

THE WIRE

A Quarterly Publication for CoBank Electric Customers
December 2017 • Volume 1 Issue 4



Reauthorizing the Farm Bill

By BRIAN CAVEY

Senior Vice President
for Government Affairs,
CoBank



With the current Farm Bill set to expire on September 30, 2018, a new Farm Bill is currently under development in Congress, and with it comes an opportunity to address needed modifications to the current agricultural and rural infrastructure programs. Although the title of the bill references specifically agriculture, it will have an impact on all of rural America, including electric co-ops and other rural infrastructure providers.

So what can we expect from the 2018 Farm Bill? The Senate chairman, Pat Roberts of Kansas, has said he expects the bill to be "evolutionary, not revolutionary." Whereas the 2014 Bill brought significant policy changes, a wholesale rewrite seems unlikely at this time.

But there are still challenges that the lawmakers will face. The biggest is financial; the federal budget is tight,

continued on page 6



How Distributed Generation Is Changing the Game for Cooperatives

Amid technological improvements and dropping prices, mainstream consumers are installing solar or other renewable energy systems on their property in greater numbers than ever. For the nation's electric cooperatives, that means distributed generation (DG) programs, once an afterthought, are rising to the forefront of conversations on costs, rates and the future role of co-ops in serving customers.

For insights, *THE WIRE* turned to Vin Nitido, CEO and general manager of Trico Electric Cooperative near Tucson, Arizona, and Mike Bash, vice president and CFO of Connexus Energy, located north of Minneapolis. Nitido and Bash reflect on how DG is affecting their ability to charge their member-customers fairly, what they're doing about it, and whether self-generators might one day abandon the grid entirely.

THE WIRE: Why has distributed generation become such a major issue for cooperatives in recent years?

Vin Nitido: Our state was a very early adopter of the net metering concept. Because our cooperative is regulated by the Arizona Corporation Commission, we're subject to net

continued



metering rules – our members can install distributed generation, use it to offset their own load, and then sell the excess back into the grid. Initially, the price we paid was the avoided retail rate, which in our case was 12.16 cents per kilowatt hour.

Because the cost structure of co-ops tends to make our rates higher than those of investor-owned utilities, we're very attractive to those who want to install solar. Our rates are probably 20 percent higher than those of Tucson Electric Power. As a result, at one point, we were doing as many as 150 solar interconnections a month. For a co-op with 40,000 members, that's an awful lot. And when members with DG sold their excess power to us at the retail rate, we couldn't recover our costs.

We recover all of our fixed costs – for generation, transmission and distribution – through a volumetric rate for the power a member uses. And when members with DG offset that volumetric rate and sold

The goal is to have the price of the power from members be competitive with the cost of power we would otherwise purchase in the market.

their excess power to us at the retail rate, we couldn't recover the costs of building, serving and maintaining our systems. That has resulted in a cost shift of more than \$2 million a year. For a cooperative whose margins tend to be in the \$5 million to \$6 million range, that's significant. About half

of it gets passed through to other non-solar members; the other half is not recovered.

Mike Bash: It has become an issue for us because we know from surveying our members that they want renewable energy. It's also an issue because of the way our rates are structured. Suppose a typical bill is \$100. Of that, \$70 is for generation and transmission and \$30 is for distribution through the cooperative. We get \$13.50 as a basic monthly service charge, and that remaining \$16.50 is recovered in the volumetric sale of energy. But if we don't sell energy because a member is self-supplying via solar or wind, we're in the same boat with Vin where we can't recover our costs.

THE WIRE: Have you done anything with your rate structure to respond to the challenges of DG?

Bash: We now charge members with DG a grid access fee that ensures they pay a

continued

Just a couple of years ago, large-scale solar was in the range of 8 to 9 cents per kilowatt hour. Now it's in the range of 3.5 to 4 cents. And the cost is only going to continue to come down.

fair share of their costs for the grid. The cooperatives in our state worked hard with the Minnesota legislature to come up with a way to do this, so that whether you're a rural cooperative or a suburban one, with different population densities and different cost structures, you can charge an appropriate grid access fee. The legislation passed in 2015, and we put our rate in place in 2016.

Nitido: When our interconnection rates started to ratchet up and we realized we had to do something, we filed a rate case with the Arizona Corporation Commission. We succeeded in moving away from a purely volumetric rate for compensating members who have solar and sell power back to us. Once members have offset their own usage, anything they push back into the grid is no longer paid for at the retail rate. Instead of paying 12.16 cents, we now pay 7.7 cents. That took effect last March. We can further reduce that rate by at least 10 percent a year until we reach our avoided cost for the DG power we buy. The goal is to have the price of the power from members be competitive with the cost of power we would otherwise purchase in the market.

We also increased the fixed monthly rate from \$15 a month to \$20. But ultimately we'd like to add a demand cost to our rate structure. That would provide an incentive for members to have storage for DG and to be more energy efficient. To the extent they can reduce their daily load, that benefits them, their neighbors and the entire system. We've agreed to provide outreach and education to our members about that, and then we'll address it in our next rate case.

THE WIRE: How have your members responded to these changes?

Bash: I think that members who have DG don't like the changes we've made, and it's certainly not popular with residential rooftop installers that market to our members, because it makes it more difficult for them to sell the economics of having rooftop solar. But our new rules survived a challenge to the Minnesota Public Utilities Commission. So we have the commission's support as well as legislative support. And we are member owned; our members, through our board, have said this is the right thing to do.

THE WIRE: How cost-competitive is DG today compared with your wholesale power cost?

Nitido: It's becoming increasingly cost competitive. In part that's still because of the federal and state tax credits. But even without those, DG costs are coming down. Just a couple of years ago, large-scale solar was in the range of 8 to 9 cents per kilowatt hour. Now it's in the range of 3.5 to 4 cents. And the cost is only going to continue to come down. The equipment is getting more efficient, and there are starting to be economies of scale as more and more solar is installed.

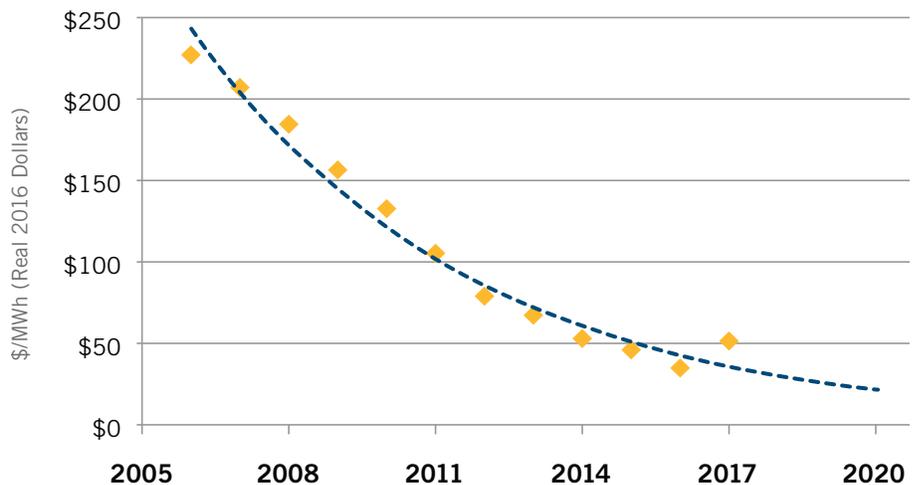
Bash: In Minnesota, the cost of solar still isn't close to our avoided cost, which will be \$24 per megawatt hour for 2018. Solar is going to be in the \$60 to \$70 range.

THE WIRE: What about potential load loss from DG? Is that a problem?

Bash: In the near- to mid-term, it's a minor concern. Right now, we have 76 members – out of 130,000 – who have renewable generation systems. Because

continued

Observed and Forecasted Levelized PPA Prices for Utility-Scale Solar



Source: Lawrence Berkeley National Lab



we have relatively low electric rates, it's hard for members to justify doing some DG projects.

Nitido: Long-term, that could become an issue, and looking ahead causes me to think about what the roles of cooperatives and utilities will be in the future. To the extent that energy storage and cost-effective solar take hold, that really could change our business model. When we can no longer depend purely on volumetric energy sales, we'll have to become more service oriented, as an expert resource to help our members make good energy choices. Who's better situated than co-ops to take advantage of the changes in the market? We're small, we're out in the community and we pride ourselves on our connection with our member owners. We're really in a good position.

THE WIRE: Do you have any concern that DG could eventually lead to members going off the grid and relying solely on self-generation?

Bash: Storage is the big problem. Battery systems are getting smaller, but until the prices plummet, they're not a concern. We're a far more economical source of electric energy than generating your own

and storing it. And I think there are going to be advantages to staying on the grid even if you are able to be energy independent. Reliability is one component. And moving forward, the grid is going to let you tap multiple renewable resources. You can tap into wind power that's generated hundreds of miles away.

Nitido: I have a hard time envisioning a world where customers on a large scale just leave. I think there's always going to be a need for some connection to the physical grid. Still, the pace of technology is really incredible these days, so I do think we need to be mindful of that as a possibility. Our model really needs to be a service model, not a sales model so much. We can't be dependent on selling an increasingly large amount of energy. I think our industry is going to be one where we have to be viewed as experts, and the provider of choice with ideas and services that will help you manage your energy in the best way. ■

This Issue's Experts



VIN NITIDO is chief executive officer and general manager of Trico Electric Cooperative, serving 45,000 members

over a 3,600-square-mile service area surrounding Tucson, Arizona. Prior to joining Trico in 2009, Nitido served as vice president, general counsel and chief administrative officer of UniSource Energy Corporation and its principal subsidiary, Tucson Electric Power Company. Nitido earned a law degree from the University of Miami and studied economics at the University of Connecticut.



MIKE BASH is vice president and chief financial officer of Connexus Energy, a \$260 million cooperative serving

132,000 members in seven counties in the north metro area outside Minneapolis. A board member of the Minnesota Rural Electric Trust and a frequent speaker at national and regional cooperative meetings, Bash teaches finance and capital credits for new Minnesota electric cooperative directors. He holds an MBA from the University of Minnesota, Minneapolis, and studied economics at St. Olaf College.

An Outside Expert
Looks at DG:

“It Blows Up the Entire Model”

As CEO of the National Renewable Cooperatives Organization, Amadou Fall has a unique perspective on the sea changes that distributed generation is bringing to the power industry. We spoke with him about what developments he expects to see in the coming years.

THE WIRE: How does distributed generation change the equation for electric cooperatives providing power to their members?

Amadou Fall: It blows up the entire model. In terms of cost as well as feasibility and ease of implementation, DG is becoming something more and more folks can contemplate doing. And whether it's rooftop solar or community solar where individual members invest in a larger solar installation, it puts the current model for revenue recovery in jeopardy and affects a cooperative's capacity to maintain the investments put in place to provide traditional service. It also makes it much more difficult to do any kind of long-range planning. How can you invest capital in an asset with a 30- to 40-year lifespan when you don't know what your future load will be?

THE WIRE: How important are improvements in battery storage in determining what comes next?

AF: The ability to store energy from distributed generation affects every part of the system. A co-op might use stored excess power to support new neighborhoods on the grid while postponing capital investments. And for homeowners, whose rates increasingly are driven by demand charges,



stored power can hold down peak usage and result in lower demand charges.

THE WIRE: Does the availability of robust communication technologies have an impact on how these changes play out?

AF: The software communication side is critical, because the amount of data that comes through today's systems is immense. In this industry, we're used to dealing with intervals of 15 minutes – that's what our interval meters measure. Now a lot of things happen in seconds. This is where co-ops could play a vital role, as the entity that integrates communication within a rapidly changing electrical system.

THE WIRE: How will the increasing prevalence of DG change the relationships of electric cooperatives with their members?

AF: Most people who have DG will remain on the grid, but for many that will be a way to ensure reliability and continuity of service. We may see almost a reversal of the current system – with the grid becoming the backup for members' own systems. I believe the industry has a lot of tools to enable it to respond to this

changing landscape. But many steps will have to be taken, in terms of business models, skill sets and other factors, if a co-op is to remain the preferred power supplier for its members. ■



AMADOU FALL has been chief executive officer of the National Renewables Cooperative Organization, which promotes and facilitates renewable energy

resources for cooperatives, since 2008. Throughout his career, Fall has worked in a wide variety of positions in the energy industry, including electrical engineering, project management, energy trading, asset management, congestion analysis and management of trading operations. He holds a master of science degree in engineering management from Drexel University and an undergraduate degree in electrical engineering from the New York Institute of Technology.

and the new tax bill will exacerbate that reality. There's also the fact that 2018 is an election year. Seven of the ten Senate Ag Committee Democrats are up for election, which might make them more sensitive to political pressure, although mid-term elections do tend to favor the party out of the White House. The Trump Administration's positions on agricultural policy are still largely unknown, although their trade efforts, mostly focused on protectionism, could put agribusiness at risk.

The Chairman of the House Agriculture Committee, Bob Goodlatte of Virginia, is predicting the Farm Bill will be on the House floor in the spring of 2018, but debate on funding the government through 2018 may slow the process. The timing of the Farm Bill is subject to other priorities of the Senate and House leadership, such as welfare reform.

No matter when it happens, CoBank will be supporting the efforts of our customers,

including electric co-ops, to make the Farm Bill work better for their industries and rural communities. Specifically, we will support efforts to advance the successful deployment of rural broadband. And for CoBank borrowers that depend on dairy and cotton producers, it will mean supporting their efforts to rework their programs to provide the vital safety net for producers going through sustained tough time of low prices.

Perhaps most importantly, we would oppose any restrictions on Farm Credit lending authorities. Banking trade associations have pushed an agenda that would reform the Farm Credit System that could be potentially devastating for the customers and industries we serve. We feel that the Farm Bill should support policies that seek to encourage infrastructure investment in rural communities, as CoBank and the Farm Credit System have long done. The most critical thing the Farm Bill can do is to help us serve the cooperatives that are the lifeblood of rural America. ■

CoBank 2018 Webinar Series

**SAVE
THE
DATE**

Beyond dependable credit and financial services, CoBank seeks to help our customer-owners by providing thought leadership, high-quality information and timely insights on a number of energy-related topics that may impact you and your organization. Our slate of webinars for 2018 includes:

Tuesday, January 16 **Electric Vehicles**

- Taylor Gunn, CoBank Lead Energy Analyst
- Mike McBride, CEO, Gunnison County Electric Association

Tuesday, March 13 **Broadband Case Studies**

- Jason Bronec, CEO, Delta-Montrose Electric Association
- Hamid Vahdatipour, CEO, Lake Region Electric Cooperative
- Kathryn McKenna, COO, Valley Communications Association

Tuesday, May 15 **Cooperative Legal Update:
Broadband, ROW, Capital Credits**

- Ty Thompson, Deputy General Counsel, NRECA

Tuesday, July 17 **Evaluating Debt Structures**

- Bill Conway, Managing Director, CC Capital Advisors

Friday, September 28 **Interest Rate Update**

- Robert Eisenbeis, Chief Monetary Economist, Cumberland Advisors

Tuesday, November 13 **Battery Storage**

- Taylor Gunn, CoBank Lead Energy Analyst

All webinars will be held at 11:00 AM Eastern time.

For more information or to register, please contact your CoBank Relationship Manager.



800-542-8072
www.cobank.com



A Touchstone Energy® Cooperative