLIAMSON: That's correct. You would
15 receive a tipping fee, and those fees I mentioned in that
16 table, so a farm basically receiving a truckload of food
17 waste a day, typically about \$100,000 a year from tipping
18 fees. However, there's still a cost in the land
19 application of that extra food waste material. So even
20 though there's an added income, there is still a cost of
21 about 25 percent.

22 MAJORITY CHAIRMAN GODSHALL: So that goes on top
23 of the benefit they receive from the electricity?

24 MR. WILLIAMSON: That's correct. And that's why
25 I wanted to show this table because one of the things that

1 our company does when a farm is interested in a digester,
2 we'll look at the technical feasibility as well as the
3 economic feasibility. And I thought these figures would be
4 helpful.

5 MAJORITY CHAIRMAN GODSHALL: Another place you
6 mentioned the number of anaerobic digesters in
7 Pennsylvania --

8 MR. WILLIAMSON: That's correct.

9 MAJORITY CHAIRMAN GODSHALL: -- are they
10 scattered around Pennsylvania or are they basically in
11 Lancaster County?

12 MR. WILLIAMSON: No, they're very much scattered
13 throughout the State. We have them in Erie County, several
14 in Somerset County --

15 MAJORITY CHAIRMAN GODSHALL: So they're going
16 into all kinds of watersheds?

17 MR. WILLIAMSON: Yes.

18 MAJORITY CHAIRMAN GODSHALL: It's not necessarily
19 the Chesapeake Bay? Because I'm in the Delaware Bay.

20 MR. WILLIAMSON: Yes.

21 MAJORITY CHAIRMAN GODSHALL: My cohort here is
22 also in the Delaware Bay.

23 MR. WILLIAMSON: Excellent point. And that's one
24 of the problems, I felt, with the proposed change as far as
25 the waiver of the 200 percent cap was if it was within the

1 Chesapeake Bay Watershed.

2 MAJORITY CHAIRMAN GODSHALL: Okay. Well, we go
3 back I guess to my original question. Should the owner of
4 one of these digesters be receiving -- if 10 cents a
5 kilowatt is what he's paying for electricity that's being
6 generated by PP&L or whoever, should he receive the full 10
7 cents or should he receive money that -- somewhere along
8 the line, that electricity has to be transported into the
9 homes. It's got to go through the grid. Should he pay his
10 share of getting that electricity to the homeowner? And
11 that's the major question that we're dealing with.

12 MR. WILLIAMSON: That is the major question and a
13 very important one. I would say, yes, I would like to see
14 the farm get the full 10 percent, and I give you two
15 reasons.

16 MAJORITY CHAIRMAN GODSHALL: Well, I would, too,
17 if I were the farmer, but --

18 MR. WILLIAMSON: Well, one of the reasons is,
19 first of all, a digester is producing electricity that's
20 very different from solar or wind because it's producing it
21 24 hours/seven days a week. And so there is no extra cost
22 and it's a small amount that's going into the grid day by
23 day. So there's no extra added cost to fix the grid for
24 the farm, whereas in some cases with large wind projects,
25 there is a cost. And then I think the other reason is that

1 all the other environmental benefits that the Commonwealth
2 gets as a result of digesters.

3 MAJORITY CHAIRMAN GODSHALL: Representative
4 Davis.

5 REPRESENTATIVE DAVIS: Out of the 30 you said
6 seven were not farms. What were they? Where are the
7 digesters?

8 MR. WILLIAMSON: Thirty --

9 REPRESENTATIVE DAVIS: You said 23 were on farms.
10 You have 30 in Pennsylvania?

11 MR. WILLIAMSON: Twenty-three are dairies and the
12 other seven would be other different kinds of livestock
13 operations.

14 REPRESENTATIVE DAVIS: I keep going back --

15 MR. WILLIAMSON: They'd be like chicken, poultry
16 and --

17 REPRESENTATIVE DAVIS: Okay. Okay. I
18 misunderstood then.

19 MR. WILLIAMSON: -- hogs. Yes.

20 REPRESENTATIVE DAVIS: I misunderstood.

21 MR. WILLIAMSON: Twenty-three are on dairies but
22 they're 30 that are farm digesters.

23 REPRESENTATIVE DAVIS: Okay. So, I don't know, I
24 keep thinking does this open up to any type of company that
25 wants to get a digester if it's beneficial to them

1 financially or is it strictly just farms?

2 MR. WILLIAMSON: Well, the bill that House Bill
3 1349 is for all digesters, whether --

4 REPRESENTATIVE DAVIS: Correct.

5 MR. WILLIAMSON: -- sewage treatment plants,
6 landfills. They all have anaerobic digesters.

7 REPRESENTATIVE DAVIS: Right. I'm just --

8 MR. WILLIAMSON: But I come from -- because my
9 clients --

10 REPRESENTATIVE DAVIS: The farm background.
11 Okay.

12 MR. WILLIAMSON: They're from the farm
13 background.

14 REPRESENTATIVE DAVIS: Thank you. I keep going
15 back to the same question.

16 MR. WILLIAMSON: No, but an important question,
17 yes.

18 REPRESENTATIVE DAVIS: Thank you.

19 MAJORITY CHAIRMAN GODSHALL: That's all I have.
20 I want to say that I have a poultry background so, in fact,
21 we had a hatchery. We used to hatch 3 million turkey eggs
22 a year. So we didn't have a digester. Maybe we should
23 have had a digester.

24 MR. WILLIAMSON: I suggest you go down to Adams
25 County outside Gettysburg. There's a large gasification

1 project, and gasification is different from digesters.
2 Gasification is the burning of manure creating gas to
3 generate electricity. And if you wanted to make a change,
4 I would support --

5 MAJORITY CHAIRMAN GODSHALL: No, I just threw
6 that in there.

7 MR. WILLIAMSON: Okay.

8 MAJORITY CHAIRMAN GODSHALL: Yes, thank you.

9 REPRESENTATIVE DAVIS: I have to go,
10 Mr. Chairman.

11 MAJORITY CHAIRMAN GODSHALL: Okay.

12 REPRESENTATIVE DAVIS: Thank you.

13 MAJORITY CHAIRMAN GODSHALL: Last testifier is
14 Pennsylvania's Solar Energy Industries Association, Ron
15 Celentano. I hope I pronounced that right.

16 MR. CELENTANO: No.

17 MAJORITY CHAIRMAN GODSHALL: Okay. Well --

18 MR. CELENTANO: Celentano or --

19 MAJORITY CHAIRMAN GODSHALL: You knew who I was
20 calling, though.

21 MR. CELENTANO: I know you tried hard, though.
22 Thank you.

23 Chairman Godshall and Chairman Daley, and Members
24 of the House Consumer Affairs Committee, good morning. My
25 name is Ron Celentano, President of Pennsylvania Solar

1 Energy Industries Association, or PASEIA, a Division of
2 Mid-Atlantic Solar Energy Industries Association, or MSEIA,
3 where I also serve as Vice President.

4 MAJORITY CHAIRMAN GODSHALL: Can you pull the
5 microphone a little bit closer?

6 MR. CELENTANO: Yes. Where I also serve as Vice
7 President. MSEIA is a not-for-profit association made up
8 of businesses and professionals working in Pennsylvania,
9 New Jersey, and Delaware involved in the development,
10 manufacturing, design, construction, and installation of
11 solar photovoltaic and solar thermal systems. Thank you
12 for the opportunity to address the Committee regarding net
13 metering and House Bill 1349.

14 Net metering is becoming a hot topic across the
15 country. According to "The 50 States of Solar: A Quarterly
16 Look at America's Fast-Evolving Distribution Solar Policy
17 Conversation," second quarter of 2015, by the North
18 Carolina Clean Energy Technology Center, 16 States recently
19 enacted or are considering changes to their existing net
20 metering policies. Some States are expanding net metering
21 to increase aggregate caps or allowing meter aggregation or
22 virtual net metering, while others are examining successor
23 tariffs to net metering or requiring solar capacity
24 limitations such as in Pennsylvania.

25 One question the Committee asked the speakers to

1 address is about the evolution of net metering since 2004.
2 Net metering was first introduced into Pennsylvania in 1998
3 when PECO was the first utility to deregulate. I played a
4 key role in shaping that tariff, as well as modified
5 interconnection rules. These tariffs were used as a
6 template across the State for other major utilities
7 deregulating over the next couple of years.

8 Finally, net metering policy was enacted as a law
9 across Pennsylvania in 2004 and amended in 2007, followed
10 by numerous PUC regulations. About 45 States have some
11 form of net metering in the country. On the scale of A to
12 F, Interstate Renewable Energy Council rated Pennsylvania's
13 net metering policy with a grade "A," along with 14 other
14 States.

15 The current net metering law in Pennsylvania
16 under Title 52 clearly states that the electric
17 distribution companies, not rural electric cooperatives or
18 municipalities, are required to credit a customer generator
19 at the full retail rate, which shall include generation,
20 transmission, and distribution charges for all the kilowatt
21 hours produced by a Tier I or Tier II resource installed on
22 the customer generator's side of the electric revenue meter
23 up to the total amount of electricity used by that customer
24 during the billing period.

25 If a customer generator supplies more electricity

1 to the electric distribution system than the EDC delivers
2 to the customer generator in a given billing period, the
3 excess kilowatt hours shall be carried forward and credited
4 against the customer generator's usage in subsequent
5 billing periods at that full retail rate. Any excess
6 kilowatt hours shall continue to accumulate until the end
7 of the year. If there is an annual surplus of kilowatt
8 hours, the EDC shall credit the customer generator at the
9 price-to-compare rate for the electric supply. This caps
10 the output that qualifies for full net-metering pricing,
11 greatly reducing the incentive to generate more than the
12 customer generator consumes. So in this particular case,
13 this is very much the disincentive if you will for over-
14 sizing the system on an annual basis.

15 Up until recent years, there have been basically
16 four very important financial mechanisms that were
17 essential for making the investment work for behind-the-
18 meter solar photovoltaic system installations. Two of
19 these included rebates or grants either from the
20 Pennsylvania Sunshine Program or the Sustainable
21 Development Fund's Solar PV Grant Program. The other was
22 from the Federal Investment Tax Credit of 30 percent.
23 These two mechanisms substantially brought down the first
24 costs of a solar PV installation. The other two mechanisms
25 kicked of the four kicked in after the solar PV system was

1 in operation, one being the revenue stream from the
2 producing and selling the solar renewable energy credits,
3 or SRECs, into the Pennsylvania Alternative Energy
4 Portfolio Standard compliance market, and the other from
5 simply offsetting the electric bill through net metering.

6 Fast forward to now, the incentive programs are
7 gone and the current Federal Investment Tax Credit is
8 scheduled to sunset at the end of 2016 for residential
9 systems down to 0 percent, so no tax credit there, and will
10 drop from 30 percent to 10 percent for nonresidential
11 systems.

12 Furthermore, the SREC market has been a disaster
13 in Pennsylvania as it is the only State in the country with
14 open borders, meaning Pennsylvania allows SRECs to be sold
15 into the PA AEPS compliance market from PJM's 12 other
16 States and the District of Columbia. There's a huge supply
17 of out-of-state projects registered to sell their SRECs
18 into Pennsylvania, which has resulted in the SREC prices to
19 collapse over recent years.

20 Why should the legislature care about this?
21 Because Pennsylvania ratepayers are subsidizing the cost of
22 those out-of-state solar projects. Low prices are good
23 only to the point where the investment still is viable;
24 then, the bottom falls out from under the market and the
25 fragile Pennsylvania solar market will fall even further

1 behind the States.

2 But we're not here to talk about the anemic SREC
3 market but to emphasize the importance of strong net
4 metering rules if Pennsylvania expects to retain a solar
5 market. Net metering is the last lifeline for solar
6 investors, particularly for the residential customers who
7 no longer see the value of SRECs and won't get any support
8 through the Federal Investment Tax Credit after next year.

9 Yet the solar industry continues to deliver on
10 the promise to lower the cost of solar. Fortunately, the
11 cost of installing solar photovoltaics has plummeted 65
12 percent since 2009, which has kept solar projects moving
13 forward. In fact, there's been over a 30 percent annual
14 increase of residential projects being installed over
15 recent years across the country, but Pennsylvania has
16 missed the boat on that as very few projects were installed
17 in the Commonwealth over the last three years.

18 It has always been assumed that net metering was
19 the most stable and secure financial mechanism for solar
20 investment; however, recently, the solar industry and solar
21 system owners feel even this is being threatened. I show
22 in the testimony a pie chart that debunks the myth that
23 revenue is really being lost at any great extent from net
24 metered to drive up ratepayer cost. I want to make sure
25 everyone sees this clearly, a pie chart representing all

1 solar customers or total energy usage in Pennsylvania. And
2 that little thin line barely seen there at all is
3 representing the net meter customers. In fact, it's really
4 overstated because of the fact that -- that says 8,400
5 customers where in fact a lot of those customers may not be
6 all net metered. Actually, some of them may not be net
7 metered at all. That is representing all the solar system
8 owners or systems in the State of Pennsylvania.

9 Even considering the worst-case scenario based on
10 the data from the Pennsylvania Public Utility Commission's
11 Net Metering & Interconnection Report of 2012 and 2014 and
12 the AEPS tracking system of installed solar PV systems in
13 Pennsylvania as of July 2015, currently solar-metered
14 customers or the total annual solar generation is less than
15 .2 percent. That's where that line is, less than .2
16 percent of that entire pie. You can tell they don't really
17 make pie slices much smaller than that actually.

18 And I also want to point out that even though
19 this may represent the net-metered customers, a majority of
20 generation certainly from solar systems actually never
21 leaves the site. It actually stays right within the
22 facility before any of it would be exported out onto the
23 grid.

24 And even when this pie slice moves up to a half-
25 a-percent, which is where our AEPS ends in 2021, it's still

1 a very insignificant piece of the entire pie.

2 The financial impacts of customer-sited PV are
3 particularly sensitive to the capacity value and the
4 avoided transmission and distribution costs of
5 photovoltaics with divergent implications for ratepayers
6 versus shareholders, based on the "Financial Impacts of
7 Net-Metered PV on Utilities and Ratepayers: A Scoping Study
8 of Two Prototypical U.S. Utilities," that was done by
9 Lawrence Berkeley National Labs in September 2014. This
10 study concluded that with solar penetrations of 2.5 percent
11 by 2020 in the Northeast utility scenario, the average rate
12 increase over all ratepayer classes was only .2 percent.

13 Now, with Pennsylvania's solar share being set at
14 half-a-percent, which is 1/5 of what that study concluded,
15 penetration by 2021, that would equate to about a .04
16 percent increase in rates due to net metering, or simply
17 put, a \$100 electric bill would increase by 4 cents.

18 I should also point out that we did get a very
19 large amount of net-metered customers in a short period of
20 time, but that was because of the Sunshine Program, but in
21 the past three years, we've seen very little, probably just
22 a few hundred net-metered customers come online because
23 it's been pretty flat, solar coming into Pennsylvania. And
24 in addition to that, because of our open borders and our
25 AEPS requirement, most of the solar that's coming in, the

1 large systems are coming in from out of State, which are
2 not net metered, so I would tend to say that probably
3 there's not going to be an enormous amount of net-metered
4 customers until the end of 2012 the way the law is laid out
5 right now.

6 In addition, one point that often gets ignored in
7 these discussions is the overall value of solar. There are
8 costs and there are benefits. PASEIA and MSEIA
9 commissioned a study not long ago entitled "The Value of
10 Distributed Solar Electric Generation to New Jersey and
11 Pennsylvania." This study found that solar power delivers
12 a premium value in the range of \$150 to \$200 per megawatt
13 hour, or 15 cents to 20 cents per kWh, above the value of
14 the solar electricity generated.

15 The concept of solar value could be illustrated
16 by a simple example of an operating solar PV system. And
17 again, I want to point out that most solar that's generated
18 are mostly residential and a lot of systems all around the
19 State, most of it stays onsite. It doesn't even go out
20 onto the grid. But in this example, I want to talk about
21 there are times in the day when the solar system is
22 generating more power than is needed at the house, for
23 example, and the excess back-feeds towards the grid. But
24 in reality the electrons are really going to offset the
25 electric loads in the neighborhood such as the neighbor's

1 house. As a result, less power is being drawn from the
2 utility distribution wires, thus reducing costly congestion
3 on the lines.

4 The transmission and distribution losses to
5 provide the same power the solar system is generating for
6 the house and the neighborhood is being saved, as well as
7 the generator itself as it uses less fuel to generate this
8 power. On very hot days, or when the system peak is very
9 high, the solar PV system can ultimately save ratepayers
10 from the high fuel cost from running expensive gas turbine
11 generators to provide peak power to the grid.

12 I want to just again talk about there's a
13 difference between distributed solar or distributed
14 generation as a whole where it's very locally based, and
15 when you're talking about avoided costs versus retail costs
16 because it's not like a power plant that's down the road.
17 The satellite type of distributed generation concept is
18 providing value in all of these neighborhoods that has a
19 much more valuable component than if it were just a large
20 plant down the road and it would only get avoided cost for
21 that power that it generates.

22 Regarding the Commission's proposed rules, we are
23 concerned about the latest Commission proposed rules
24 regarding net metering, which were released for comment
25 over the last two years and are still pending, the Proposed

1 Rulemaking Order that was released in February 2014 and the
2 Advanced Notice of Final Rulemaking Order in April of 2015.

3 I just want to point out some of the main
4 comments that we had or main concerns we had, and we had
5 many, but the three ones I want to point out now is that we
6 at PASEIA oppose the proposed rules that would give the
7 Commission the authority to order utilities to charge
8 customer generators additional fees. And we reject the
9 Commission imposing a 200 percent of annual load limitation
10 on PV system capacities, particularly with the residential
11 systems, as there's already a current law that caps them at
12 50 kW. We oppose the proposed change in the rules for
13 defining virtual net metering whereby it adds an additional
14 requirement that all service locations must have a separate
15 existing measurable load.

16 In answer to the Committee's question regarding
17 what changes and updates to net-metering provisions of AEPS
18 would take place, PASEIA supports two major changes that
19 would advance solar in the Commonwealth. One is
20 overhauling and expanding the virtual net metering
21 definition to fully enable community solar applications
22 within the EDC region, including multiple account holders.
23 There are several community solar models out there, but we
24 like the New York model, which is about to being I think
25 probably starting in the fall.

1 Currently in Pennsylvania there are electric
2 customers who are unable to take advantage of utilizing
3 solar such as renters or facility owners with little or no
4 solar exposure. Community solar provides a way for these
5 electric customers to invest or lease part of a large solar
6 system and the utility provides net-metering credit through
7 each of those customers' electric bills.

8 Solar remains very popular in our State and this
9 change could provide many more families and businesses to
10 have solar. It also is part of the answer to making solar
11 more affordable in Pennsylvania. This concept could be
12 further expanded to large renewable energy resource
13 generators such as wind turbines and anaerobic digesters.
14 In fact, in New York they don't even call it community
15 solar; they call it community-distributed generation
16 because it could be a lot of different types of renewable
17 energy generation products.

18 The second suggestion would be to expand the net
19 metering requirement to include all electric generator
20 suppliers, or EGSs, not only the EDCs. Currently, the EGSs
21 are not obligated to credit the customer generator for the
22 excess generation produced by the customer generator.
23 Expanding this requirement to include all electric
24 suppliers, EDCs and EGSs, could promote more customer
25 generators to switch from their default service providers.

1 Finally, I'd like to very briefly address House
2 Bill 1349. PASEIA does not support this bill as it is
3 written unless it was expanded to include all renewable
4 energy resources such as solar and wind and not only
5 methane from anaerobic digesters. Furthermore, it would
6 need to be expanded to all market sectors, including
7 residential, commercial, industrial, and government, et
8 cetera, as well as the agricultural sector. These
9 expansions would avoid picking winners and losers.

10 Thank you for this opportunity.

11 MAJORITY CHAIRMAN GODSHALL: I just have one
12 comment. And the pages aren't listed but you say "fast-
13 forward to now, the incentive programs are gone and the
14 current Federal Investment Tax Credit is scheduled to
15 sunset" and then you go into other programs that have been
16 -- and at the same time we heard earlier today from the
17 Energy Association that "currently, there are 80 energy and
18 energy-efficiency programs in Pennsylvania that are
19 available for the solar and wind.

20 MR. CELENTANO: Well, first off, that number
21 seems awfully high to me, as you were surprised to hear
22 yourself. And also, that was really talking about energy
23 efficiency. We're talking about solar here. As far as the
24 solar programs that we have in Pennsylvania, I mean why
25 isn't solar moving and hasn't moved much in the last three

1 years is because there are really no programs. We have
2 monies that are in the Commonwealth Finance Authority right
3 now but they're being held up. They aren't available yet
4 at this time. There's really no money there, so I'm not
5 sure what that's referring to. It must be 80 programs for
6 something else.

7 MAJORITY CHAIRMAN GODSHALL: Okay. The only
8 purpose of the question is I was wondering who was correct,
9 and if the programs are going away or --

10 MR. CELENTANO: Well, let's just say if it was
11 correct, you would see a lot more action going on out in
12 the marketplace, and so I'm not sure where that's coming
13 from.

14 MAJORITY CHAIRMAN GODSHALL: There being no
15 further questions, I thank you very much for your
16 testimony.

17 MR. CELENTANO: Thank you.

18 MAJORITY CHAIRMAN GODSHALL: Comments were
19 submitted for inclusion in the record by Brubaker Farms,
20 Pennsylvania Waste Industry Association, and the
21 Pennsylvania Department of Agriculture.

22 I'd like to thank all the presenters for taking
23 the time to speak to us today and provide us with a better
24 understanding of the issue. And if there are no further
25 questions, the meeting is adjourned. Thank you. Thank you

1 for the audience and participants.

2

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(The hearing concluded at 11:34 a.m.)

1 I hereby certify that the foregoing proceedings
2 are a true and accurate transcription produced from audio
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4 transcript of the same.

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