

117TH CONGRESS  
1ST SESSION

# H. R. 5423

To amend the Internal Revenue Code of 1986 to establish the advanced solar manufacturing production credit.

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## IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 29, 2021

Mr. KILDEE (for himself, Mr. BLUMENAUER, Ms. DELBENE, Mr. RYAN, Mr. SCHNEIDER, Ms. BOURDEAUX, Mr. KRISHNAMOORTHY, Mr. CLEAVER, Mr. HIGGINS of New York, and Mr. SWALWELL) 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 establish the advanced solar manufacturing production credit.

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 “Solar Energy Manufac-  
5 turing for America Act”.

### 6 **SEC. 2. ADVANCED SOLAR MANUFACTURING PRODUCTION** 7 **CREDIT.**

8 (a) IN GENERAL.—Subpart C of part IV of sub-  
9 chapter A of chapter 1 of the Internal Revenue Code of

1 1986 is amended by adding at the end the following new  
2 section:

3 **“SEC. 36C. ADVANCED SOLAR MANUFACTURING PRODUC-**  
4 **TION CREDIT.**

5 “(a) IN GENERAL.—

6 “(1) ALLOWANCE OF CREDIT.—There shall be  
7 allowed as a credit against the tax imposed by this  
8 subtitle for any taxable year an amount equal to the  
9 sum of the credit amounts determined under sub-  
10 section (b) with respect to each solar component  
11 which is—

12 “(A) produced by such taxpayer, and

13 “(B) during the taxable year—

14 “(i) sold by the taxpayer to—

15 “(I) an unrelated person, or

16 “(II) a related person for the use  
17 of such person in their trade or busi-  
18 ness (with the exception of any trade  
19 or business related to resale of such  
20 solar component without any subse-  
21 quent modification, assembly, or inte-  
22 gration into a project), or

23 “(ii) placed in service or operation by  
24 the taxpayer or any other person.

1           “(2) PRODUCTION AND SALE MUST BE IN  
2       TRADE OR BUSINESS.—Any solar component pro-  
3       duced and sold by the taxpayer shall be taken into  
4       account only if the production and sale described in  
5       paragraph (1) is in a trade or business of the tax-  
6       payer.

7       “(b) CREDIT AMOUNT.—

8           “(1) IN GENERAL.—Subject to paragraph (3),  
9       the amount determined under this subsection with  
10      respect to any solar component shall be equal to—

11           “(A) in the case of an integrated module,  
12      an amount equal to the product of—

13           “(i) 11 cents, multiplied by

14           “(ii) the capacity of such module (ex-  
15      pressed on a per direct current watt basis),

16           “(B) in the case of a photovoltaic cell, an  
17      amount equal to the product of—

18           “(i) 4 cents, multiplied by

19           “(ii) the capacity of such cell (ex-  
20      pressed on a per direct current watt basis),

21           “(C) in the case of a photovoltaic wafer,  
22      \$12 per square meter,

23           “(D) in the case of solar grade polysilicon,  
24      \$3 per kilogram,

1 “(E) in the case of a solar module which  
2 is not an integrated module, an amount equal  
3 to the product of—

4 “(i) 7 cents, multiplied by

5 “(ii) the capacity of such module (ex-  
6 pressed on a per direct current watt basis),

7 “(F) in the case of a solar tracker torque  
8 tube, an amount equal to the product of—

9 “(i) 87 cents, multiplied by

10 “(ii) the mass of such torque tube (ex-  
11 pressed on a per kilogram basis),

12 “(G) in the case of a solar tracker longitu-  
13 dinal purlin, an amount equal to the product  
14 of—

15 “(i) 87 cents, multiplied by

16 “(ii) the mass of such longitudinal  
17 purlin (expressed on a per kilogram basis),

18 “(H) in the case of a solar structural fas-  
19 tener, an amount equal to the product of—

20 “(i) \$2.28, multiplied by

21 “(ii) the mass of such structural fas-  
22 tener (expressed on a per kilogram basis),

23 and

24 “(I) in the case of an inverter, an amount  
25 equal to the product of—

1 “(i) the applicable amount, multiplied  
2 by

3 “(ii) the capacity of such inverter (ex-  
4 pressed on a per alternating current watt  
5 basis).

6 “(2) APPLICABLE AMOUNT.—For purposes of  
7 paragraph (1)(I), the applicable amount with respect  
8 to any inverter shall be—

9 “(A) in the case of a central inverter, 0.25  
10 cents,

11 “(B) in the case of a utility-scale inverter,  
12 1.5 cents,

13 “(C) in the case of a commercial inverter,  
14 2 cents,

15 “(D) in the case of a residential inverter,  
16 6.5 cents, and

17 “(E) in the case of a microinverter, 11  
18 cents.

19 “(3) PHASE OUT.—

20 “(A) IN GENERAL.—In the case of any  
21 solar component sold after December 31, 2028,  
22 the amount determined under this subsection  
23 with respect to such component shall be equal  
24 to the product of—

1 “(i) the amount determined under  
 2 paragraph (1) with respect to such compo-  
 3 nent, as determined without regard to this  
 4 paragraph, multiplied by

5 “(ii) the phase out percentage under  
 6 subparagraph (B).

7 “(B) PHASE OUT PERCENTAGE.—The  
 8 phase out percentage under this subparagraph  
 9 is equal to—

10 “(i) in the case of a solar component  
 11 sold during calendar year 2029, 70 per-  
 12 cent,

13 “(ii) in the case of a solar component  
 14 sold during calendar year 2030, 35 per-  
 15 cent, and

16 “(iii) in the case of a solar component  
 17 sold after December 31, 2030, 0 percent.

18 “(c) DEFINITIONS AND OTHER RULES.—In this sec-  
 19 tion—

20 “(1) SOLAR COMPONENT.—The term ‘solar  
 21 component’ means any property described in para-  
 22 graph (2).

23 “(2) OTHER DEFINITIONS.—

24 “(A) INTEGRATED MODULE.—The term  
 25 ‘integrated module’ means a solar module pro-

1           duced by a single manufacturer through the  
2           conversion of a photovoltaic wafer or other  
3           semiconductor material into an end product  
4           which is—

5                   “(i) suitable to generate electricity  
6                   when exposed to sunlight, and

7                   “(ii) ready for installation without ad-  
8                   ditional manufacturing processes.

9           “(B) PHOTOVOLTAIC CELL.—The term  
10          ‘photovoltaic cell’ means the smallest semicon-  
11          ductor element of a solar module which per-  
12          forms the immediate conversion of light into  
13          electricity.

14          “(C) PHOTOVOLTAIC WAFER.—The term  
15          ‘photovoltaic wafer’ means a thin slice or sheet  
16          of semiconductor material of at least 240  
17          square centimeters produced by a single manu-  
18          facturer—

19                   “(i) either—

20                           “(I) directly from molten solar  
21                           grade polysilicon, or

22                           “(II) through formation of an  
23                           ingot from molten polysilicon and sub-  
24                           sequent slicing, and

1 “(ii) which comprises the substrate of  
2 a photovoltaic cell.

3 “(D) SOLAR GRADE POLYSILICON.—The  
4 term ‘solar grade polysilicon’ means silicon  
5 which is—

6 “(i) suitable for use in photovoltaic  
7 manufacturing, and

8 “(ii) purified to a minimum purity of  
9 99.999999 percent silicon by mass.

10 “(E) SOLAR MODULE.—The term ‘solar  
11 module’ means the connection and lamination  
12 of photovoltaic cells into an environmentally  
13 protected final assembly which is—

14 “(i) suitable to generate electricity  
15 when exposed to sunlight, and

16 “(ii) ready for installation without an  
17 additional manufacturing process.

18 “(F) SOLAR TRACKER COMPONENTS.—

19 “(i) IN GENERAL.—The term ‘solar  
20 tracker’ means a structural support ele-  
21 ment which supports and mechanically  
22 moves solar panels to varying angles with  
23 respect to the position of the sun to opti-  
24 mize solar panel output throughout the  
25 day.



1                   “(ii)   SOLAR   TRACKER   TORQUE  
2                   TUBE.—The term ‘solar tracker torque  
3                   tube’ means a tubular structural steel sup-  
4                   port element of any cross-sectional shape  
5                   which—

6                               “(I) is part of a solar tracker,

7                               “(II) may be assembled from in-  
8                   dividually manufactured segments,

9                               “(III) spans longitudinally be-  
10                  tween foundation posts,

11                              “(IV) supports a solar panel  
12                   (with or without the use of additional  
13                   support rails), and

14                              “(V) is rotated by means of a  
15                   drive system.

16                   “(iii) SOLAR TRACKER LONGITUDINAL  
17                   PURLIN.—The term ‘solar tracker longitu-  
18                   dinal purlin’ means a structural steel sup-  
19                   port element which satisfies the conditions  
20                   described in subclauses (I) through (V) of  
21                   clause (ii).

22                   “(iv)   SOLAR   STRUCTURAL   FAS-  
23                   TENER.—The term ‘solar structural fas-  
24                   tener’ means a component which is used to  
25                   connect—

1 “(I) segments of a solar tracker  
2 torque tube or solar tracker longitu-  
3 dinal purlin,

4 “(II) the mechanical and drive  
5 system components of a solar tracker  
6 to the foundation of such solar track-  
7 er, or

8 “(III) solar tracker torque tubes  
9 or solar tracker longitudinal purlins to  
10 drive assemblies.

11 “(G) INVERTERS.—

12 “(i) IN GENERAL.—The term ‘in-  
13 verter’ means an end product which is suit-  
14 able to convert direct current electricity  
15 into alternating current electricity.

16 “(ii) CENTRAL INVERTER.—The term  
17 ‘central inverter’ means an inverter which  
18 is suitable for large utility-scale systems  
19 and has a capacity which is greater than  
20 1,500 kilowatts (expressed on a per alter-  
21 nating current watt basis).

22 “(iii) COMMERCIAL INVERTER.—The  
23 term ‘commercial inverter’ means an in-  
24 verter which—

1 “(I) is suitable for commercial  
2 applications,

3 “(II) has a rated output of 208,  
4 480, or 600 volt three-phase power,  
5 and

6 “(III) has a capacity which is not  
7 less than 20 kilowatts and not greater  
8 than 170 kilowatts (expressed on a  
9 per alternating current watt basis).

10 “(iv) MICROINVERTER.—The term  
11 ‘microinverter’ means an inverter which—

12 “(I) is suitable to connect with at  
13 least one integrated module or solar  
14 module,

15 “(II) has a rated output of 120  
16 volt single-phase power, and

17 “(III) has a capacity which is not  
18 greater than 650 watts (expressed on  
19 a per alternating current watt basis).

20 “(v) RESIDENTIAL INVERTER.—The  
21 term ‘residential inverter’ means an in-  
22 verter which—

23 “(I) is suitable to connect with at  
24 least one integrated module or solar  
25 module for a residence,

1 “(II) has a rated output of 120  
2 volt single-phase power, and

3 “(III) has a capacity which is not  
4 greater than 20 kilowatts (expressed  
5 on a per alternating current watt  
6 basis).

7 “(vi) UTILITY-SCALE INVERTER.—The  
8 term ‘utility-scale inverter’ means an in-  
9 verter which—

10 “(I) is suitable for large utility-  
11 scale systems,

12 “(II) has a rated output of not  
13 less than 480 volt three-phase power,  
14 and

15 “(III) has a capacity which is  
16 greater than 170 kilowatts and not  
17 greater than 1,500 kilowatts (ex-  
18 pressed on a per alternating current  
19 watt basis).

20 “(3) RELATED PERSONS.—Persons shall be  
21 treated as related to each other if such persons  
22 would be treated as a single employer under the reg-  
23 ulations prescribed under section 52(b). In the case  
24 of a corporation which is a member of an affiliated  
25 group of corporations filing a consolidated return,

1 such corporation shall be treated as selling compo-  
2 nents to an unrelated person if such component is  
3 sold to such a person by another member of such  
4 group.

5 “(4) ONLY PRODUCTION IN THE UNITED  
6 STATES TAKEN INTO ACCOUNT.—Sales shall be  
7 taken into account under this section only with re-  
8 spect to solar components the production of which is  
9 within—

10 “(A) the United States (within the mean-  
11 ing of section 638(1)), or

12 “(B) a possession of the United States  
13 (within the meaning of section 638(2)).

14 “(5) PASS-THRU IN THE CASE OF ESTATES AND  
15 TRUSTS.—Under regulations prescribed by the Sec-  
16 retary, rules similar to the rules of subsection (d) of  
17 section 52 shall apply.

18 “(d) REGISTRATION.—

19 “(1) IN GENERAL.—The Secretary shall require  
20 any person claiming tax benefits under the provi-  
21 sions of this section to register with the Secretary at  
22 such time, in such form and manner, and subject to  
23 such terms and conditions, as the Secretary may by  
24 regulations prescribe. A registration under this sub-

1 section may be used only in accordance with regula-  
2 tions prescribed under this subsection.

3 “(2) REGISTRATION IN EVENT OF CHANGE IN  
4 OWNERSHIP.—Under regulations prescribed by the  
5 Secretary, a person (other than a corporation the  
6 stock of which is regularly traded on an established  
7 securities market) shall be required to re-register  
8 under this subsection if after a transaction (or series  
9 of related transactions) more than 50 percent of  
10 ownership interests in, or assets of, such person are  
11 held by persons other than persons (or persons re-  
12 lated thereto) who held more than 50 percent of  
13 such interests or assets before the transaction (or  
14 series of related transactions).

15 “(3) DENIAL, REVOCATION, OR SUSPENSION OF  
16 REGISTRATION.—Rules similar to the rules of sec-  
17 tion 4222(c) shall apply to registration under this  
18 section.

19 “(4) INFORMATION REPORTING.—The Sec-  
20 retary may require—

21 “(A) information reporting by any person  
22 registered under this subsection, and

23 “(B) information reporting by such other  
24 persons as the Secretary deems necessary to  
25 carry out this section.”.

1 (b) CONFORMING AMENDMENTS.—

2 (1) Section 6211(b)(4)(A) of the Internal Rev-  
3 enue Code of 1986 is amended by inserting “36C,”  
4 after “36B,”.

5 (2) Paragraph (2) of section 1324(b) of title  
6 31, United States Code, is amended by inserting  
7 “36C,” after “36B,”.

8 (3) The table of sections for subpart C of part  
9 IV of subchapter A of chapter 1 of the Internal Rev-  
10 enue Code of 1986 is amended by inserting after the  
11 item relating to section 36B the following new item:

“Sec. 36C. Advanced solar manufacturing production credit.”.

12 (c) EFFECTIVE DATE.—The amendments made by  
13 this section shall apply to components produced and sold  
14 after December 31, 2021.

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