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119TH CONGRESS
1ST SESSION

H. R. 5441

To amend the Internal Revenue Code of 1986 to expand the advanced manufacturing production credit to include fusion energy components.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 17, 2025

Mrs. MILLER of West Virginia (for herself, Ms. TENNEY, Ms. DELBENE, and Mr. BEYER) introduced the following bill; which was referred to the Committee on Ways and Means

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A BILL

To amend the Internal Revenue Code of 1986 to expand the advanced manufacturing production credit to include fusion energy components.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Fusion Advanced Manufacturing Parity Act''.

SEC. 2. INCLUSION OF FUSION ENERGY COMPONENTS IN ADVANCED MANUFACTURING PRODUCTION CREDIT.

(a) IN GENERAL.—Section 45X of the Internal Revenue Code of 1986, as amended by section 70514 of Public Law 119–21, is amended—

(1) in subsection (b)—

(A) in paragraph (1)—

(i) in subparagraph (L)(ii), by striking ''and'' at the end,

(ii) by redesignating subparagraph (M) as subparagraph (N), and

(iii) by inserting after subparagraph (L) the following new subparagraph:

''(M) in the case of a fusion energy component, an amount equal to 25 percent of the sales price of such component, and'',

(B) in paragraph (3)—

(i) in subparagraph (A), by striking ''and (D)'' and inserting '', (D), and (E)'',

(ii) by redesignating subparagraphs (D) and (E) as subparagraphs (E) and (F), respectively, and

(iii) by inserting after subparagraph (C) the following new subparagraph:

"(D) PHASE OUT FOR FUSION ENERGY COMPONENTS.—

"(i) IN GENERAL.—In the case of any fusion energy component sold after December 31, 2031, the amount determined under this subsection with respect to such component shall be equal to the product of—

"(I) the amount determined under paragraph (1) with respect to such component, as determined without regard to this paragraph, multiplied by

"(II) the phase out percentage under clause (ii).

"(ii) PHASE OUT PERCENTAGE.—The phase out percentage under this clause is equal to—

"(I) in the case of a fusion energy component sold during calendar year 2032, 75 percent,

"(II) in the case of a fusion energy component sold during calendar year 2033, 50 percent,

''(III) in the case of a fusion energy component sold during calendar year 2034, 25 percent, and

''(IV) in the case of a fusion energy component sold after December 31, 2034, 0 percent.'', and

(2) in subsection (c)—

(A) in paragraph (1)(A)—

(i) by redesignating clauses (iv) and (v) as clauses (v) and (vi), respectively, and

(ii) by inserting after clause (iii) the following new clause:

''(iv) any fusion energy component,'',

(B) by redesignating paragraph (6) as paragraph (7),

(C) by inserting after paragraph (5) the following new paragraph:

''(6) FUSION ENERGY COMPONENT.—

''(A) IN GENERAL.—The term 'fusion energy component' means any of the following components which are intended for the operation or use of a fusion energy machine:

''(i) A high-temperature superconducting magnet.

''(ii) A fusion chamber or plasma vacuum vessel.

''(iii) A blanket system.

''(iv) High-temperature superconductor tape or wire.

''(v) A high-energy laser.

''(vi) A fusion heating system.

''(vii) A high-voltage capacitor.

''(viii) Films used in high-voltage capacitors.

''(ix) Plasma compression systems.

''(x) High-power switches.

''(xi) Packaging used in high-power switches.

''(xii) High-voltage conductors and insulators.

''(xiii) Composite materials used in fusion chambers or vacuum vessels.

''(xiv) Fused quartz parts and ceramics used in fusion chambers or vacuum vessels.

''(xv) Plasma formation devices.

''(xvi) Fuel processing and storage components.

''(xvii) Cooling system components.

"(xviii) Fusion targets.

"(xix) Dielectric fluids and systems.

"(xx) Controls equipment.

"(B) FUSION ENERGY MACHINE.—The term 'fusion energy machine' means a fusion machine (as defined in section 11 of the Atomic Energy Act of 1954 (42 U.S.C. 2014)) which is used for the production of electricity or process heat, as well as any associated system (such as for fuel and exhaust processing).

"(C) HIGH-TEMPERATURE SUPERCONDUCTING MAGNET.—The term 'high-temperature superconducting magnet' means the entire system of electromagnetic coils consisting of high-temperature superconducting tape and structural metals that produce the magnetic fields, which confine, shape, and stabilize the plasma in a fusion energy machine, including toroidal field magnets, poloidal field magnets, and central solenoid magnets.

"(D) FUSION CHAMBER OR PLASMA VACUUM VESSEL.—The term 'fusion chamber or plasma vacuum vessel' means the enclosing structure that—

"(i) holds fusion targets or creates and maintains a vacuum in the area which contains the fusion plasma, and

"(ii) absorbs the plasma heat exhaust and structurally supports other integrated components, such as the plasma facing material, in-vessel diagnostics, and plasma heating systems in the fusion energy machine.

"(E) BLANKET SYSTEM.—The term 'blanket system' means the containers, pipes, pumps, chemistry control, tritium and fuel extractors, heat exchangers, and liquid metal, salt bath, or other components that are designed to remove the fusion heat, shield components from neutrons, generate tritium, and transfer heat to a power generation system.

"(F) HIGH-TEMPERATURE SUPERCONDUCTOR TAPE OR WIRE.—The term 'high-temperature superconductor tape or wire' means the multi-layered tape or foil that carries electrical current with no resistance at high temperatures and magnetic fields.

"(G) HIGH-ENERGY LASER.—The term 'high-energy laser' means the sources of light

and associated optic systems that transfer beams of light to either directly or indirectly implode a fusion fuel capsule to create a fusion reaction.

''(H) FUSION HEATING SYSTEM.—The term 'fusion heating system' means an auxiliary system used to increase the temperature of fusion fuel to create fusion reactions.

''(I) HIGH-VOLTAGE CAPACITOR.—The term 'high-voltage capacitor' means an electrical component designed to store and release electrical energy in circuits operating at high voltage levels above 1,000 volts, as well as circuit components (such as printed circuit boards) used to enable the capacitor system or related power system to function.

''(J) FILMS USED IN HIGH-VOLTAGE CAPACITORS.—The term 'films used in high-voltage capacitors' means metalized and non-metalized films used due to their dielectric properties, high breakdown voltage, and thermal stability in windings for high-voltage capacitors.

''(K) PLASMA COMPRESSION SYSTEM.—The term 'plasma compression system' means mechanical or electrical components, such as

electromagnetic coils or gas-driven pistons, used to compress plasma targets.

''(L) HIGH-POWER SWITCHES.—The term 'high-power switches' means switching devices which—

''(i) use semiconductors, electrodes and a gas chamber, or other approaches, and

''(ii) are used to control and manage the flow of power in circuits by enabling or interrupting the flow of high voltage or high current greater than 1 kilovolt.

''(M) PACKAGING USED IN HIGH-POWER SWITCHES.—The term 'packaging used in high-power switches' means covers, terminals, or connections, heat transfer components, or packaging surrounding a semiconductor die.

''(N) HIGH-VOLTAGE CONDUCTORS AND INSULATORS.—The term 'high-voltage conductors and insulators' means power transmission components used to connect high-voltage capacitors to fusion energy machines, including cables and busbars capable of operating greater than 1 kilovolt or 1 kiloampere.

''(O) COMPOSITE MATERIALS USED IN VACUUM VESSELS.—The term 'composite materials used in vacuum vessels' means fiber reinforced materials, such as glass-epoxy systems, used to create vacuum chambers for fusion energy machines.

''(P) FUSED QUARTZ AND CERAMIC PARTS USED IN VACUUM VESSELS.—The term 'fused quartz parts and ceramics used in vacuum vessels' means components made of high-purity quartz material or other dielectric ceramics and machined into components used as plasma-facing components on fusion energy machine vacuum vessels.

''(Q) PLASMA FORMATION DEVICE.—The term 'plasma formation device' means components used to form fusion plasmas through methods such as coaxial helicity injection or local helicity injection.

''(R) FUEL PROCESSING AND STORAGE COMPONENTS.—The term 'fuel processing and storage components' means components used for the manufacture, purification, processing, transport, or storage of fusion fuels, including deuterium, tritium, and helium-3.

''(S) COOLING SYSTEM COMPONENTS.—The term 'cooling system components' includes chillers, fluid coolers, distribution systems, and similar components that cool mechanical or electrical components (such as high-temperature superconducting magnets) during normal operations.

''(T) FUSION TARGETS.—The term 'fusion targets' means components that—

''(i) contain the fusion fuel in the fusion chamber, and

''(ii) receive energy from lasers or electrical circuits to cause such fusion fuel to undergo a fusion reaction.

''(U) DIELECTRIC FLUIDS AND SYSTEMS.—The term 'dielectric fluids and systems' means—

''(i) electrically insulated fluids, such as transformer oil or deionized water used for electrical insulation, and

''(ii) any associated equipment needed to move and maintain the physical properties of such fluids, such as pumps, filtration systems, and cooling systems.

''(V) CONTROLS EQUIPMENT.—The term 'controls equipment' means any hardware or software used to electronically control any subsystem of a fusion energy machine.'', and

(D) in paragraph (7) (as redesignated by subparagraph (B) of this paragraph)—

(i) in subparagraph (D)(i), by inserting ''beryllium hydroxide, or beryllium fluoride,'' after ''copper-beryllium master alloy,'',

(ii) in subparagraph (P)(i), by striking ''or lithium hydroxide'' and inserting '', lithium hydroxide, lithium chloride, lithium fluoride, lithium-6, lithium-7, or lithium tetrafluoroberyllate'',

(iii) by striking subparagraphs (X) and (Y) and inserting the following:

''(X) TUNGSTEN.—Tungsten which is—

''(i) converted to tungsten master alloy,

''(ii) converted to ammonium paratungstate, ferrotungsten, tungsten trioxide, or tungsten carbide, or

''(iii) purified to a minimum purity of 85 percent tungsten by mass.

''(Y) VANADIUM.—Vanadium which is—

''(i) converted to vanadium master alloy,

''(ii) converted to ferrovanadium or vanadium pentoxide, or

''(iii) purified to a minimum purity of 85 percent vanadium by mass.'',

(iv) in subparagraph (AA)—

(I) by redesignating clauses (xxiii) through (xxv) as clauses (xxvi) through (xxviii), respectively,

(II) by redesignating clauses (vii) through (xxii) as clauses (ix) through (xxiv), respectively,

(III) by redesignating clauses (iii) through (vi) as clauses (iv) through (vii), respectively,

(IV) by inserting after clause (ii) the following new clause:

''(iii) Deuterium.'',

(V) by inserting after clause (vii) (as redesignated by subclause (III) of this clause) the following new clause:

''(viii) Helium–3.'', and

(VI) by inserting after clause (xxiv) (as redesignated by subclause (II) of this clause) the following new clause:

''(xxv) Tritium.'',

(v) by redesignating subparagraphs (I) through (AA) as subparagraphs (K) through (CC), respectively,

(vi) by redesignating subparagraphs (E) through (H) as subparagraphs (F) through (I), respectively,

(vii) by inserting after subparagraph (D) the following new subparagraph:

''(E) BORON.—Boron which is converted to boron carbide or ferroboron.'', and

(viii) by inserting after subparagraph (I) (as redesignated by clause (vi) of this paragraph) the following new subparagraph:

''(J) COPPER CHROMIUM ZIRCONIUM.—Alloys or assemblies comprised of not less than 80 percent copper.''.

(b) CONFORMING AMENDMENT.—Section 30D(e)(1)(A) of the Internal Revenue Code of 1986 is

amended by striking ''section 45X(c)(6)'' and inserting ''section 45X(c)(7)''.

(c) EFFECTIVE DATE.—The amendments made by this section shall apply to components produced and sold after December 31, 2025.

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