

ORIGINAL



0000016838

RECEIVED

2005 FEB 17

COMMENTS OF S.O.L.I.D. USA, INC.
REGARDING STAFF REPORT ON PROPOSED CHANGES
TO THE ENVIRONMENTAL PORTFOLIO STANDARD RULES
(DOCKET NOS. RE-00000C-00-0377 AND RE-00000C-05-0030)

AZ CORP. COMM. DOCUMENT CONTROL

S.O.L.I.D. USA, Inc. (SOLID USA) is a newly formed Arizona corporation established to deploy commercial-scale solar thermal space heating, air conditioning, domestic hot water, and process heat systems in the U.S. The company is an affiliate of S.O.L.I.D. Gesellschaft mbH of Austria, a company founded in 1991, which has developed and installed hundreds of large solar thermal projects all over Europe and has recently begun developing projects in Canada and China. SOLID USA is currently working on numerous Arizona projects and expects these projects to range in size from 50 kW to 500 kW. (The SOLID USA technology was previously distributed in the U.S. by So Cool Energy, Inc.)

SOLID USA commends the Commission for initiating revisions to the Environmental Portfolio Standard (EPS) and wishes to thank Staff for its hard work in developing its recommendations. We believe Staff has done an excellent job with an almost impossible task, balancing economic and environmental interests in a broad-reaching approach. Nonetheless, SOLID USA believes that slight modifications to the proposed distributed energy requirement are necessary for large-scale solar thermal systems to be deployed in Arizona.

Treatment of Solar HVAC Systems

In October of 2004, the Commission led the country in establishing a Pilot Program for Solar HVAC systems in order to allow five solar HVAC projects to move forward and be categorized as solar electric. The reason for this action was to give solar

Arizona Corporation Commission
DOCKETED

FEB 17 2005

DOCKETED BY

HVAC technologies a chance to begin developing in the Arizona market. These technologies cannot currently compete with non-solar technologies such as wind and landfill gas; therefore, because solar HVAC systems displace electricity, the Commission established the Pilot Program.

Staff proposes that solar HVAC technologies not be permanently treated as solar electric for three reasons: 1) it would not be consistent with the original intent of the EPS to increase clean generation, 2) if solar technologies that displace electricity are all included, solar electric would not develop due to its high cost, and 3) even without this re-definition, the other solar technologies will be included in the distributed generation set-aside.

SOLID USA does not believe that the long-term success of this technology requires it to be classified as solar electric; however, as a solar technology that is new to the market, it does not want to be pitted against solar technologies that currently have achieved market dominance.

Proposed Distributed Energy Requirement Modifications

Due to the history of the utility industry in the U.S., the nature of the system is characterized by centralized power plants. In the era of deregulation, an aging grid, energy security, and environmental concerns, this Commission has openly voiced support for development of a robust distributed energy market, both in this forum and the demand side management forum. In order for this robust market to fully develop under the EPS, SOLID USA believes that the proposal needs to be modified as identified below.

First, SOLID USA believes that the intent of Staff's distributed renewable energy set-aside is intended to encompass non-utility projects only. We would ask for this clarification.

Second, SOLID USA supports a broad definition of distributed renewable technologies as long as they are customer-sited and utilized. We specifically request that solar thermal process heat be included. We believe that this will help the utilities and the State achieve their renewable energy goals by supporting emerging technologies.

Third, even with a broad definition, SOLID USA does believe that a preference for solar in the State with the best solar resource in the U.S. is justified. That preference, however, is currently given only to solar electric. SOLID USA, joined by Industrial Solar Technologies, Inc., recommends that the distributed energy category be divided into three categories: 1) solar technologies already established in the marketplace, specifically solar electric, residential solar hot water, and residential solar pool heating (if added, as proposed by AriSEIA), 2) the other solar technologies, and 3) the non-solar distributed resources. This banding of the distributed energy requirement is consistent with AriSEIA's request to set-aside a certain portion of this requirement as solar electric.

The requirement would then be modified to include the following language:

"In the years 2006-2010, the percent of energy that can be provided from photovoltaic, solar residential hot water and solar residential pool heating shall be limited to 60% of the distributed energy requirement. In the same years, non-solar resources shall be limited to 15% of the requirement."

This suggested revision is made in order to allow solar technologies that did not receive early recognition to establish a foothold in the marketplace before being forced to compete directly with the established distributed technologies. Therefore, the limit would disappear after year five. Otherwise, SOLID USA is concerned that there would be no

incentive for utilities to support various other solar technologies. The less established technologies may eventually be as or more cost-effective than the better known technologies but may not have the opportunity to reach the market due to other factors. We believe that these technologies should receive initial assistance but then be forced to compete with other distributed systems.

We believe that this will provide many advantages to the State of Arizona, both economically and otherwise. For example, in the case of solar thermal air conditioning, this technology addresses the primary reason for peak demand for Arizona utilities – air conditioning load. This technology reduces peak demand on the utilities during the highest peak times by supplying a portion of the energy required for air conditioning with an on-site system powered by the sun.

Solar thermal air conditioning and heating systems have numerous additional advantages. First, they have built-in storage so that they can act as firm power. Second, as the market develops here in the U.S. pricing will continue to decline, as has been demonstrated with other renewable technologies. Third, with commercial-scale solar thermal projects leading the way, it is highly probable that SOLID USA and possibly others will begin introducing a residential version of these systems within the next 2-3 years to make this technology available to address the entire peaking load. Fourth, solar thermal cooling systems require some electric energy and can therefore work in conjunction with small solar electric systems to further deploy distributed solar electric. Fifth, solar air conditioning systems will displace electricity and give further advantages by reducing use of the electrical grid. Finally, solar thermal systems also share additional advantages, such as energy security, with other distributed energy systems.

In addition to solar air conditioning, solar thermal technologies can also provide commercial-scale domestic hot water and process heat, applications which have not been widely deployed in Arizona to date. Further, solar thermal technologies can also provide both commercial and residential space heating, which would be another new application in Arizona.

To adopt these changes would also allow the solar HVAC Pilot Program that this Commission adopted in the fall to achieve its true potential. It will allow the Commission to continue the groundbreaking path it initiated in that Program and join other countries in the world which are putting new emphasis on solar thermal technologies.

We understand that others are proposing to add other renewable resources to the distributed energy category. We would support that addition; however, we ask the Commission to consider either increasing the distributed energy requirement to 30% in 2012 and thereafter to accommodate all of the competing technologies. Many of the in-state renewable energy companies will fall within distributed generation and this will further the economic development envisioned by the Commission. If the Commission does not choose a higher distributed requirement, we ask that the Commission consider a somewhat higher total EPS, as suggested by numerous other groups.

Uniform Credit Purchase Program

SOLID USA supports the establishment of a Uniform Credit Purchase Program with emphasis on solar technologies as a way to insure that the distributed solar energy potential is fulfilled. Standard programs at the utilities for solar photovoltaics and solar hot water have had a tremendous impact on increasing the installation of those systems.

We believe such a program could also assist the other solar technologies to be deployed in Arizona more quickly.

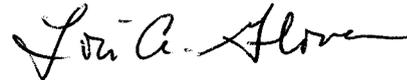
Solar is Arizona's most abundant renewable resource and SOLID USA believes it requires emphasis. SOLID USA's parent company agreed to base the U.S. operations in Arizona due both to the resource and the promise of support by the regulatory bodies in this State based on past history. We hope that promise is fulfilled.

We look forward to the development of a Uniform Credit Purchase Program and would be happy to join the working group to assist Staff in development of the program.

Conclusion

Arizona is continuing to show itself to be a leader in the renewable energy arena. SOLID USA is proud to be part of this effort and wishes to thank the Commission for the opportunity to submit these comments.

Sincerely,

A handwritten signature in cursive script that reads "Lori A. Glover".

Lori A. Glover
President
S.O.L.I.D. USA, Inc.