

What the One Big Beautiful Bill Act Means for HVAC&R Professionals

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This article will cover major changes to the Internal Revenue Code (IRC) as it transitions from the Inflation Reduction Act (IRA) to the One Big Beautiful Bill Act (OBBBA). Some provisions from the IRA are set to expire; others are being phased out. There is now an introduction of Foreign Entity of Concern (FEOC) and notable wins for building owners, the manufacturing sector, architects and engineers such as (100% Bonus Depreciation and Section 174A), which includes notable wins for building owners, the manufacturing sector, architects and engineers.

The Inflation Reduction Act (IRA) was passed by the 117th United States Congress and signed into law by President Joe Biden on Aug. 16, 2022. It primarily incentivized the transition to green energy—such as solar power, heat pumps and electrification with a focus on reducing energy consumption and supporting the decarbonization of both residential and commercial buildings. Table 1 compares the key differences between the IRA and the OBBBA, which was signed into law by President Donald Trump on July 14, 2025.

Table 1 Key differences between the IRA and the One Big Beautiful Bill Act (OBBBA)			
	IRC	IRA	OBBBA
Energy Generation & Carbon Capture	45Y: Clean Electricity Production Tax Credit	Credit Amount: consistent with the credits under section 45 before January 1, 2025.	The provision keeps intact 45Y through 2032; however, solar and wind credits are phased out, mandating termination of the credit after 2027 for facilities not yet placed in service.
	48E: Clean Electricity Investment Tax Credit	Credit Amount: 6% of qualifying investment (basis); 30% if PWA requirements are met.	Most of the Section 48E credits remain unchanged under the new provision, but it applies the same framework used in Section 45Y to solar and wind projects.
	45Q: Credit for Carbon Oxide Sequestration	Credit Amount: \$12-\$36 per metric ton of qualified carbon oxide capture. \$60-\$180 if PWA are met.	Taxpayer cannot claim the 45Q credit if they are a specified foreign entity or a foreign-influenced entity. Credit updated to \$17 per ton from 2025-2026.
	45U: Zero-Emission Nuclear Power Production Credit	Credit Amount: 0.3 cents/kWh and 1.5 cent/kWh id PWA are met	No credit allowed for specified foreign entities, effective immediately upon enactment. Foreign-influenced entities effective two years after enactment.
Fuels	30C: Alternative Fuel Vehicle Refueling Property Credit	Credit Amount: 6% basis of businesses; 30% if PWA requirements are met.	The credit associated with alternative fuel refueling properties expires after June 30, 2026.
	45V: Clean Hydrogen Production Tax Credit	Credit Amount: \$0.60/kg multiplied by the applicable percentage (20% to 100% of the lifecycle greenhouse emissions)	Expires the credit for clean hydrogen production facilities that begin construction on or after Jan. 1, 2028.
	45Z: Clean Fuel Production Credit	Credit Amount: \$0.20/gallons (\$0.35/ gal for aviation fuel) multiplied by CO ₂ “emission factor”	The Clean Fuel Production Credit has been extended from Dec. 31, 2027, to Dec. 31, 2029. Restrictions on FEOC.

Energy Efficiency Credits	45L: New Energy Efficient Home Credit	Credit Amount: \$500 per unit under the ENERGY STAR (MFNC) program. \$1,000 per unit under (ZERH) program. If prevailing wage requirements are met, the credit is increased by a 5x multiplier on the base rate.	New home energy efficiency credits expire after June 30, 2026.
	179D: Energy Efficient Commercial Buildings Deduction	Deduction Amount: \$0.50 - \$1.00 per square foot and \$2.50 to \$5.00 per square foot if PWA requirements are met.	The deduction for energy efficiency improvements to commercial property expires for property that has not yet begun construction by June 30, 2026.

Foreign Entity of Concern (FEOC) is a provision added to this bill, and the following outlines the definition of entities classified as FEOCs. The bill establishes strict limitations on participation in federally supported programs for any entity designated as a Foreign Entity of Concern. An FEOC is defined as any entity that is owned or controlled by, or subject to the jurisdiction or influence of, a foreign adversary government such as China, Russia, Iran, or North Korea. It also includes entities listed on U.S. government watchlists, such as the Department of Commerce’s Entity List, the Department of Defense’s list of Chinese military companies, and the Treasury Department’s Specially Designated Nationals (SDN) list. These restrictions are intended to safeguard national security and ensure that taxpayer-funded programs, resources, and technologies are not accessed by foreign adversaries or entities under their influence. Entities classified as FEOCs are prohibited from receiving certain federal grants, tax credits and contracts under this legislation.

The OBBBA introduces numerous changes and terminations to provisions within the Internal Revenue Code (IRC), significantly impacting efforts to reduce energy consumption and decarbonization objectives established by our ASHRAE community. It is important to be aware of the applicable safe harbor dates in order to claim certain tax deductions and credits. **Table 2** summarizes key deadlines to track over the coming year to ensure prompt compliance and maximize available tax benefits.

Table 2: Safe Harbor Dates	
Date	Description
Dec 31, 2024	Status: Already Locked Projects that began construction on or before December 31, 2024, are governed by the legacy provisions of Sections 45 and 48—free from Foreign Entity of Concern (FEOC) restrictions and not subject to any newly enacted sunset provisions.
Jun 16, 2025	Binding Contracts Exception – FEOC Cost Test Under certain circumstances, equipment ordered pursuant to a binding written contract signed by June 16, 2025, is excluded from the Foreign Entity of Concern (FEOC) cost calculation. This implies that equipment—potentially including Chinese-manufactured components—procured earlier in the year under valid contracts may be grandfathered in and not subject to FEOC-related disqualification.
Dec 31, 2025	FEOC Compliance Cut-Off for Renewable Energy Projects Solar and wind projects that commence construction on or before December 31, 2025, are exempt from the Foreign Entity of Concern (FEOC)

	screening requirements. Additionally, all other eligible technologies that begin construction by this date will also bypass the FEOC-related supply chain test.
Jun 30, 2026	To qualify for the Section 45L credit, residential units must be leased or sold by Jun 30, 2026. For Section 179D, construction must commence by June 30, 2026, in accordance with the safe harbor provisions outlined in the Inflation Reduction Act. It is recommended that at least 7% of the estimated total construction cost be incurred by that date to meet the safe harbor threshold. If there are any change orders or adjustments to the scope of work, meeting the 7% expenditure requirement can still satisfy the minimum 5% cost threshold, allowing the project to remain eligible under the safe harbor rules.
July, 2026	Post-Enactment Grace Period for Solar & Wind Projects Solar and wind facilities that begin construction within approximately 12 months following the enactment of the legislation will retain eligibility for the Section 45Y and 48E clean energy tax credits, even if the project is placed in service after 2027.
Dec 31, 2027	Eligibility for Clean Energy Credits (45Y/48E) Solar and wind projects placed in service on or before December 31, 2027, are eligible for the Section 45Y and 48E tax credits, regardless of their construction start date.

Other credits and deductions, such as Sections 45L and 179D, are widely expected to be included in the next Congressional Tax Extenders Package, as has been the case in previous years.

However, the temporary and uncertain nature of these extensions makes it difficult to plan for these incentives in advance. Despite this, supporting these provisions is highly beneficial to the industry, particularly for **developers, building owners, architects and engineers** who rely on them to support energy-efficient construction and design.

New Depreciation Framework Reshapes Capital Investment for Building Owners

Under Section 70301 of the OBBBA, large-building owners and other stakeholders will benefit from significant enhancements to bonus depreciation. Eligible business property acquired after January 19, 2025, and placed in service will qualify for 100% bonus depreciation, allowing for full expensing. To be eligible, the property must have a recovery period of 20 years or less under the General Depreciation System (GDS). For assets placed in service between Jan. 1 and Jan. 19, 2025, the Tax Cuts and Jobs Act (TCJA) provision still applies, allowing a reduced bonus depreciation rate of 40%. Additionally, taxpayers may elect to apply this 40% rate to all qualifying property placed in service during 2025; however, beginning with future tax years, they will have to adopt the 100% bonus depreciation rate for eligible property.

Boosting Domestic Manufacturing with Full Expensing Provisions

Under Section 70307 of the OBBBA, businesses engaged in qualified production activity (QPA)—defined as manufacturing, production or refining of tangible personal property excluding food or beverages prepared and sold in the same retail establishment—may benefit from a special depreciation allowance for Qualified Production Property (QPP). QPP refers to the portion of nonresidential real property used integrally in such activities and is classified as Section 1245 property, making it eligible for immediate 100% depreciation based on its adjusted basis. To qualify, the property must be placed in service within the United States or its possessions, have its original use begin with the taxpayer and construction must begin between January 19, 2025, and Jan. 1, 2029, with placement in service by Jan. 1, 2031. Taxpayers must elect QPP treatment, likely via Form 4562, though property under the Alternative Depreciation System (ADS) is excluded. Should the property be disposed or sold within ten years,

depreciation is recaptured similarly to Section 1245. While all components of the manufacturing site may be included as QPP, areas used for office, administration, lodging, parking, sales, R&D, software and engineering are excluded. Lessors are not eligible, even when leasing to qualifying producers. Additionally, production is limited specifically to agricultural and chemical activities. For previously existing properties or acquisitions, eligibility requires that the property was not used in QPA between Jan. 1, 2021, and May 12, 2025, and was not used by the taxpayer prior to acquisition. Such properties must also meet Section 179(d) requirements for qualified energy-efficient retrofit properties.

Section 174A Reinstates Immediate Expensing to Accelerate Innovation and Design

The introduction of IRC Section 174A under the OBBBA represents a substantial advancement for U.S.-based manufacturers, architects, and engineers, particularly those who invest heavily in research and development (R&D) by covering the four-part test required to qualify: New or Improved Business Component, Elimination of Uncertainty, Process of Elimination, and Technology in Nature. Beginning in tax years after December 31, 2024, Section 174A allows taxpayers to choose between two strategic options for handling domestic R&D expenses: immediate deduction in the year incurred or capitalization with amortization over a 60-month period. This flexibility empowers businesses to better align their tax planning with operational cash flow and innovation cycles.

Importantly, the legacy IRC Section 174 has been amended to exclusively cover foreign research costs, which must continue to be capitalized and amortized over 15 years. In contrast, the new domestic provisions under Section 174A offer additional incentives: larger companies—defined as those averaging more than \$31 million in gross receipts during 2021–2023—may accelerate remaining amortized R&D costs from 2022, 2023 and/or 2024 either fully in tax year 2025 or split over 2025 and 2026. Smaller companies falling below that threshold may amend prior returns to recover domestic amortized research costs, provided those amendments are filed by July 4, 2026.

For professionals in manufacturing, architecture and engineering, the restoration of immediate expensing plays a vital role in improving project margins, speeding up innovation timelines and reinvesting in new technologies and design of better buildings. However, companies electing the immediate expensing option must once again comply with IRC Section 280C, meaning any R&D credits claimed will require a corresponding reduction to avoid double benefit, as was required prior to 2022.

Conclusion

As the Internal Revenue Code undergoes a sweeping transition from the Inflation Reduction Act (IRA) to the One Big Beautiful Bill Act (OBBBA), industries such as manufacturing, architecture and engineering stand to gain significantly from newly introduced tax provisions, including IRC Section 174A. However, maximizing these benefits and ensuring compliance

requires more than standard tax preparation. Many of the updated rules, including expensing options, amortization treatments and R&D credit offsets, are nuanced and complex.

To fully capitalize on the opportunities within the evolving tax landscape, companies should engage specialized professionals, such as tax attorneys and engineers, experienced in regulatory and technical tax matters. While Certified Public Accountants (CPAs) play a vital role, typical generalists may not be fully versed in the latest legislation, particularly provisions impacting design, research and innovation sectors. Strategic consultation can help uncover hidden value, mitigate risks and align financial planning with evolving compliance requirements.

In this rapidly changing environment, the difference between missed opportunities and optimized outcomes may rest on choosing the right expertise.

References

1. [H.R.1 - 119th Congress \(2025-2026\): One Big Beautiful Bill Act | Congress.gov | Library of Congress](#)
2. [H.R.5376 - 117th Congress \(2021-2022\): Inflation Reduction Act of 2022 | Congress.gov | Library of Congress](#)

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