119TH CONGRESS
1ST SESSION

S. 1642

To amend the Internal Revenue Code of 1986 to expand the advanced manufacturing investment credit to include materials integral to semiconductor manufacturing.

IN THE SENATE OF THE UNITED STATES

MAY 7, 2025

Mrs. BLACKBURN (for herself, Mr. BENNET, Mr. TILLIS, and Mr. COONS) introduced the following bill; which was read twice and referred to the Committee on Finance

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A BILL

To amend the Internal Revenue Code of 1986 to expand the advanced manufacturing investment credit to include materials integral to semiconductor manufacturing.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Strengthening Essen-
5 tial Manufacturing and Industrial Investment Act" or the
6 "SEMI Investment Act".

1 **SEC. 2. EXPANSION OF ADVANCED MANUFACTURING IN-**
2 **VESTMENT CREDIT.**

3 (a) IN GENERAL.—Paragraph (3) of section 48D(b)
4 of the Internal Revenue Code of 1986 is amended to read
5 as follows:

6 "(3) ADVANCED MANUFACTURING FACILITY.—
7 "(A) IN GENERAL.—For purposes of this
8 section, the term 'advanced manufacturing fa-
9 cility' means a facility for which the primary
10 purpose is the manufacturing of—
11 "(i) semiconductors,
12 "(ii) semiconductor manufacturing
13 equipment, or
14 "(iii) semiconductor materials.
15 "(B) SEMICONDUCTOR MATERIALS.—
16 "(i) IN GENERAL.—For purposes of
17 this paragraph, the term 'semiconductor
18 materials' means—
19 "(I) any direct production mate-
20 rial, or
21 "(II) any indirect production ma-
22 terial,
23 which is used in semiconductor manufac-
24 turing (as defined in section 231.116 of
25 title 15, Code of Federal Regulations).

1 "(ii) DIRECT PRODUCTION MATE-
2 RIAL.—For purposes of this subparagraph,
3 the term 'direct production material'
4 means a material which is—
5 "(I) primarily used for, and inte-
6 gral to, the production of a semicon-
7 ductor,
8 "(II) physically incorporated into
9 a finished semiconductor, and
10 "(III) any of the following:
11 "(aa) SUBSTRATE.—Any
12 substrate of silicon, silicon car-
13 bide, gallium nitride, gallium ar-
14 senide, indium phosphide, or
15 other semiconductor-grade sub-
16 strate material.
17 "(bb) THIN FILM OR
18 LAYERING MATERIAL.—Any de-
19 posited metal, dielectric, barrier
20 material, or dopant that forms
21 the physical structure of a semi-
22 conductor.
23 "(cc) PACKAGING SUB-
24 STRATE MATERIAL.—Any ce-
25 ramic, organic, or metallic mate-

rial that forms the physical base for semiconductor packaging.

"(dd) BONDING, INTERCONNECT, OR ADHESIVE MATERIAL.—Any wire bond, solder bump, lead frame, die attach adhesive, underfill, or other material which—

"(AA) forms electrical connections within a semiconductor, or

"(BB) provides structural integrity within a semiconductor.

"(iii) INDIRECT PRODUCTION MATERIAL.—

"(I) IN GENERAL.—For purposes of this subparagraph, the term 'indirect production material' means a material which is—

"(aa) a specialized material that is primarily used for, and integral to, the production, testing, inspection, or packaging of a semiconductor,

1 “(bb) not physically incor-
2 porated into a finished semicon-
3 ductor, and

4 “(cc) any of the following:

5 “(AA) PROCESS CHEMI-
6 CALS.—An etchant, deposi-
7 tion precursor, doping gas,
8 or other chemical used in
9 wafer fabrication.

10 “(BB) PHOTOLITHOG-
11 RAPHY MATERIAL.—A
12 photoresist, photoresist an-
13 cillary material, developer,
14 mask, or pellicle used in
15 semiconductor patterning.

16 “(CC) CLEANING,
17 PLANARIZATION, AND PREP-
18 ARATION MATERIAL.—A sol-
19 vent, surfactant, slurry,
20 Chemical Mechanical
21 Planarization (CMP) pad,
22 conditioning disk, or clean-
23 ing agent used to prepare
24 and maintain semiconductor
25 manufacturing surfaces.

"(DD) TESTING AND INSPECTION MATERIAL.—A probe card, test socket, or optical inspection material.

"(EE) PACKAGING PROCESS MATERIAL.—A mold compound, encapsulant, or bonding wire used in assembly processes.

"(FF) FLUID-, GAS-, OR WAFER-HANDLING MATERIAL.—A polymer, elastomer, ceramic material and resultant tubings, fittings, vessels, filters, seals, or other such chemical-handling or wafer-handling material.

"(GG) WAFER PROCESSING CHAMBER MATERIALS.—Any process chamber materials used in production that play an active role in energy transmission, heat dissipation, plasma re-

1 sistance, or chemical resist-
2 ance.
3 ''(HH) OTHER MATE-
4 RIAL.—Any other material
5 identified by the Secretary
6 pursuant to subclause (II).
7 ''(II) OTHER INDIRECT PRODUC-
8 TION MATERIALS.—For purposes of
9 item (cc)(HH) of subclause (I), the
10 Secretary (in consultation with the
11 Secretary of Commerce) shall identify
12 additional materials which are de-
13 scribed in items (aa) and (bb) of such
14 subclause.
15 ''(III) EXCLUSION.—The term
16 'indirect production material' shall not
17 include any material which—
18 ''(aa) has a generic use, and
19 ''(bb) is predominately used
20 in an application other than
21 semiconductor manufacturing.
22 ''(iv) LIST OF SEMICONDUCTOR MATE-
23 RIALS.—
24 ''(I) IN GENERAL.—Not later
25 than 180 days after the date of enact-

1 ment of the Strengthening Essential
2 Manufacturing and Industrial Invest-
3 ment Act, and annually thereafter, the
4 Secretary, in consultation with the
5 Secretary of Commerce, shall publish
6 a list that sets forth the specifications,
7 characteristics, and applications of
8 materials that qualify as direct pro-
9 duction materials and indirect produc-
10 tion materials for purposes of clauses
11 (ii) and (iii).

12 ''(II) PETITION FOR INTERIM DE-
13 TERMINATION.—In the case of any
14 material which has not been included
15 on the most recent list under sub-
16 clause (I), a taxpayer may file a peti-
17 tion (at such time, and in such form
18 and manner, as the Secretary may
19 prescribe) with the Secretary for a de-
20 termination of whether such material
21 qualifies as a direct production mate-
22 rial or indirect production material for
23 purposes of clauses (ii) and (iii).''.

1 (b) EFFECTIVE DATE.—The amendment made by
2 this section shall apply to property placed in service after
3 the date of enactment of this Act.

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