BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering	Rulemaking 14-07-002 (Filed July 10, 2014)

PROPOSAL BY CALIFORNIA FARM BUREAU FEDERATION FOR NET ENERGY METERING SUCCESSOR TARIFF OR CONTRACT PURSUANT TO JUNE 4, 2015 RULING OF ADMINISTRATIVE LAW JUDGE SIMON

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SUMMARY PAGE

Proposal:

Farm Bureau's proposal is limited to the element of aggregation under a Net Metering Program. Rather than creating a new case, our proposal is to continue aggregation as a supplement to the successor tariff, essentially retaining the current relationship of the aggregation program to the underlying NEM tariff. The nascent nature of NEMA indicates the prudent course is to continue the existing elements.

Cases:

No separate case was developed.

Compliance with Statutory Criteria:

The production agriculture customer segment, who Farm Bureau represents, is not able to effectively utilize on-site generation without the ability to aggregate accounts, thus it is a necessary component to any sustainable growth for this unique segment.

Open Statutory, Policy or Practical Issues:

Because Farm Bureau's proposal is dependent upon an underlying tariff which is yet to be determined, it is not possible to address each element of the underlying components requested for the tariff at this time.

I. INTRODUCTION

Pursuant to the Ruling of ALJ Simon on June 4, 2015, Seeking Party Proposals for the Successor Tariff or Contract ("Ruling") (as subsequently modified for scheduling by the June 23, 2015 Assigned Commissioner Ruling), the California Farm Bureau Federation ("Farm Bureau")[1] provides a limited but important proposal, which effectively accounts for the operations and opportunities of net metering for agricultural customers. Specifically, Farm Bureau proposes a structure for the aggregation of electric accounts under net metering to be used in conjunction with the successor tariff or contract adopted in this proceeding.

Consistent with the treatment of the option for Net Energy Metering Aggregation ("NEMA") as an add-on or supplemental feature for the construct of any successor tariff, Farm Bureau recommends retaining NEMA as a supplement to an appropriate successor tariff. Within the requested structure of how proposals are to be submitted,[2] NEMA is characterized as an "Additional Element" to be applied to an underlying tariff design. Additionally, since the assessment was made that there is insufficient available data to evaluate the costs and benefits of NEMA in the Public Tool,[3] the most reasonable course of action is to retain the existing approach for NEMA of building upon the underlying NEM tariff. Therefore, Farm Bureau's recommendation for NEMA is structured to operate as

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[1] The California Farm Bureau Federation is California's largest farm organization with approximately 57,000 agricultural and associate members in 53 county Farm Bureaus. California farmers and ranchers sell $44.7 billion in agricultural products annually, accounting for 9 percent of the gross state product, and hundreds of thousands of jobs in California. Farm Bureau's members expect to pay in excess of one billion dollars for their electric service.

[2] June 4 Ruling, page 9.

[3] Attachment 1 to Ruling of ALJ Simon dated June 4, 2015, Setting Specifications for the Final Version of the Public Tool and Accepting into the Record the Final Version of the Public Tool, page 9.

an overlay to other more extensive proposals for successor tariff/contracts anticipated for introduction in this proceeding.

Farm Bureau has been engaged from the outset of this proceeding in the discussions regarding the development of the successor tariff and anticipated utilization of the Public Tool for development of its proposal. However, as the complexity of the Public Tool along with the increased focus on residential rate structures became evident, a different approach became necessary. Farm Bureau's offer of NEMA as a supplement to any underlying tariff is consistent with the current treatment for aggregation within the net metering framework, as well as the direction provided in the Ruling to address NEMA. As a result, a direct and status quo approach is recommended for estimation of the impact of aggregation.

Our recommendation is to continue the existing NEMA parameters building upon whatever underlying NEM framework is adopted as a successor tariff or contract. Because NEMA would be additive to the successor tariff, at this stage it is difficult to assess what type of adaptations to a new tariff are needed. It is recognized, however, as the successor tariff is developed some realignment might be needed. With Farm Bureau's focus on the successor tariff at this stage directed at aggregation, the provisions in the various ALJ Rulings regarding proposals reliant upon results of operation of the Pubic Tool[4] made clear it would not be feasible to submit a proposal with results from the Public Tool. The July 20, 2015 ALJ Ruling clarifies that between six and nine model runs would be necessary in order to meet the specifications set out.[5] In evaluating the options

[4] June 4, 2015 Rulings and July 20, 2015 Ruling.
[5] July 20, 2015, Administrative Law Judge's Ruling Providing Further Instructions for Parties' Proposals and Accepting into the Record Certain Updates to the Public Tool.

at this point, Farm Bureau believes it is neither prudent nor appropriate to perform extensive manipulations of the model, which are largely driven by changes in the residential rate structures, to assess the viability of continuing the NEMA opportunities. Because the underlying net metering program will dictate most elements, it is appropriate and logical to continue aggregation as a supplemental component, particularly in light of its limited role in the overall net metering program. This approach is further supported by various utility notices and requests as more specifically delineated in the proposal below.

II. FARM BUREAU'S PROPOSAL FOR AGGREGATION IS BASED ON THE STRUCTURE WHICH CURRENTLY EXISTS

A. At a Minimum the Existing Proven Success of NEM Aggregation Should be Continued as Part of Any Successor Tariff or Contract

The implementation of NEMA has been relatively recent, and although the mechanics of its implementation are still evolving, the volume of applications and interest in it indicate a strong demand for the program. Public Utilities Code section 2827(4) sets out the statutory parameters for NEMA, which parameters were then definitively made operable through Commission Resolution E-4665 for SCE and SDG&E and Commission Resolution E-4610 for PG&E, with corresponding implementing Advice Letters of the three utilities for the program.[6] In previous rounds of comments, Farm Bureau has reflected upon the important opportunity aggregation provides to agricultural customers, pointing out that aggregation has made private investments in renewable energy sources substantially feasible for that customer segment. Aggregation for agricultural customers equalizes opportunities for on-site generation, as it solves the challenge of disparate meter configurations not faced by other types of operations. The constraints faced in

[6] The implementing advice letters are: SCE AL-2952-E, SCE AL-2952-E-A, SDG&E AL-2529-E, SDG&E AL-2529-E-A, PG&E AL-4315-E and PG&E AL-4305-E-A.

finding workable locations to site renewable projects which do not impede operations has been resolved favorably in many instances through aggregation. There are many indicators of the success and interest of the program. As the attached two recent articles indicate, a range of agricultural businesses have invested in renewable energy because of the program. Orchard, vineyard, dairy owners have all found a way for NEMA to work for them.[7] In addition, a recent ex parte notice submitted by PG&E[8] included a letter with information that highlights customers' adoption of renewable projects with the implementation of NEMA:

> As it stands today, the NEMA program is PG&E's second most utilized net energy metering program, next to the single account program. PG&E's NEMA program has nearly 1000 applicants and is growing by roughly 10 applications per week, with arrangements of up to 153 aggregated accounts and single customers installing multiple 1 MW NEMA arrangements on various parcels within a single farm enterprise.

As much interest as the program has generated, it is nevertheless recognized that it will be dependent upon the underlying structures of the tariff that evolves and will most effectively continue like the supplemental program currently operated.

B. Key Elements of NEMA to be Retained

There are several elements of NEMA that have created a workable solution for customers to pursue renewable generation and should be continued in a successor tariff/contract. They include:

1. Aggregation of Accounts Across Multiple Parcels of Property. Currently parcels which are contiguous or adjacent to one another are eligible for aggregation of

[7] Ag Alert May 6, 2015 and Fresno Business Journal http://www.thebusinessjournal.com/news/agriculture/ 18099-dairies-see-bright- future-big-savings-in-going-solar June 15, 2015. Copies of both articles are also attached to this proposal.
[8] July 20, 2015 ex parte notice in R. 14-07-002.

metered accounts on the parcels. The type of parcel configuration that would be considered contiguous appeared to be resolved when NEMA was implemented, but as is true with any new program unanticipated situations arise requiring resolution. For example, PG&E's letter of July 15, points to the need to address easements that intersect parcels at various points. Because agricultural properties sustain countless easements for infrastructure, it is an important consideration and one that requires consistent treatment. The program should be allowed to evolve in a manner that builds on developing knowledge of the circumstances that will be faced.

In addition, we recommend that as this process moves forward whether there are technical drivers that affect the efficacy of the contiguous requirement be addressed. An appropriate review may provide direction of instances when it would be appropriate to allow aggregation without an adjacency requirement. The recommendation, nevertheless, is that in the near term the status quo be maintained with a time certain to examine the program in greater detail to address various requirements such as contiguousness or other requirements.

2. Common Ownership and Operation of Accounts. The ability to aggregate what is under common operation by an entity should be continued. Because there are a variety of reasons that names across electric accounts may vary, there are ministerial resolutions of issues that may arise. The fundamental ability to group the accounts to offset usage should not be waylaid by simple nomenclature. Such an approach should be continued.

3. Reasonable and Known Billing Charges. Uniform billing service fees were established in the course of review of the implementing advice letters at the outset of the

implementation of NEMA, with the opportunity to request changes to the fees by the utilities. Recent filings by Southern California Edison and San Diego Gas and Electric Company validate the need to maintain the continuity of NEMA with limited change until further information can be obtained from the utilities. Both Edison and SDG&E submitted requests for six month extensions to file Tier 3 Advice Letters pursuant to Resolution E-4665.[9] In the case of Edison's request, it may not be until January 2016 that any potential billing revisions associated with NEMA arise. Edison requested the time to collect true-up data, SDG&E to develop more representative data. Currently, then, compliance with the necessary information for a key component of assessing the costs and benefits relative to the program is in abeyance until after the date anticipated for a determination of the successor tariff. That unknown billing component to NEMA provides an additional sound basis for continuing the program as is for the time being, with necessary adaptation only as substantive information is obtained.

4. Rational and Streamlined Offset of Usage for Credits. A very specific methodology was adapted for purposes of the NEMA program to ensure costs and benefits were properly accounted for with respect to the generation and usage.[10] How the crediting mechanism will operate under a new tariff will be dependent upon the tariff ultimately adopted, since the aggregation would act as an overlying program to the adopted tariff under Farm Bureau's proposal. As with other aspects of this program, information gathered continues to provide potential improvements. For example, depending upon the underlying program, it may be appropriate in some instances to

[9] Edison's extension request to PUC Executive Director, Timothy Sullivan, was dated July 16, 2015 and SDG&E's was dated July 22, 2015. Edison's request was granted on July 22, 2015. SDG&E's is pending.
[10] See for example, Special Condition 2b of the PG&E NEM tariff.

adjust the true-up period so that the credits are able to be applied earlier in the annual period to reduce large swings between payments for energy and later credits.

Concurring with PG&E's willingness to discuss opportunities to improve customers' NEMA experience,[11] Farm Bureau too is committed to focusing on a limited aspect of the net metering tariff/contract and how to develop an effective mechanism to meet a small and unique market through aggregation of accounts.

C. Consideration of Changes to NEMA in the Future

Although there is some information beginning to become available regarding the operability of NEMA, most information revolves around putting the systems in place and making them effective components of the business operation. There are high expectations about the efficacy, but limited documentation to determine what does and does not work beyond the initial interconnection issues. The PG&E letter addresses some issues which have arisen. There are likely changes that ought to be considered which would optimize the program from both a customer and utility perspective, but making that determination before the successor tariff is implemented may be premature. Pragmatism dictates that the existing program for NEMA remain intact until it can be assessed against changes arising out of this proceeding.

At this stage, Farm Bureau recommends an approach that makes fundamental changes to the program only after collection of relevant data and the opportunity to review the information. In the near term, NEMA should be continued as it is, with necessary adaptations to any successor tariff.

[11] PG&E Ex Parte dated July 20, 2015, with July 15, 2015 letter attached.

III. FURTHER DESCRIPTION OF PROPOSAL FOR COMPLIANCE WITH RULING

A. Required Elements for Evaluation (Pages 8 to 9 of Ruling)

The Ruling requests that any proposal include an explanation of compliance with several specific elements.

1. Contract or Tariff. The NEMA program will be adaptable to either a contract or tariff structure. As a supplemental program, it should easily be adapted to the underlying construct, just as the program operates now.

2. Tariff Description and Netting. Because we are assuming that NEMA would be additional to whatever is adopted, there would be no unique descriptions about the underlying tariff or the netting principles.

3. AB 327 Elements. For the AB 327 elements, any realistic growth for agricultural customers, however the growth is ultimately described, dictates NEMA be included. What gave rise to the statute, and what the Commission recognized as well, is the unique operational attributes of agricultural entities in utilizing self-generated renewable power. To properly facilitate investments in renewable power for this segment, aggregation is an essential component to the new tariff.

4. Costs and Benefits. In assessing costs and benefits of the contract or tariff, the underlying attributes will be most determinative of how such assessments are made. As a small component of the larger tariff/contract structure, NEMA will have limited impact on the overall analysis. It is evident from the requirements related to use of the Public Tool, that residential rates and customers are the significant drivers for determinations about the contract/tariff structure. However, it is the non-residential sector which largely drives NEMA. In comparison to residential systems, the non-residential sector imposes

less costs and greater benefits. As the Energy Division Staff Paper instructs,[12] "For instance, because NEM systems tend to reduce net energy consumption by a greater percentage than they reduce peak demand, the cost impact of non-residential systems (which have large demand charges) is lower than for residential systems." A program like NEMA, which incents non-residential systems, provides for a better balance between costs and benefits on a total system basis. In addition, from an overall cost perspective, consolidation of on-site generation into a single connection point reduces costs for interconnection. Such consolidation allows the utility to more effectively manage the system and reduces implications of multiple connections.

B. Safety and Consumer Protection Issues

The Ruling (page 10) requests a description of whether safety issues are addressed in proposals. NEMA does have positive safety implications. Although the types of customers whose operations would support aggregation are not likely to place separate renewable facilities at all meters available to be aggregated, it is likely multiple connections would otherwise occur. Focusing implementation and connection into a single connection, rather than connecting at numerous points along the system, translates to fewer instances of contact with the system. Instead, the number of connections which must be installed and managed can be reduced providing fewer contacts with the system.

IV. CONCLUSION

Aggregation of accounts has been significantly embraced by the agricultural community, even during what is otherwise an ever-increasingly difficult period for effective

[12] June 4, 2015, ALJ Ruling Accepting into the Record Energy Division Staff Papers on the AB 327 Successor Tariff or Contract, Attachment 1, Energy Division Staff Paper on the AB 327 Successor Tariff or Contract, pages 1-28 to 1-29.

operations due to the ongoing drought. Even in this early state of the program, the significance of the investments in renewable energy spurred by aggregation is evident. It is important that as the successor tariff is crafted, NEMA remain a viable element of net metering.

Dated: August 3, 2015

Respectfully submitted,

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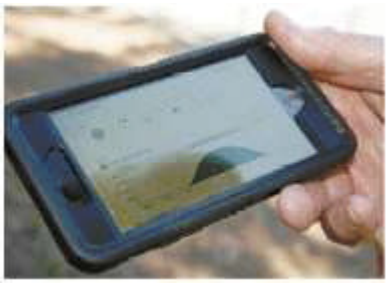
ATTACHMENTS

AgAlert
THE WEEKLY NEWSPAPER FOR CALIFORNIA AGRICULTURE

Farmers participate in net energy metering

Issue Date: May 6, 2015
By Christine Souza

Walnut grower Jack Gilbert stands next to the 105-kilowatt photovoltaic system he had installed at his ranch near Wheatland last fall. Gilbert uses the state Net Energy Metering Program to offset solar energy generated with electricity used.
Photo/Christine Souza



Gilbert monitors the number of kilowatts generated by the solar panels at various times of day with his smartphone
Photo/Christine Souza

Jack Gilbert monitors equipment installed for use with his solar photovoltaic system and compares the amount of electricity used at his residence with what is generated on the farm.
Photo/Christine Souza

Farmers, ranchers and other businesses are participating in the state Net Energy Metering Program so they can offset energy generated from a renewable-energy facility at one meter and credit it against other meters.

Since last year's approval by the California Public Utilities Commission, customers of Pacific Gas and Electric Co., Southern California Edison and San Diego Gas and Electric Co. have been able to aggregate electrical accounts, to save on their energy bills.

Gopal Shanker, president of Napa Valley-based Récolte Energy, a renewable energy consulting firm, said net-metering systems are being installed at a very steady pace in California.

"To the extent that (farmers) have any kind of utility bill, going solar is one thing that is economically beneficial, because even though everything else might be tanking, electricity bills continue to increase," said Shanker, who develops renewable energy projects using solar photovoltaic, fuel cell and energy-storage systems. "Having net-metering systems installed is definitely a hedge against escalating electricity prices."

Karen Norene Mills, California Farm Bureau Federation associate counsel and director of public utilities, said under aggregation, a farmer can locate the installation in a location that makes the most sense for his or her operation, such as on unused land, even if it's not next to the meter that has the most electricity use.

However, Mills said, "depending upon the location and complexity of the project, various steps in the process may require additional time for review and assessment by the connecting utility, resulting in longer time frames than may have been anticipated."

Walnut grower Jack Gilbert has implemented net energy metering at his farm near Wheatland, and last October installed a photovoltaic system that uses an array of solar panels to absorb and directly convert sunlight into electricity.

"We are ready to go for the summer," Gilbert said. "Where this will be operating is for our wells. We use electricity for pumping from deep wells, particularly in a year like this when we are suffering from drought. Or, we use it to boost the pressure for water that is delivered from the surface system."

While Gilbert's electricity bill is much less during normal weather, the installed 105-kilowatt system was sized, he said, "to cover the cost when we are pumping out of the ground, so under normal rain conditions we should have a surplus."

A portion of the system also offsets the cost of energy for his residence, as well as for an electric vehicle.

"We are also putting solar on the roof of a new building that we bought for Gilbert Orchards, so we're kind of into it," Gilbert said. "We were able to combine all of the meters on land that is contiguous."

Gilbert isn't alone. One of his neighbors has invested in solar with the installation of a PV system, and in Mendocino County, winegrape grower Chris Nelson of Nelson Family Vineyards has also adopted net energy metering. His family's solar installation went online April 21.

West of Chico along the Sacramento River, Les Heringer, a farm manager with M&T Ranch, said the farm's solar installation was installed in response to a variety of benefits that exist for people interested in net metering.

"We have about 35 electric accounts here on the ranch—pumps, an almond (processing) plant, shop, three or four wells—just a variety of different accounts that we are aggregating into one solar field," Heringer said. "There's depreciation benefits, tax benefits, a variety of benefits for farming operations to put in solar, especially now that we are able to aggregate accounts; it is all good, all positive."

For many agricultural customers, the true-up for the installation cost can be within the first year, in six years or in 10 years, depending on a customer's financial situation, Shanker said. For M&T Ranch, Heringer said, the operation expects the solar installation to be paid for in just a few years.

"When you put in a solar field, you want to be slightly under capacity so you are not generating more power than you are using. That is when you get the best return on your investment," Heringer said. "I think this would be good for anybody who has contiguous parcels with a variety of accounts."

Growers participating in net metering will have meters read each month, but under an agreement with their utility company, likely may not be billed for electricity used until the anniversary of the agreement a year later. Ratepayers will be billed for any net electricity consumed.

"There really isn't a downside to this," Heringer said. "I would think, now that ag is able to aggregate on contiguous parcels, there really is no reason why people wouldn't be doing this. It used to be that you had to have one solar field for every account. We would have had to have 35 different fields on the ranch. The Legislature passed a bill allowing the aggregation of accounts on parcels that are contiguous."

Aggregated net metering resulted from a resolution approved by the California Public Utilities Commission in September 2013 under a framework established by Senate Bill 594, which passed in 2012. Previously, power generated from an on-site renewable facility could not be counted against other meters for utility customers, meaning that farmers had to install a separate facility for each meter.

The state's program will end when capacity of net-metered generation exceeds 5 percent of an electric utility's aggregate demand or by July 1, 2017, whichever happens first. In addition, the federal investment tax credit equal to 30 percent of the total cost of renewable installation expires at the end of 2016.

(Christine Souza is an assistant editor of Ag Alert. She may be contacted at csouza@cfbf.com.)

Dairies see bright future, big savings in going solar

Published on 06/15/2015 - 11:46 am
Written by George Lurie

Brian Medeiros, owner of Medeiros and Son Dairy in Hanford, is a big believer in the power

Visalia-based CalCom Solar installed a 440-kilowatt solar power generation system at Anderson Orchards in Coalinga last year.

of the sun.

Honored as Kings County's Dairy Family of the Year in 2013, Medeiros is in the process of installing a 1-megawatt solar power system on his 1,400-acre South Valley dairy farm.

The installation, which will be completed later this summer, is being put in by

CalCom Solar, a Visalia-based company that designs and builds solar projects for agribusinesses and water districts.

"CalCom is making solar energy work for us — both operationally and financially," Medeiros said.

Beginning in the third quarter of 2015, the dairy, which milks 2,450 cows, expects to significantly lower operational costs, saving about $320,000 annually on utility bills with the new solar system.

Medeiros is paying just more than $2 million for the new system but believes going solar will save his business more $8 million in utility costs over the next 25 years.

Running a successful dairy "takes constant evaluation and assessment to ensure our operation and team is working as efficiently as possible," he said. "We're extremely focused on improving efficiencies across the entire farm. Solar is one of those crucial tools that makes a lot of sense. It helps us to reduce our energy costs and improve our bottom line."

"By deploying over a megawatt of clean, solar-powered generation, Medeiros and Son will take a huge step towards becoming a net-zero, sustainable dairy," said Nic Stover, CalCom Solar's CEO.

Founded in 2012, CalCom currently has 39 employees. In the past three months, Stover said the company has helped nine dairies around the Valley go solar — "six in Tulare County, two in Kings County and one in Madera County."

With the exception of the Madera County installation, all of CalCom's recent projects have been 1 megawatt, which is as large a solar power-generating system as dairies are allowed to build in California by local utilities Pacific Gas & Electric Co. and Southern California Edison.

While the permitting process can take as long as six to nine months, Stover said a 1-megawatt installation, when operational, produces enough energy to power 250 residential homes.

"The savings in going solar can be huge for these dairies," said Stover, whose system's panels are designed to actually move throughout the day to track the sun. The movement makes the panels more efficient — and easier to clean.

Around the Valley, a growing number of dairymen are tapping the power of the sun.

Andy Zonneveld of Zonneveld Dairy in Laton said he is considering adding a solar system at the Fresno County dairy.

At his Zonneveld Farms diversified ag operation in Hanford, CalCom is already in the process of installing a 1-megawatt system that Zonneveld says "should pay for itself in four and a half to five years."

And the availability of a 30-percent federal tax credit for solar installations, due to expire at the end of 2016, makes going solar "a little more attractive," Zonneveld added.

"Pumping costs (at the farm) are increasing because of the drought and utility costs also seem to be constantly rising," Zonneveld said. "We think [going solar] will provide a good return on investment."

Stover said that over the next few months, CalCom Solar has contracts to break ground on 12 new solar projects at area dairy farms.

"We have multiple clients putting in additional systems — second- and third-phase projects — because their [potential] savings are so substantial and they are also seeing that the price of solar

has come down pretty dramatically in recent years," he added.

Lately, area financial institutions are also looking very favorably at lending for ag-related solar projects.

Farm Credit, which has branches across the Valley, is currently offering a solar lease program that allows farmers to positively cash flow solar installations and also gives the operators the option of owning the systems at the end of the lease period.

Most of CalCom's systems come with a five-year maintenance and monitoring package — and the panels themselves, manufactured by Upsolar, have a 25-year warranty.

Medeiros said going solar would allow his business to "improve efficiencies" and reduce peak electrical demand on the dairy's fans, chillers and pumps.

And the new photovoltaic array is being installed on what Medeiros characterized as "once unproductive ground."

"By being based in Visalia, we're able to service our Valley customer base very effectively," Stover said.

CalCom, in partnership with another company called Wexus, is currently in the process of developing reporting tools that Stover said will help dairies and other ag operations better manage energy and water usage.

"Understanding the agricultural sector's special requirements, combined with state-of-the-art agriculture energy systems, analysis software and related tools, can help ensure precise right-sizing of clean energy solutions that work to ensure smart, efficient energy and water use, especially at a time when water is increasingly rare and precious," Stover said.