

INTERIM STUDY PROPOSAL 2021 -099

1
2
3 REQUESTING THE HOUSE COMMITTEE ON CITY, COUNTY, AND LOCAL AFFAIRS TO
4 CONDUCT A STUDY ON NET-METERING AND SOLAR POWER, TO STUDY CONCERNS
5 RELATED TO ALTERNATIVE ENERGIES THAT CREATE INEQUITIES IN ENERGY
6 CONSUMPTION COST, TO STUDY THE FATE OF THE MATERIALS USED IN ENERGY
7 CONSUMPTION AT THE END OF THEIR LIFE CYCLE, TO STUDY THE CURRENT METHOD
8 OF RATE CALCULATIONS USED TO PURCHASE POWER FROM SOLAR POWER PRODUCERS,
9 TO STUDY THE LIFE CYCLE OF SOLAR PANELS AND SOLAR POWER INFRASTRUCTURE,
10 AND TO STUDY HOW TO PROPERLY DISPOSE OF THE MATERIALS USED DURING
11 ENERGY CONSUMPTION.
12

13 WHEREAS, net-metering and solar power are alternative energies that are
14 used in energy consumption; and
15

16 WHEREAS, the impact of alternative energy on energy consumption and the
17 long-term impact of the disposal of end use materials related to solar power
18 are unknown; and
19

20 WHEREAS, use of alternative energies may raise concerns that
21 alternative energies create inequities in energy consumption costs; and
22

23 WHEREAS, the fate of materials used in net-metering and solar power at
24 the end of their life cycle is unknown; and
25

26 WHEREAS, existing methods of rate calculation used to purchase power
27 from solar power producers are inconsistent and often ambiguous; and
28

29 WHEREAS, solar panels and infrastructure have a finite life cycle and
30 upon completion of their use in energy consumption leave end use materials
31 that needs to be properly disposed of; and
32

33 WHEREAS, there is a need to establish and understand the current method
34 of rate calculations used to purchase power from solar power producers and to
35 understand the life cycle of solar panels and associated infrastructure and
36 how ~~to~~ properly dispose of materials used in the production and use of solar

1 power; and

2

3 WHEREAS, the solar power industry has finally reached a market cost
4 point that provides affordable systems to the public so long as several key
5 factors are in place, but these key factors vary and need to be understood;
6 and

7

8 WHEREAS, the two (2) types of available solar panel systems are:

9 (1) Systems utilized by homeowners; and

10 (2) Systems utilized by industry, businesses, and
11 municipalities, which are also known as solar farms; and

12

13 WHEREAS, both types of users depend on varying factors to make the use
14 of solar power systems cost-effective to achieve financial equilibrium and
15 any potential changes to the fiscal program governing the use of solar power
16 systems should understand the impacts of any alterations suggested to the
17 systems; and

18

19 WHEREAS, homeowners rely on tax credits and the net-metering rate at
20 which surplus power is sold back to the utility companies to make the solar
21 power system's return on investment pay off; and

22

23 WHEREAS, the solar power systems are typically financed as a second
24 mortgage on the homeowner's property, which can lead to difficulties later on
25 with commercial transactions regarding the homeowner's property; and

26

27 WHEREAS, solar farms primarily serve the same purpose as homeowner's
28 solar power systems to provide energy to use and to create excess power to
29 sell back to the utility companies at a retail rate; and

30

31 WHEREAS, the volume of the excess energy required to be purchased by
32 utility companies creates an unfair subsidy to the solar farm manufacturer
33 that is then distributed to all other utility customers to make up the cost
34 difference for the power purchased by the utility company; and

35

36 WHEREAS, the life span of the solar materials is typically twenty (20)

1 years but there is no fiscal planning for the proper disposal of the
2 materials at the end of their life cycle; and

3
4 WHEREAS, in these cases, the problem could be a great financial burden
5 to the solar farm manufacturer due to the sheer volume of solar materials
6 utilized; and

7
8 WHEREAS, in 2020, over two hundred thousand (200,000) solar panels
9 exist in these types of settings and currently there is no infrastructure in
10 place to address the environmental concerns of managing the volume of
11 anticipated waste material that will be created; and

12
13 WHEREAS, the solar power program was initially marketed to homeowners
14 as a way to reduce their energy costs and to create a built-in return of
15 investment by selling surplus power back to the utility companies at a retail
16 rate; and

17
18 WHEREAS, the federal government has also developed tax incentives to
19 foster the development of alternative fuel sources that provide incentives to
20 homeowners to purchase solar power systems to assist in the return of
21 investment process; and

22
23 WHEREAS, the expansion of the solar power system program has followed
24 the windmill power program by creating large solar panel farms to power
25 factories and municipal entities such as jails and government buildings to
26 provide energy at no cost and have the return on investment built in with
27 selling surplus power to the utility companies at retail rates; and

28
29 WHEREAS, neither the solar power system manufacturers and their
30 representatives or installers nor the federal government, which incentivizes
31 the purchase of the solar power systems, have developed any programs for the
32 disposal of the materials at the end of their life cycle; and

33
34 WHEREAS, this could be attributed to the long life span of the
35 materials but somebody will have to bear the financial responsibility for the
36 disposal of the materials when that time comes; and

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

WHEREAS, there are operational, technical, fiscal, and environmental issues that should be resolved first in order to implement any proposed changes to the solar power industry program; and

WHEREAS, proposed changes to the solar power industry program will need to account for:

(1) Fiscal impacts of any changes to the solar power industry program including:

- (A) Current rebates;
- (B) Tax credits;
- (C) Other financial incentives created for the solar power industry program; and
- (D) The energy cost rate at which the power is sold back to the electric utility companies;

(2) Life cycle concerns including:

- (A) Concerns about the environmental impact in the long-term if the materials have reached the end of their life cycle and will need to be disposed of and by whom; and
- (B) That the cost of properly handling these materials, which are currently classed as hazardous electronic waste, will be exponentially higher due to the composition of the materials and the size and volume of the solar panels;

(3) The solar manufacturer;

(4) The representative or installer of the solar manufacturer selling the equipment;

(5) The financial institutions funding the purchase of the solar power system; and

(6) The homeowner's, businesses', or municipality's return on investment; and

WHEREAS, the development of a two-tiered system will need to be devised to protect:

(1) Those who have already purchased and installed a solar power system based on the fiscal model in effect at the time of purchase; and

(2) Anyone who purchases and installs a new solar power system

1 purchased in the future under a new fiscal model; and

2
3 WHEREAS, tax incentives may also play a part in the purchase of solar
4 power systems that need to be considered as well; and

5
6 WHEREAS, efforts to improve solar power system should:

7 (1) Develop environmental fees assessed on solar power
8 manufacturers and solar farms to be paid into a remediation fund to assist
9 solar farms with disposal of end use materials;

10 (2) Explore the development of a logistically detailed program
11 for recycling the used solar equipment and the estimated cost of the
12 recycling program per panel; and

13 (3) Explore federal and state laws that currently exist on how
14 existing solar panels are classified to identify necessary changes that may
15 need to be made to reduce the cost of recycling and disposing of the solar
16 panels; and

17
18 WHEREAS, the solar power industry stretches across several sectors
19 within the community and all relevant community stakeholders should be made a
20 part of the process in clearly identifying the current issues and future
21 concerns; and

22
23 WHEREAS, the following stakeholders are recommended as a minimum:

24 (1) Solar power manufacturers and installers;
25 (2) Financial institutions that loan money to homeowners for
26 solar power systems;
27 (3) Underwriting and bond companies that underwrite solar farms;
28 (4) Utility companies who purchase surplus power from solar
29 power manufacturers;

30 (5) Recycling companies capable of addressing the logistics of
31 establishing a recycling program;

32 (6) The Division of Environmental Quality; and

33 (7) The Arkansas Public Service Commission,

34
35 NOW THEREFORE,

36 BE IT PROPOSED BY THE HOUSE COMMITTEE ON CITY, COUNTY, AND LOCAL AFFAIRS OF

1 THE NINETY-THIRD GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

2 THAT the House Committee on City, County, and Local Affairs conduct a
3 study to:

4 (1) Identify the needs and costs associated with net-metering
5 and solar power;

6 (2) Identify the concerns related to alternative energies that
7 create inequities in energy consumption costs, including fiscal, tax, and
8 environmental concerns;

9 (3) Determine the process for disposal of the materials used in
10 energy consumption at the end of the materials' life cycle;

11 (4) Identify the current method of rate calculations used to
12 purchase power from solar power producers;

13 (5) Identify the life cycle of solar panels and solar power
14 infrastructure;

15 (6) Identify the proper and most cost-effective method to
16 dispose of materials used during energy consumption;

17 (7) Develop changes to impact programs affecting alternative
18 energies concerning fiscal and environmental issues; and

19 (8) Identify, propose, and recommend the best practices and
20 establish standards for the needs and costs associated with net-metering,
21 solar power, and alternative energy.

22
23
24 Respectfully submitted,

25
26
27
28 Representative Lanny Fite

29 District 23

30 Prepared by: ANS/ANS

31
32
33
34
35
36