

Q&A: Four Star Fruit Finds Energy Management Success

JESSE MUNGUIA, General Manager, Four Star Fruit



The Powerit Solutions' installation at Four Star Fruit came online in mid-May 2010. Four Star Fruit's core product is table grapes. The family-operated company is located in Delano, California. With Spara, Powerit's energy management system, Four Star Fruit has implemented demand control and Auto-DR, and has made substantial energy efficiency gains. The company's engineer, Jesse Munguia, loves the transparency he has thanks to Spara: he can see real-time into his operations and he enjoys superb temperature control in his grape rooms. What did it cost? The whole system paid for itself in less than two months thanks to a generous incentive program through Four Star Fruit's local utility, Southern California Edison. Plus, the produce company receives ongoing revenue from its participation in demand response (DR) programs.

Q: Why were you interested in controlling your energy costs?

A: We were looking ahead at trends and noted that energy prices were predicted to increase from 2009 through 2014. Since we use a very large amount of electricity during three critical months of the grape season, we wanted to get on top of this issue. We also wanted to do the right thing from a "green" perspective.

Another key factor is that our business is booming and we anticipate growth—yet more growth means using more energy. To give you a sense, in the last 36 months Four Star Fruit grew by 20% and our power consumption *doubled* in this time period.

Q: What kinds of incentives were you able to take advantage in California

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to pay for your energy management system from Powerit Solutions?

A: Our utility is Southern California Edison and we were able to tap into their generous incentive programs, which combined paid for 96% of the project. One program was related to Auto-DR. To qualify for this program, we had to demonstrate in a simulated event, verified by their engineers, that we can automatically drop our draw on the grid. We did that by 722kW, and it was seamless and automated thanks to the Spara system. For the second incentive program for energy efficiency, we installed new equipment to permanently reduce our draw on the grid.

Q: Yes, tell me more about the EnerNOC arrangement and about the revenue you receive. What is that about and how does it work?

A: We have signed up with EnerNOC, an aggregator, on an on-call basis to participate in DR events. As part of the EnerNOC program, we are signed up to drop energy use at anytime, and we receive monthly payments for being able to make this amount of electricity available to the grid. If there is an actual event, we are paid additional money for this as well by EnerNOC.

Q: What are your results to date with Powerit's Spara product?

A: Here's how the numbers break out for our results:

- ROI was less than 2 months (1.76 months).
- A 16% reduction in our electric bills, of which 8% is attributed to increased energy efficiency and 5% to decreasing our peak demand use. DR revenues in the form of payments from EnerNOC offset 3% of the bill.

Q: How has your experience been with Spara?

A: The experience has been really positive. Spara is a powerful tool—very user-friendly. I've found it very rewarding.

Q: What's the best thing about the new energy management system?

A: I see the main benefits breaking out into three categories: financial, engineering, and quality.

Achieving the 16% reduction in our bill has been great and was more than we anticipated based on the original estimate from Powerit. Getting the monthly checks from EnerNOC is a plus too. Also, we appreciate knowing that our growth isn't hampered by escalating energy costs, thanks to the system.

As an engineer, the one thing I really appreciate about the Powerit system is the kind of visibility I have into my operations. It's such a powerful tool with real-time advantages. For example, with Spara I know instantaneously through alarms if a pump is not working or a fan broke and I can have it fixed right away. It used to be

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that people had to walk the system to visually inspect and check for these things.

In terms of quality, the core quality of our product, the best part is that I know the temperature of each grape room—the quality control experience has taken us into the 21st century.

Q: Why is controlling the room temperature for your grapes on a room-by-room basis so important?

A: Grapes are our very lifeblood and the temperatures in the grape rooms are our number one priority. Our core product is providing outstanding table grapes globally, so each grape room's temperature control is critical. Our grapes come in off the field at different times and then are sorted and treated differently based on their ultimate use, so the grape rooms have a wide array of temperature needs that need to be closely managed. Now, with Spara, we can do that more effectively. And, in turn, this transparency and management of temperature that is now at the tips of our fingers lets us address the bigger energy issues that we wanted to tackle.

Q: Has the Spara system met your expectations?

A: Yes, it has exceeded them. And it's nice to receive ongoing suggestions from Powerit on how we can continue to fine-tune Spara to wring more savings from the system. Just the other day we were advised that we could increase savings by better managing our demand control set point.

Interview by Powerit Solutions

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