Tax Cuts Could Propel Major Upgrades

New Rules for Immediate Expensing Make it Easier to Invest in Machinery and Software

by Trey Barrineau with contributions by Ellen Rogers

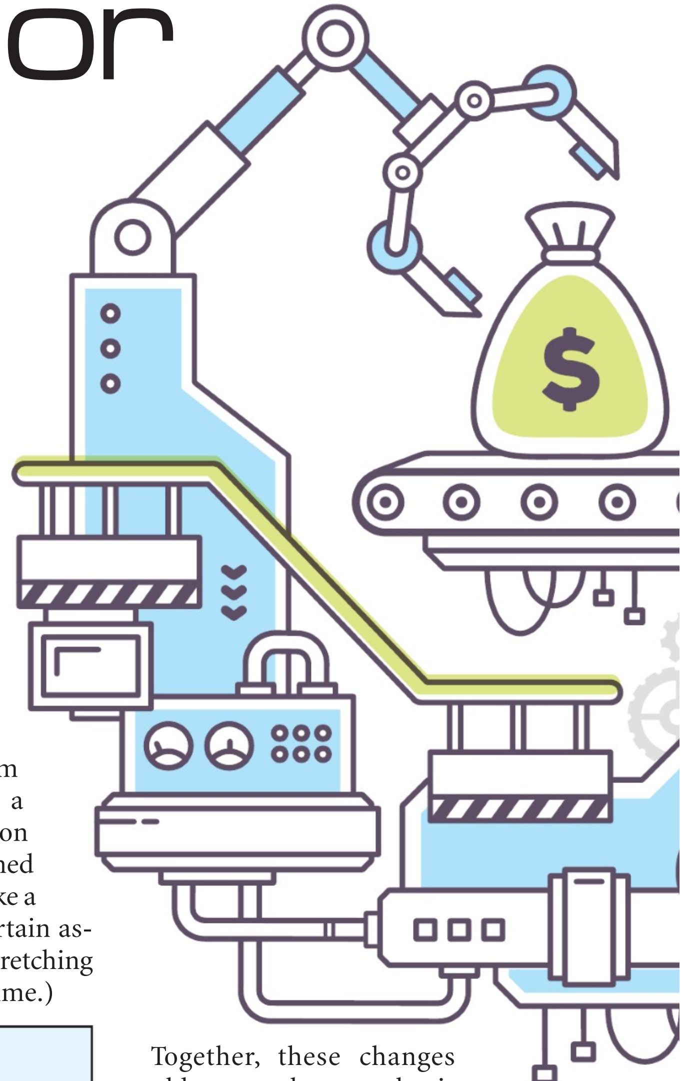
The tax-reform bill that was signed into law at the end of 2017 has many attractive provisions for companies in the glass industry.

For the big players, the corporate tax rate is slashed from 35 percent to 21 percent. Smaller companies set up as so-called "pass-through" businesses get to deduct 20 percent of the first $315,000 of earnings. ("Pass-throughs" represent about 95 percent of the 26 million businesses in the U.S.)

But one provision of the Tax Cuts and Jobs Act could have a major long-term effect on every manufacturing business in the industry, regardless of size.

The law allows companies to write off the full cost of new equipment for the next five years immediately upon purchase. Before, the system only allowed these expenses to be written off over an extended period of time through depreciation and amortization deductions.

Additionally, the popular Section 179 deduction for capital expenses will rise from $500,000 to $1 million, with a limit of $2.5 million. (Section 179 of the IRS Code was designed to allow small businesses to take a depreciation deduction for certain assets in year one, rather than stretching them over a longer period of time.)



Together, these changes could mean a lot more business in 2018 and beyond for companies that sell machinery and equipment to the glass industry manufacturers. Overall, U.S. orders for manufacturing equipment are expected to rise 12 percent in 2018, according to the Association for Manufacturing Technology.

"Yes, there have been discussions and increased interest not just due to this part of the tax code but also the lowering of the corporate rate has made investing more attractive as well," says Morgan Donohue, the vice president of sales and marketing with Erdman Automation. "When an owner feels the investment in his or her business will have a quicker payback due to reduced taxes, it simplifies the decision."

It could also give a big boost to auto-

What to Do Right Now

Here are four steps manufacturing companies should take now to tackle tax reform, according to BDO:

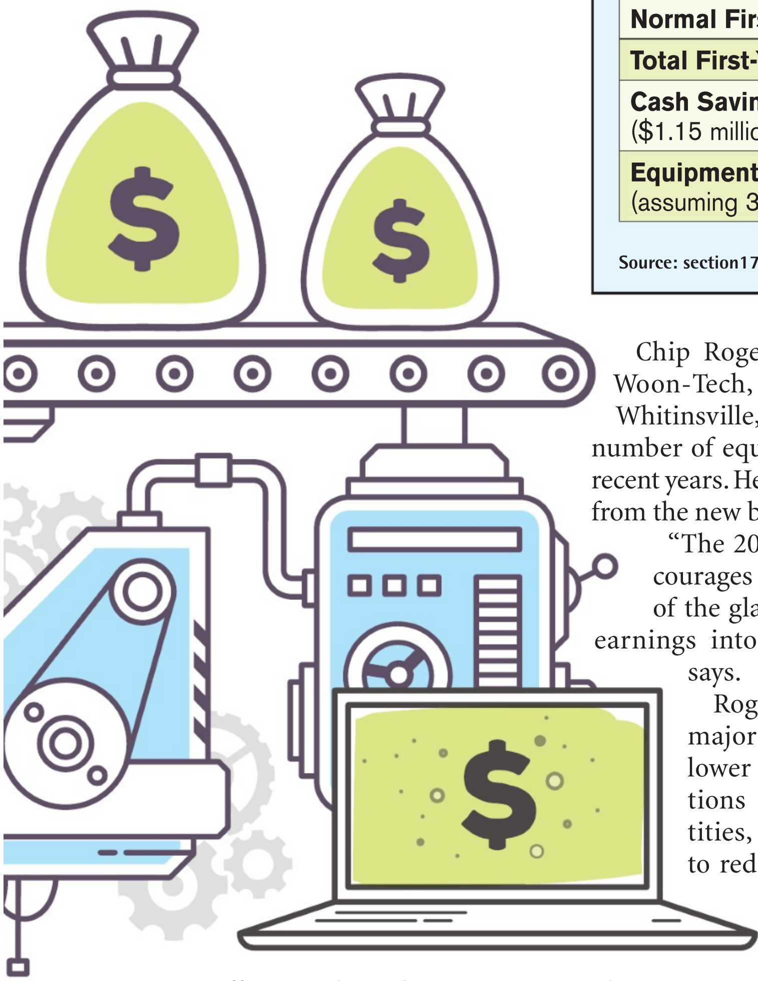
1. **Assemble a team.** While accountants will probably do most of the work, companies and their finance teams will have an important role to play to gather all the necessary data.
2. **Dig into the data.** Assessing the effects of tax reform requires a lot of data. Organizations need to move from modeling the impact of tax reform to focusing on data collection and computations as soon as possible. If you have an international presence, some of the information needed could date back to 1987.
3. **Establish priorities.** When considering what to undertake, focus on the areas that could have the greatest effect on your organization.
4. **Talk with your tax advisor.** Tax reform of this magnitude is the biggest change in a generation. It will require intense focus to understand not only how the changes apply at the federal level, but also to navigate the ripple effect this is likely to have on state taxes as well.

Using Section 179 in 2018

Here's a sample calculation for purchasing machinery or equipment and using the Section 179 deduction.

Equipment Purchases	$1.15 million
First-Year Write-Off	$1 million
100 Percent First-Year Depreciation	$150,000
Normal First-Year Depreciation	$0
Total First-Year Deduction	$1.15 million
Cash Savings ($1.15 million x 35-percent tax rate)	$402,500
Equipment Cost After Tax (assuming 35-percent tax bracket)	$747,500

Source: section179.org; Crest Capital



mation efforts as the industry continues to struggle with a lack of qualified workers.

"I'm not a betting man, but if I were, I would bet that the combination of tax changes, a blooming economy and a tight labor pool will all contribute to increased automation on the factory floor," says Ron Crowl, president and CEO of FeneTech, a provider of software and automation solutions to the fenestration industry.

There's evidence that companies in the industry are beginning to invest in new machinery, too. For example, in January, PPG Industries Inc. told the Wall Street Journal that it plans to spend $50 million on capital projects in the U.S. this year because of the new expensing rules.

Chip Rogers is the president of Woon-Tech, a glass fabricator in Whitinsville, Mass., that has made a number of equipment investments in recent years. He also sees opportunities from the new bill for the industry.

"The 2017 Tax Reform Act encourages all companies, inclusive of the glass industry, to reinvest earnings into their companies," he says.

Rogers points out that the major changes, such as the lower tax rates for corporations and pass-through entities, allow glass companies to redirect a portion of their earnings that used to pay taxes to other areas, such as employee wages, expansion and capital expenditures.

"Another part of the Act brings back 100 percent Federal Bonus Depreciation on both new and used capital expenditures," he says. "The amount spent is unlimited. As a quick example, corporations spending $1 million on capital expenditures will save hundreds of thousands of dollars in federal taxes."

Some machinery companies that serve the glass industry are reporting strong sales—and have been for a while.

Mike Rosato, senior machines engineer for Salem Glass and Mirror in Winston-Salem, N.C., says customers have been very encouraged by the new tax reform.

"Principal owners and managers are looking forward to investing in new equipment for the tax savings and are feeling encouraged to be able to expand to meet market, quality and competitive trends," he says. "Tax savings for business leads to expansion and investment in new equipment and for 2018 and beyond, the deduction limit doubles and increases to $1 million. Furthermore, the maximum limit on deductible equipment purchases increases to $2.5 million. This will help nudge investment toward not just individual pieces of equipment, but more expensive integrated fabrication systems that are robotic, fully combined and communicating with accounting, order and optimization software systems."

Others haven't yet had the same experience.

"Although we've been quite busy quoting and selling over the last few months I haven't had anyone directly tell me that they're purchasing, or interested in purchasing due to some new tax break," says Todd Tolson, director of sales with ProLine Automation Systems. "That said, I'm sure some of the increased activity we're seeing is due, in part, to the changes in the tax code."

Whether you're looking to invest in new equipment and software now or in the future, **USG**lass magazine has gathered some crucial information that could help guide your decision.

continued on page 58

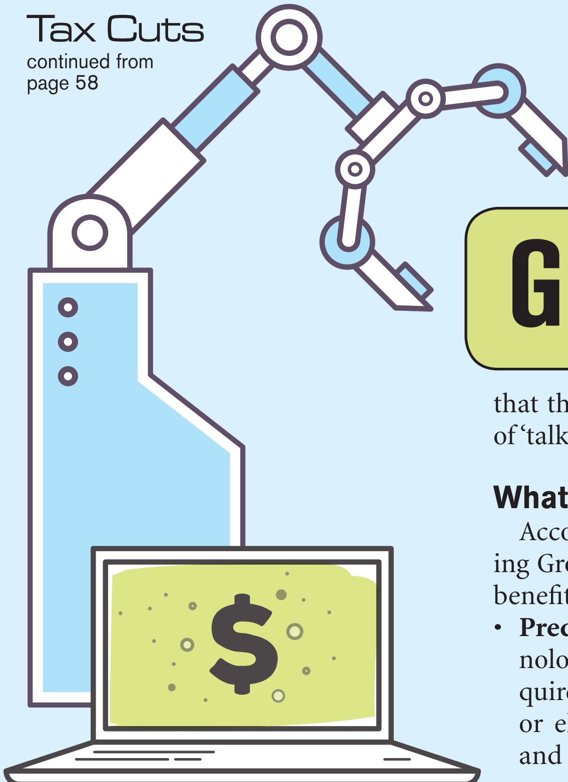
Tax Reform: What It All Means

BDO, an international accounting, tax and business-advisory firm, recently released a comprehensive look at what various components of the new tax law mean for manufacturers. Here are some highlights:

Provision	Summary of Changes	Implications for Manufacturers
Reduce the Corporate Tax Rate	Reduces the top corporate tax rate from 35 to 21 percent. **Effective date:** Taxable years after Dec. 31, 2017	A huge win for manufacturers. The effective actual tax rate for manufacturers has historically averaged 22 percent.
Repeal the Corporate Alternative Minimum Tax (AMT)	Conforming to the repeal of the corporate AMT, the bill also repeals the election to accelerate AMT credits in lieu of bonus depreciation. **Effective Date:** Taxable years after Dec. 31, 2017	Keeping the corporate AMT would have made it difficult for businesses to reduce their effective corporate tax rate lower than 21 percent.
Pass-Through Tax Treatment/ Section 199A	Raises the deduction available to pass-through filers to 20 percent. **Effective date:** Taxable years after Dec. 31, 2017	Because many manufacturers are structured as pass-throughs, this should end up as a net positive for the industry.
Limitations on Interest Deductibility	Revises Section 163(j) and expands its applicability to every business, including partnerships. Generally, caps deduction of interest expense to the sum of 1) business interest income; 2) 30 percent of adjusted taxable income (computed without regard to deductions allowable for depreciation, amortization, or depletion; and 3) the taxpayer's floorplan financing interest for the tax year. Disallowed interest is carried forward indefinitely. Contains a small business exception. **Effective date:** Taxable years after December 31, 2017.	This is a base broadener that would limit the interest deduction to 30 percent of EBITDA for four years, then 30 percent of EBIT thereafter. The interest expense ceiling could be problematic to manufacturers that rely heavily on debt financing.
Repeal of Domestic Production Activities Deduction (DPAD or Section 199)	DPAD was a tax incentive for businesses that manufactured property at least partially within the United States. **Effective date:** Taxable years after December 31, 2017.	Manufacturers that previously claimed the section 199 deduction will no longer be able to reduce their tax rate by the benefit; however, this impact will likely be offset by the significant reduction in overall tax rates.
Research Tax Credit	The Research Tax Credit's net value was effectively increased by 22 percent—from 65 percent to 79 percent of incremental qualified spending—because of the corporate rate's reduction to 21 percent and the required Sec. 280C(c)(3) election or addback of R&E deduction. **Effective date:** Taxable years after December 31, 2017.	In addition to the credit benefit increasing by 22 percent, the elimination of AMT means more taxpayers may benefit from the credit.
R&E Tax Deduction	Generally, companies may not use an NOL to offset income in any prior year and may offset only 80 percent of taxable income (after NOL) in carryforward year. **Effective date:** The elimination of carrybacks is effective in taxable years after December 31, 2017. The current 100 percent allowance is phased down by 20 percent per year beginning in 2023.	Costs incurred in one year will not be able to offset 100 percent of taxable income in the next year. In situations where manufacturers' earnings are volatile, the restrictions on the carryback and use of NOLs could present a significant cash flow obstacle.
Immediate Expensing of Certain Capital Expenditures	Companies will be able to fully expense certain capital expenditures, including acquisitions of used property, in 2018. **Effective date:** Applies until 2022 for purchases made after September 28, 2017. The percentage of allowable expensing will be phased out at a rate of 20 percent per year from 2023 (80 percent) to 2026 (20 percent).	This is likely to encourage more capital spending, potentially driving up sales for manufacturers of products eligible for expensing, such as machinery and equipment.
Like-Kind Exchanges (Section 1031)	Like-kind exchanges will be limited to exchanges of real property that is not primarily held for sale. **Effective date:** Taxable years after December 31, 2017. However, there is an exception if the property was disposed of by the taxpayer on or before December 31, 2017.	This imposes greater limitations on the types of property manufacturers could consider as part of a like-kind exchange.
Offer a Deduction for Foreign-Derived Intangible Income	Effectively taxes such income at a reduced 13.125 percent tax rate. Deduction only available to C corporations that are not RICs or REITs. **Effective date:** The effective tax rate on FDII will be 13.125 percent in tax years beginning after 2017 and before 2026 and 16.406 percent after 2025.	Some commentators have described this as being similar to a "patent box," which is featured in the tax framework of some European countries to encourage the formation of intellectual property within those respective countries, and provides a preferential tax rate on certain income.

continued on page 60

continued from page 58



Could Tax Reform Spur Automation Investments?

Growth Opportunities

Sure, all that high-tech robotic and automated equipment is nice, but a purchase like that is beyond your company's budget, right? That sentiment may have been true for many small- to mid-size glass industry companies, but the recently passed tax-reform bill could change that. Given the opportunities now available, the new bill could spur many companies to invest in automated equipment and machinery.

Automation based on the Industrial Internet of Things (IIoT) is making strong strides in the glass industry, as well as many other manufacturing segments. In fact, a 2017 study by the Boston Consulting Group predicts that by 2020, $267 billion will be spent on IIoT technologies, products and services, which some also call the fourth Industrial Revolution or Industry 4.0.

Aurora, Ohio-based company FeneTech says the requirement for connectivity between software that runs the business and machinery on the floor continues to grow.

"The uptick in the economy has led to the purchase of new machinery by many of our clients," says FeneTech president and CEO Ron Crowl. "Having realized the benefits of connected systems, many clients get us involved early in their purchasing activities to verify that the machinery has the capability of 'talking' to our software."

What Are the Benefits?

According to the Boston Consulting Group, automation provides many benefits:

- **Predictive maintenance.** IIoT technologies detect when a machine requires maintenance. That can reduce or eliminate unplanned downtime and extend the time between costly repairs, extending maintenance cycles and reducing costs.
- **Optimized production.** IIoT can monitor and optimize production processes in real time, making adjustments to improve quality and reduce waste.
- **Inventory management.** Thanks to advances in sensors, global positioning systems (GPS) and cameras, IIoT technologies can track the location and condition of raw materials or products, including temperature and humidity. That allows companies to increase their response time, reduce inventory and boost just-in-time production.

What Are the Drawbacks?

While many in the fenestration industry are rushing to automate, there are still a few stumbling blocks.

Security remains a concern. More devices connected to the internet can lead to the kind of hacking attacks that the public fears with home-automation products. Some companies are developing VPNs (virtual private networks) that can block cybercriminals from accessing the huge amounts of data that manufacturing business generate.

Additionally, there are currently no standards that provide "plug and play" operation for IIOT-connective devices. ("Plug and play" refers to software or devices that work perfectly right off the shelf without modifications.)

"Each machinery manufacturer has different interface protocols—and oftentimes different methods altogether based on the type and vintage of machinery," says Crowl.

To that end, FeneTech is promoting the concept of FENml (FENestration Manufacturing Language) as an industry-wide manufacturer-independent standard with the goal of "plug and play" operation.

FeneTech introduced FENml in the fall of 2017. Crowl says he tried to use GlassBuild America to educate machinery manufacturers about the concept of a unified communication method between dissimilar machines and software applications.

However, he says the industry's response to FENml hasn't quite lived up to his expectations.

"I would describe the reception to the idea as lukewarm at best as the machinery people see this as added cost with no real demand at the moment from their customers, the fabricators," Crowl says. "Having said that, we are currently working with two forward-thinking machinery manufacturers who see value in this. Jointly we are currently attempting to find fabricators to be beta test sites to implement this technology."

Working Toward Automation

Bell County Glass Co. Inc. in Killeen, Texas, recently purchased new equipment, a new RhinoFAB 900, with plans to purchase a CNC machine for door hardware. Ken VanHoozer, president, told **USG**lass magazine that while the Texas market has been growing for the last several years, the tax incentives and tax breaks were also a driving

continued on page 62

Tax Cuts

continued from page 60

force, freeing up money for businesses.

"I think it's only common sense that any time you can create tax breaks for businesses, especially small businesses, you're going to see a positive impact on communities and the country as a whole as long as it's done correctly and doesn't create more hardships down the line," says VanHoozer. "I think any business that's been around understands the need to keep up with the trends and technology, because if they didn't then they probably wouldn't still be around," says VanHoozer. "This is our first dabble into automation of any sort, but we look to build from this step moving forward—I think we have to in order to stay competitive and continue to offer the quality of service we do in the timeframes required by the No. 1 burden on this industry, so any automation where you can is key."

What's Next: Tips for Making Your Next Machinery Purchase

If you've been thinking about purchasing new equipment—or even if you haven't—now may be a good time to buy, thanks to the tax-reform bill that was signed into law at the end of 2017. In fact, according to a Key Media & Research survey, 67 percent of industry businesses said they'd been considering buying equipment, and the new legislation confirms their decision to purchase. Likewise, 33 percent said while prior to the bill they hadn't thought about buying new equipment, they're now considering it.

"If you can find favorable financing or you have cash [available] and you choose bonus depreciation, 100 percent of the cost of the equipment is deductible on your federal return (only in year one)," says Chip Rogers, president of Woon-Tech Glass. "There's nothing [after] year two, so your taxes will go up because you don't have the depreciation expense as a deduction."

He adds that companies can also expect big saving. "If your corporate rate is the new 21 percent and you spend $1 million, you save $210,000 in taxes (year-one only)."

However, Rogers points out that because of these changes and the many others resulting from the 2017 Tax Reform Act, more money is being retained by corporations.

"Each corporation will have to decide what they will do with these savings. Faster depreciation is great, but you still need the money/credit in the first place to buy the equipment, and any tax reductions are good only if you make a profit and are paying taxes in the first place."

And as exciting as it may be to hear the sounds of a new machine humming throughout the facility—and even nicer to do so at a cost savings—buying a new piece of major equipment is still a considerable investment and something that can't be taken lightly.

There's a lot to think about and plan for to ensure a successful purchase. **USG**lass columnist and industry consultant Paul Bieber is well-versed in what it takes to ensure a successful machinery purchase. Here he shares a few points that can guide you in navigating yours.

- Don't purchase the first machine of a new generation—even when the manufacturer offers a discount.
- Understand the operating costs of the machine—how much power does it use monthly?
- Ask if the manufacturer has a spare parts depot in the U.S. and if it is reachable 24/7.
- Know what spare parts are included with your order.
- Make sure the installation costs are clearly spelled out and how long will the manufacturer's training team be with you.
- Don't buy more machinery than you need, with planning three years ahead.
- Understand how many people will be needed to operate the machine, in both slow times and busy times.
- Buy a machine that will cover 95 percent of your needs—that last 5 percent costs more than it's worth.
- Does your machine have remote diagnostics so the manufacturer can help you 24/7—in your time zone?
- See it for yourself. Visit an installation of this machine if it is your first time buying this type of equipment. ■