Re solar panels worth the investment? Will a U-shape interior minimize travel distance for employees? Does retrofitting an existing facility make more financial sense than building one from the ground up?

So many questions, so many decisions must be made when designing and building or retrofitting a laundry plant. Textile Services recently spoke with several plant engineers and a design/builder who share their experiences and perspectives on how they lower energy costs, enhance employee productivity and safety, while maximizing their company’s return-on-investment. Below are highlights from several of these interviews.

**How are new plants designed to be more energy efficient?**

“We’re seeing more solar power involved in creating electricity,” says Ed Kwasnick, director of business development at the Laundry Division of ARCO/Murray National Construction Co. Inc., Oakbrook Terrace, IL, which designs and builds roughly 10-12 laundry plants each year. “It’s on the edge of just getting to the laundry sector. We’re seeing more clients embracing solar panels to provide electricity for office-related functions.”

Tom Walsh, director of engineering at Paris Cos., a healthcare and industrial supplier that supports four plants in Pennsylvania and Ohio, said water conservation and related efforts are a key component of their efforts in this area. “By working with our chemical supplier, we’ve come up with a better water reuse-process,” says Walsh, who’s based in DuBois, PA. “Our tunnel washers normally use 0.6 gallons per pound and now we’re down to 0.4 gallons per pound. That creates less sewage—less pumping, less filtering, less waste. Our new press also has higher bar pressure that pushes more water out of goods, so they enter the dryer with less moisture. Instead of 18- to 19-minute dryer times, we’re down to 16 to 17 minutes.”

Jim Curiale, director of engineering at Uni-tex Textile Rental Services, which operates 11 healthcare laundry plants in Connecticut, New Jersey and New York, noted that finishing-side upgrades have had an impact on saving energy. “We’ve had the opportunity to replace some of our older ironers with thermal fluid ironers,” says Curiale, who’s based in Mt. Vernon, NY. “They (offer) a 20% increase in energy efficiency because the heating medium doesn’t have to continually change state from a gas to a liquid and back again. In addition, since the heating medium doesn’t rely on pressure for temperature, they can run much hotter than traditional steam ironers—up to 400 degrees.”
Custom Aprons

Proudly Made in the USA

Available in These Colors:
- Sandlewood
- Dusty Rose
- Seafoam
- Gold
- Ivory

Customize fabric colors, hem colors, pockets, embroidery and adjustable bands.

DuraTec aprons set the standard for the industry. These aprons feature amazing soil releasing technology and innovative engineering.

Benefits:
- Excellent strength and durability
- Great color consistency
- Outstanding soil release
- Better return on investment
- Excellent feel
- Longer life

Service Excellence:
- Exceptional quality through owned and controlled manufacturing
- Domestic manufacturing in support of import programs
- Bulk fabric rolls stocked in our U.S. manufacturing facility
- Most orders shipped within 48 hours

Available Styles:
- Bistro
- No Pockets
- Pencil Pocket
- 3 Pockets (pencil & 2 lower pockets)
- Or customizable...

Stock Colors:

The colors in this chart are for reference only. Actual colors may vary.

Venus sets the industry standards for durability
HOW CAN PLANT OPERATORS PROCESS MORE GOODS IN LESS TIME AT LOWER COSTS?

“There are companies now offering water-recycling systems, energy-reclamation systems, and low-temperature wash chemistry,” says Bryan Bartsch, director of operations at Ecotex Healthcare Linen Service, which operates four linen processing plants in the Northwest and Southwest regions of the U.S. and Western Canada. “European dryers offer reuse of exhaust air to reduce the amount of flame time on dryers, resulting in a strong ROI.” Bartsch is based in Sumas, WA.

Walsh: “We have a production management system at all of our plants that tracks what employees are doing. Every station has a monitor that tells employees how they’re doing comparing their production to the standards. In our case, a green light is good, yellow means their numbers are slipping and red means they’re underperforming. The live information is not only shared with the little TV screen in front of them, but it’s also on our dashboards on big screen TVs throughout the plant that managers and supervisors can see.”

Curiale: Traditionally, with an older-technology boiler, it would take up to an hour to reach the proper operating pressure. But now there’s a big movement toward on-demand steam technology boilers that are literally up to pressure between five and 10 minutes because of the lower volume of water you’re heating in them. You gain one hour of start time every morning, which used to be wasted energy. The footprint of the new boilers is also much smaller than the old ones, which is a big plus.”

Kwasnick: “We’re tightening up the overall layout into a smaller footprint, minimizing travel distance and the amount of time people are wasting in-between production processes, like pushing carts back and forth or delivering products from one department to the next. You want to keep people at their workstations.”

HOW ARE YOU MAKING YOUR PLANTS SAFER AND MORE ERGONOMICALLY SOUND?

Bartsch: “In many cases, we are now installing equipment that reduces the need for heavy-lifting jobs. We replaced some of our aging equipment with new equipment, which has helped increase machine safety for operators. We have also purchased new materials-handling devices to reduce strains on employees and completed a comprehensive safety audit in each plant.”

Walsh: “We brought in our safety department (to help) design the building itself. We monitor how many steps—for fatigue factors—that employees take throughout the day.”
employee... The machines we're now using help differenti- ate between sizes of all the different products like between a king, queen or standard sheet. The folder machines are now capable of pre-sizing that product. It's also good for towels, gowns and general healthcare (items) like scrubs.”

**WHEN BUILDING A NEW PLANT, WHAT DO YOU LOOK FOR IN CONTRACTORS?**

*Bartsch:* “When undergoing any project, we align with ex- perienced individuals that have a knowledge of our industry. We want people who can challenge our way of thinking and maybe provide insight into new ways of doing things... The art is to know the desired outcome and not be led astray by the many points of view.”

*Curiale:* “Flexibility is a big one. Our projects tend to be moving, living targets. Lots of things change during the course of a building project. We have to be able in real time to make changes, have real-time responses. We were lucky enough with the last three projects to use the same architect and engineers. We didn’t have to teach them from scratch each time on how to build a laundry.”

**WOULD YOU RATHER BUILD FROM SCRATCH, OR RENOVATE AN EXISTING FACILITY?**

*Walsh:* “Our philosophy is that we would always prefer to build from the ground up because it can be customized to our needs. The ceiling can be designed to handle the weight of a rail system and support the piping system. You can run all electrical underground, save costs, and make the plant look cleaner and neater when all this stuff doesn’t hang from the ceiling. The building can be built with the steel sup- port beams in the correct layout, so they do not affect the equipment design/layout and gives us our desired flow from incoming soil to final pack out and delivery.”

*Kwasnick:* “For every brand-new facility we build, we do five retrofits. The major disadvantage of retrofitting a build- ing is you’re starting with a shell that’s determined. Now you’re working to design the laundry around that build- ing’s footprint. The advantage is you’re up and running quicker because the shell was already (built). And it’s more cost-effective. During the (economic) downturn, there was a glut of industrial buildings on the market that were being sold for 40 to 60 percent off from what they were before 2009. But the market has shifted and now in certain areas...
like Northern Virginia and California, that’s not the case anymore.”

**WHO IS INVOLVED IN THE DESIGN PROCESS?**

**Walsh:** “We bring the design team to our individual plants. For our last plant, we got our front-line supervisors and our safety staff involved in the plant layout. We aren’t perfect and they pick up on things we didn’t see. Our IT department is also critical in helping us with the design and layout.”

**Curiale:** “We actively involve management from various plants and interview them on, ‘If you were designing a plant, what would you like and dislike?’ I’m at all the plants at least once a month. Nobody is shy about telling me what we do wrong.”

**Bartsch:** “Each part of your team can provide you with good ideas. Production departments are key (since) they are ultimately (the) users of the equipment and are tasked to be efficient with labor. Engineers are obvious… Sales departments may have certain ambitions as well…Collaboration from many people is the way to get the best outcome for our project.”

**ARE OPEN HOUSES THAT SHOWCASE A NEW PLANT WORTH THE EFFORT? HOW DO YOU MAKE THEM SUCCESSFUL?**

**Bartsch:** “In 2013, we conducted two large open-house events for our customers. It was the most important aspect of the retrofit projects… We now had a reason to get people over to the laundry (plant) and see the amazing work our team performs each day. We offered more than one date, invited a few important people in each organization three months in advance, followed up with guests along the way, delivered an excellent tour and presentation, and had good food and drink available for our guests.”

**Curiale:** “We’ve always done this during the business day. We invite all local government people (involved with the project), present or prospective accounts, contractors who built the plant, industry friends and family… It has to be a feel-good event. We invite city officials to give a little speech. It’s a genuine appreciation of all the people who helped us in the project.”

**TYPICALLY, HOW LONG DOES IT TAKE BEFORE A NEW PLANT OPERATES AT FULL SPEED?**

**Kwasnick:** “You’re going to find that there are minor water/utility or steam leaks (and other) typical punch-list items. The more complicated the equipment package, the more complicated the automation is, the more complex the system, typically the longer the shake-out period. My rule of thumb is it will take six months for a high-tech plant to operate at 100%.”

**Curiale:** “There are always a lot of unforeseen, minor issues with equipment… Generally, you’re working with new crews and there’s a tremendous amount of time necessary to train them. Our plants are very functional within about 30 days.”

**Walsh:** “We found that it can take as much as 12 months to get up and running 100%. We were surprised at that. It can take (that long) to get employees working up to their full potential. We created a ramp-up schedule, which includes training to meet the 100% of the production standard. Maintenance also learns how to repair things and tweak machines to get the best quality and productivity out of them.”

Carol Patton is a freelance writer based in Las Vegas.