



BEFORE THE ARIZONA CORPORATION COMMISSION

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MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

Arizona Corporation Commission

DOCKETED

AUG 28 2007

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IN THE MATTER OF NET METERING IN)
THE GENERIC INVESTIGATION OF)
DISTRIBUTED GENERATION)

DOCKET NO.E-00000A-99-0431

DECISION NO. 69877

ORDER

Open Meeting
August 21 and 22, 2007
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

Introduction

1. Commission Decision No. 67744 directed Staff to schedule workshops to consider outstanding issues concerning distributed generation ("DG"). The second issue to be addressed by the workshops, after DG interconnection, was net metering. A workshop on net metering was held on September 7, 2006. Participants in the workshop included representatives from utilities, government agencies, environmental advocacy groups, consumers, advocates for renewable resources, advocates for distributed generation, renewable resource providers, and others.

2. Staff requested written comments from interested parties on issues related to net metering. Comments were received from a.k.a. Green, American Solar Electric, Arizona

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1 Cooperatives,¹ Arizona Public Service Company ("APS"), Arizona Solar Energy Association,
2 Sally R. Day, Distributed Energy Association of Arizona, Solar Advocates,² Jim Stack, and
3 UniSource Energy.³

4 3. In addition, the Energy Policy Act of 2005 requires each state regulatory authority
5 to consider certain PURPA⁴ standards, including one on net metering. The Commission may
6 decline to implement the standard or adopt a modified standard. The Commission was required to
7 begin its consideration by August 8, 2007, and must complete its consideration by August 8, 2008.
8 On January 23, 2006, Staff filed a memo in Docket Control that Net Metering was being addressed
9 in Docket No. E-00000A-99-0431.

10 **Consideration of the PURPA Standard on Net Metering.**

11 4. The Energy Policy Act of 2005 requires each state regulatory authority to consider
12 a PURPA standard on net metering. The standard would apply to utilities with greater than
13 500,000 MWh in annual retail sales. The Commission may decline to implement the standard or
14 adopt a modified standard. The standard is as follows:

15 *Each electric utility shall make available upon request net metering service to any*
16 *electric consumer that the electric utility serves. For purposes of this paragraph,*
17 *the term 'net metering service' means service to an electric consumer under which*
18 *electric energy generated by that electric consumer from an eligible on-site*
19 *generating facility and delivered to the local distribution facilities may be used to*
20 *offset electric energy provided by the electric utility to the electric consumer during*
21 *the applicable billing period.*

22 5. The Commission is required to consider the three purposes of PURPA in its
23 determination of whether to adopt the net metering standard. The three purposes of PURPA are as
24 follows:

25 ¹ The Grand Canyon State Electric Cooperative Association filed comments on behalf of its Arizona cooperative
26 members ("Arizona Cooperatives") which are: Duncan Valley Electric Cooperative, Inc.; Graham County Electric
27 Cooperative, Inc.; Mohave Electric Cooperative, Inc.; Navopache Electric Cooperative, Inc.; Sulphur Springs Valley
28 Electric Cooperative, Inc.; and Trico Electric Cooperative, Inc.

² Solar Advocates include American Solar Electric Inc., the Greater Tucson Coalition for Solar Energy; the Annan
Group; Code Electric; SunEdison; and the Vote Solar Initiative.

³ UniSource Energy includes Tucson Electric Power Company and UNS Electric, Inc.

⁴ Public Utility Regulatory Policies Act of 1978.

- conservation of energy supplied by electric utilities,
- optimal efficiency of electric utility facilities and resources, and
- equitable rates for electric consumers.

6. Having net metering may facilitate the installation of DG and thus reduce the amount of energy to be supplied by electric utilities. The presence of DG may improve the efficiency of electric utility facilities and thus reduce costs for electric consumers.

Benefits and Costs of Net Metering

7. The U. S. Department of Energy ("DOE")⁵ has identified the following potential benefits of DG:

- reduced peak loads,
- provision of ancillary services such as reactive power and voltage support,
- improved power quality,
- decreased vulnerability of the electrical system,
- increased resiliency of other critical infrastructure sectors, and
- reduced land use effects.

8. DG might also provide reduced transmission and distribution losses, avoided generation fuel cost, fuel diversification, avoided water use, reduced environmental impacts, and potential deferral or reduction in distribution investment.

9. Net metering provides a financial incentive to encourage the installation of DG, especially renewable resources. DOE describes net metering as a policy option available to states to promote environmentally preferred customer-located DG, and its absence can be viewed as a barrier to deployment. The *Regulator's Handbook on Renewable Energy Programs & Tariffs*⁶ lists the following purposes of net metering:

- promoting small-scale renewables;
- enhancing the market for renewables;
- facilitating installation and interconnection of on-site generation;
- reducing customers' electricity bills;
- empowering customers to manage their electricity usage, essentially storing excess power on the grid for use at a later time; and
- lowering the utility system peak demand.

⁵ U.S. Department of Energy, *The Potential Benefits of Distributed Generation and Rate-Related Issues That May Impede Their Expansion: A Study Pursuant to Section 1817 of the Energy Policy Act of 2005*, February 2007.

⁶ Jan Hamrin, Ph.D; Dan Lieberman; and Meredith Wingate, *Regulator's Handbook on Renewable Energy Programs & Tariffs*, March 2006.

1 10. According to American Solar Electric, photovoltaic systems are often larger in
2 service territories that offer net metering because it reduces the systems' payback times. Net
3 metering also makes savings predictable. In their written comments, the Solar Advocates point out
4 that net metering makes solar systems effectively cheaper for system owners, and it helps increase
5 solar's peak shaving impact and transmission and distribution effects to benefit all ratepayers.
6 They state that net metering is a critical enabling policy for renewable resources that are
7 intermittent and non-dispatchable.

8 11. APS and the Arizona Cooperatives, in their written comments, state that customers
9 taking service under net metering rates do not pay the full cost of the transmission and distribution
10 system. Net metering rates do not yield sufficient revenue to cover cost. Therefore, those net
11 metering customers are subsidized by other customers. The Solar Advocates respond that the
12 impact of net metering is equivalent to the impact of a customer who reduces load through
13 conservation. UniSource Energy states that the utility's cost of implementing net metering is all
14 fixed investment and operating expenses incurred above the incremental cost of avoided energy
15 purchased or generated. In the view of UniSource Energy, net metering is a super-subsidy for a
16 class of generation that needs an extra incentive to move renewable technologies to market
17 transformation. A different view is that the subsidy, if there is one at all, is exceeded by the
18 overall benefits provided to the system by the on-site generation.

19 **Staff Analysis**

20 12. Staff believes that net metering should be available in all utility areas because DG
21 can provide benefits, and net metering may facilitate the installation of DG. Several other states
22 have considered and rejected the PURPA standard on net metering, not because of the merits of
23 the standard, but because they already have net metering rules in place. States that have rejected
24 the standard and already have net metering rules in place include California, Colorado,
25 Connecticut, Idaho, Indiana, Iowa, Louisiana, Minnesota, Nevada, Utah, Vermont, Virginia,

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1 Wisconsin, and Wyoming. Ohio adopted the standard and has rules in place. According to the
2 Database of State Incentives for Renewable Energy ("DSIRE"), 36 states have net metering rules.⁷

3 13. Some concerns have been raised that net metering would result in revenue losses
4 for utilities; although there is some disagreement on the issue. The Arizona Cooperatives, in their
5 written comments, recommend that only utilities with greater than 500,000 MWh in retail sales
6 should be subject to the net metering standard adopted by the Commission because small
7 cooperatives will be impacted to the greatest degree by the loss of revenue and margins associated
8 with net metering.

9 14. Staff believes that, if revenue losses occur as a result of net metering, the losses
10 would impact utilities of all sizes. The impact of revenue loss on all utilities could be controlled
11 through provisions in rules, such as by a limit on total participation.

12 15. The electric distribution companies that are regulated by the Commission are listed
13 in the following table.

14 Electric Distribution Companies in Arizona
15 (Under Commission Jurisdiction)

16 With Greater than 500,000 MWh of Arizona Retail Sales in 2005
17 Arizona Public Service Company
18 Mohave Electric Cooperative
19 Morenci Water and Electric Company
20 Sulphur Springs Valley Electric Cooperative
21 Trico Electric Cooperative
22 Tucson Electric Power Company
23 UNS Electric
24
25 With Less than 500,000 MWh of Arizona Retail Sales in 2005
26 Ajo Improvement Company
27 Columbus Electric Cooperative
28 Dixie-Escalante Rural Electric Cooperative
Duncan Valley Electric Cooperative
Garkane Energy Cooperative
Graham County Electric Cooperative
Navopache Electric Cooperative

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28 ⁷ www.dsireusa.org

1 **Staff Recommendations**

2 16. Staff recommends that the Commission adopt the PURPA standard on net metering.

3 17. Staff also recommends that the standard be applied to all electric distribution
4 companies in Arizona that are regulated by the Commission.

5 18. Staff further recommends that the Commission direct Staff to begin a rulemaking
6 process to draft rules on net metering. The draft rules should address, at a minimum, the following
7 issues:

- 8 ● customer sector participation,
- 9 ● types of generation resources,
- 10 ● project size,
- 11 ● total participation,
- 12 ● metering,
- 13 ● treatment of net excess generation, and
- 14 ● responsibility for costs.

15 **CONCLUSIONS OF LAW**

16 1. The Commission has jurisdiction the subject matter of the application.

17 2. The Commission, having reviewed the application and Staff's Memorandum dated
18 August 7, 2007, concludes that it is in the public interest to direct Staff to begin a rulemaking
19 process on net metering.

20 **ORDER**

21 IT IS THEREFORE ORDERED that the PURPA standard on net metering, as included in
22 Finding of Fact No. 4, that would apply to all electric distribution companies in Arizona that are
23 regulated by the Commission is adopted.

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IT IS FURTHER ORDERED that Staff is to begin a rulemaking process to draft rules on net metering. The draft rules should address, at a minimum, the issues listed in Finding of Fact No. 18.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

Samuel McCutcheon

CHAIRMAN

Will Wood

COMMISSIONER

Jeffrey H. Hitch-Miller

COMMISSIONER

Tommy

COMMISSIONER

Gary

COMMISSIONER

IN WITNESS WHEREOF, I DEAN S. MILLER, Interim Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this 28 day of August, 2007.

Dean S. Miller

DEAN S. MILLER

Interim Executive Director

DISSENT: _____

DISSENT: _____

EGJ:BEK:lhm\KL

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