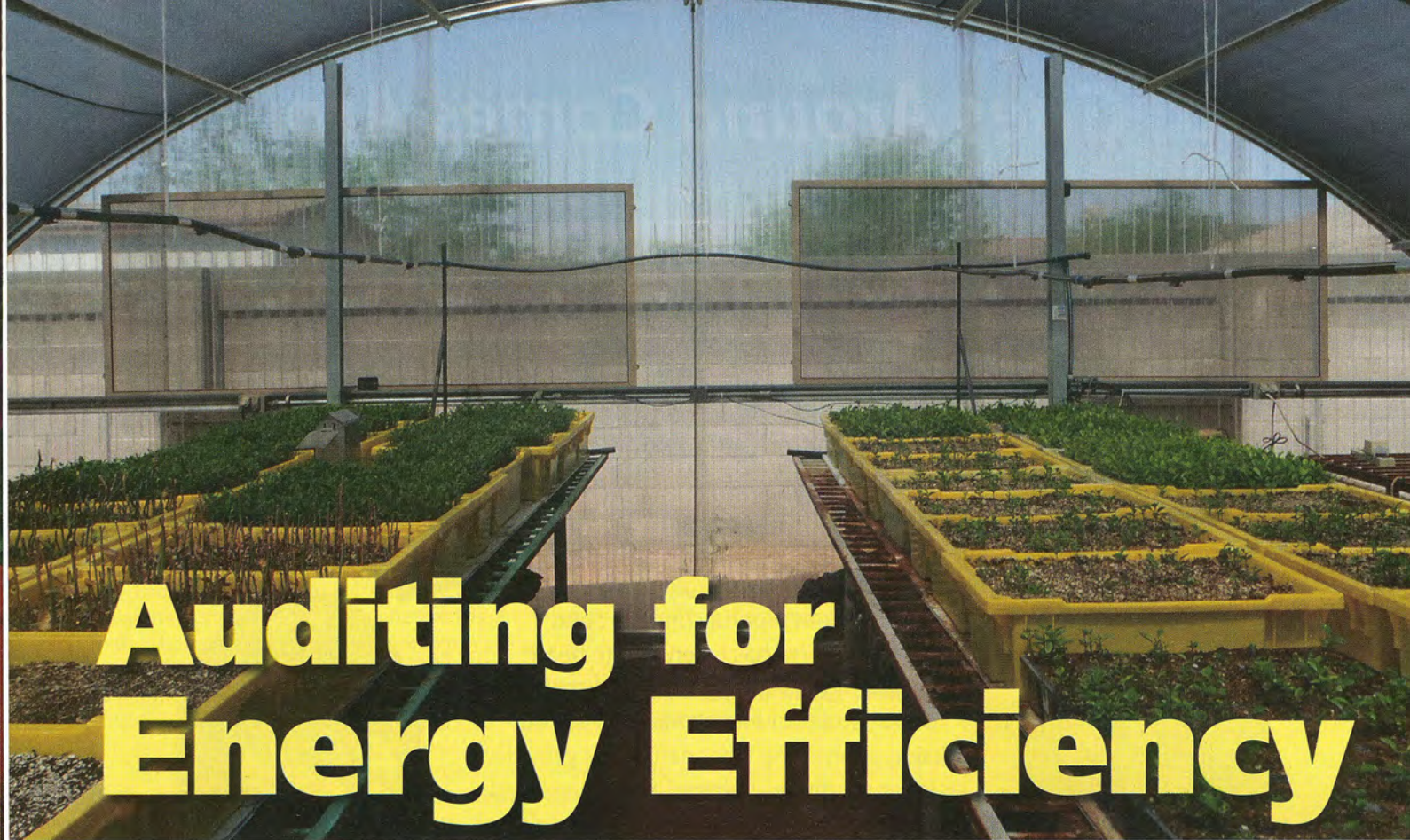


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# Auditing for Energy Efficiency

By Sally Benson

**A**udit: It's a word that can strike fear in the hearts of business owners. Visions of IRS agents rifling through shoeboxes full of receipts can keep anyone from getting a good night's sleep.

When it comes to an energy audit, however, it's a different story. True, at some point a government agency may be involved, but in this case the old joke, "I'm from the government and I'm here to help," isn't meant to be ironic. Energy and agriculture agencies across the country have resources and funds to help growing operations evaluate their energy use and to make improvements, but to take advantage of this assistance, you need an audit.

The audit itself—let's call it an *evaluation*—is voluntary. No one's going to bang on your door and demand to see your records. And it's really just a fact-gathering exercise. The details vary from program to program, but in a nutshell, data regarding

Above, Greenhouses at RSI Growers were evaluated as part of an overall energy audit performed through the state of Arizona's On-Farm Energy Audit Implementation Program.

An Arizona nursery volunteered for an energy audit as part of a state program that assists agriculture-related businesses in evaluating their use and needs. It was free, it was painless, and it'll help the operation save money.

your energy use are collected simply to set a baseline. Information can range from BTUs to therms to how many light bulbs are in use, including their wattage. It's pretty thorough, and it serves to tell you where you stand.

Once those data are compiled, the information is evaluated to determine how you can save both resources and dollars. Then it's up to you to make the all the improvements, just some of them, or leave things as they are.

The point of an energy audit is to help you operate more efficiently. And greater efficiency leads to greater savings.

## Auditing in Arizona

A relatively new project in the Grand Canyon State called the "On-Farm Energy Audit Implementation Program," launched by the Arizona Department of Agriculture in partnership with the USDA's National Resources Conservation Service (NRCS) and the governor's Office of Energy Policy, aims to help. Its purpose, simply put, is to assist ag-related businesses in finding ways to save energy. And dollars.

Rusty Van Leuven, an environmental program manager with the Arizona Department of Ag, was instrumental in developing the program and works closely with "producers" to implement audits. "We partnered with the NRCS because they've had money available to do conservation projects, but few have taken advantage of that," Leuven says. So the Department of Ag acts as a liaison of sorts, gathering information and facilitating audits for producers, who then can turn to the NRCS, audit in hand, and apply for funds to implement the changes they deem necessary.

"The producer contacts the Department of Ag and fills out an application," Leuven explains. "The only information that we collect is an application that is then sent to the [independent] auditing company to do a follow-up with particular energy questions that pertain to that operation.

"Then that information is relayed back to us at the department," he continues, "to verify and collect anything that was missed in the conversation with the auditing company and the producer. The

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verifying and collection includes getting specific information from equipment, taking pictures of equipment and plates, verifying irrigation systems, and asking any last questions that the auditing company may have for the producer.

"The good thing about the audit is," he adds, "as a producer, you're always looking at rising energy costs. So, finding out where you can save money on those energy costs, in order to do that, you need an audit."

The audit is filed with the Department of Ag and with the NRCS, both of which simply maintain it on file in case the producer wants to pursue additional help. But the audit—the actual report—belongs to the nursery operation.

"The big question is," says Van Leuven, "what's expected of [producers] in terms of time and money? There's no cost: The Department of Ag pays the cost. There's really just the time for the phone calls to the auditing company, the time with data collectors when they show up for data collection."

## Where the NRCS fits in

If a nursery owner decides to follow up on an audit and make improvements, the NRCS is ready to help. "We can provide funds after an energy audit is done to help make those inefficiencies more efficient," says Amanda Sutter, public affairs specialist for the Arizona NRCS office. "It can be something as simple as changing out the light bulbs, or changing out the motor that's in the well."

In order to qualify for funds, however, you need the audit. "The audit's a blueprint," Sutter explains. "The producer owns the audit; they're not going to be told what to do; it's just there for their information. They'll be able to identify where they have inefficiencies and can realize savings. It's completely up to them. In fact, should they decide to apply for funding, they can specify what they want to cover and what they don't."

While other ag producers have taken advantage of the program, "We're pretty new to the nursery clientele," says Sutter. "We just started to reach out to them, and we can assist if they're eligible and their land has resource concerns. We're working to recruit more producers from the nursery industry."

Promotional efforts from the Arizona Nursery Association also have helped alert growers to the program. So far, only two



Arizona Department of Agriculture program manager Rusty Van Leuven, right, assists RSI Growers owner Reid Rodgers to collect information for an energy audit.

Photos courtesy of Arizona Department of Agriculture

nurseries have participated—but someone has to lead the way.

## One grower's experience

RSI Growers in Glendale, Ariz., produces fruit trees, vines and succulents that are adapted to the often-brutal climate of the American Southwest. As owner Reid Rodgers says, "Our energy needs in Arizona are different. Obviously, cooling is more of a concern than heating." Still, energy use is energy use, and where utility bills and resource savings are concerned, every penny counts.

We asked Rodgers to explain his experience with the Arizona program, and here's what he had to say:

### ▶ American Nurseryman

Why did you decide to have an energy audit performed?

### ▶ Rodgers

Who wouldn't want free energy? I think everyone on the planet would, wouldn't you? Fact is nothing's free; one way or the other someone has to pay. There is emerging technology for solar, wind, water or other means of power for our and other industries, and it's an overwhelming amount of information that's needed to make the correct choice of what or how to achieve that. Everyone asks, "Where do I begin?" I can tell you what I first thought—it's not just *your* electric or fuel bills!

### ▶ American Nurseryman

What type of grant or funding did you pursue to finance your energy audit?

### ▶ Rodgers

In our case we didn't need any type of funding for an audit; it's *free!* The govern-

ment wants to follow UN dictates and have a "green" country, so who wouldn't? If I can remove any cost of energy from my operation, that's all the better for my bottom line at year-end. The question then is, what do we do with that audit once it's finished?

### ▶ American Nurseryman

How was your energy audit conducted? What was the cost? The time investment?

### ▶ Rodgers

Our real and only investment was a small amount of time to gather the information the auditors needed. [That included] all our utility bills and a list of any energy-using items we have in our operation, right down to each light bulb, irrigation controller or any energy-using item. Once that information is submitted, an auditor comes out to simply verify all the information. The time for us was less than an afternoon, simply because we keep all our files well organized.

### ▶ American Nurseryman

What changes were made to normal operations in order to improve energy use? Was new equipment required?

### ▶ Rodgers

We haven't had to really change anything that wasn't on the list of items that we change out each season anyway, so we haven't had to add any new equipment to our operation. In our case, being in Arizona, we're blessed with 365 days a year of sun, so the solar panels were our option. But with that sun comes a very low humidity and high heat, so as a propagator we use huge amounts of cooling [energy]. So the new equipment we needed is solar panels and converters. But what kind? And how many? That's what the audit tells us!

### ▶ American Nurseryman

Was the company able to realize savings as a result of the analysis/audit?

### ▶ Rodgers

All the installation isn't complete yet, but with the audit we know exactly how much energy will be saved, how it will be used and what item will use it. Currently, with the information we now have, our energy usage will be about 3 percent of what it used to be. And if we choose to add more [solar] panels, we'll be selling our power company kilowatts back. That's a positive cash flow!

### ▶ American Nurseryman

What advice would you give to other growers considering energy audits?

### ▶ Rodgers

Don't fear the word "audit." Once most of us hear that word and find out the government is involved, we shut down. And understandably so. But this isn't like

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that. This is, in most cases, a private company collecting information on your energy usage, and *only* your energy usage. They have no interest in anything else. These people count kilowatts.

Within the regulatory environment we have now—and what is coming in the future—we're all going to see our costs, or our taxes, increase for using energy. They're already talking about charging a tax for each mile we drive our cars. EPA and DOE are adding or trying to add more regulations to users. In the near future, the only way we'll be able to comply is if we have an audit showing we're "green" or our "carbon footprint" is as little as can be for our operation so we don't get fined for being over our regulated usage. The audit will give you the recommendations to achieve that.

### ▶ American Nurseryman

Can you explain your experience working with the [Arizona Department of Agriculture] program?

### ▶ Rodgers

Department of Agriculture! Good grief, don't we all hate that? What I mean



With high temperatures and abundant sunshine, Arizona presents different energy challenges.

is, having a government employee telling us how to do something when they probably have never done it themselves?

In our case, I think both the Arizona Farm Bureau and the Arizona Nursery Association are lucky to have someone like Rusty [Van Leuven, program manager with the Arizona Department of Agriculture], who on his own merit took the initiative to put this program together in order to help all agriculture in our state. He understands the Federal program and worked out details with independent auditors in order for Arizona agriculture

to receive these audits for free.

For us, it's been a painless and easy effort for the amount of information we now have as a result.

I currently am the Chairman of the Agriculture Nursery and Greenhouse Committee for the State of Arizona Farm Bureau, and I am suggesting to all our members in Farm Bureau and the Arizona Nursery Association to give serious consideration to this program. Once all our installation is fully completed, we'll use it as a model for others to follow. Sustainability is now an option.

## Shape

## the Future of the Floral Industry

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## ▶ American Nurseryman

What would you like to tell our readers about making a growing operation more energy efficient?

## ▶ Rodgers

All of us in the nursery industry know and can see what's coming in the near future from government regulations. Energy is on the mind of just about everyone. If we as an industry take a reactive instead of a proactive position, we're going to be run over by sheer regulations.

Contact your state ag department and ask who's doing what Rusty has done for us in Arizona. Spend the time collecting the information the auditors request; they'll send you a questionnaire asking for all the information they'll need.

Once your information is received, they'll do an interview—in my case, it was over the phone—then a local administrator will do a visual check to check the wattage and usage of each item in use. Once they have that, it goes to an independent company for energy recommendations. You'll get a complete copy of the audit.

Then it's up to you to implement the changes you wish to do. There's no requirement that you do anything at all! But now you have the audit in hand, and that's the key to going forward.

The fact is, most of us these days don't have hundreds of thousands of dollars sitting around to buy solar panels or wind turbines. How do we get this implemented without making the capital expense?

- Federal grant money is there to use to make our industry carbon-free. But you can't have any of it without the audit.
- State grants that have tapped into federal dollars for energy reduction. Yes, it's there, but you need the audit.
- Private or public energy companies are more than happy to help. You'd be surprised how far they are willing to go. Remember, they're regulated by EPA and DOE also.

How many manufacturers of solar panels want to get their product out and into our industry? More than you think. Do you know, I found one company that makes a shade house and the lath is really a photocell collector!

As I said: Don't fear the word "audit."

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Special thanks go to Cheryl Goar, executive director of the Arizona Nursery Association. She can be reached at cgoar@azna.org.

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