505502957 05/31/2019

PATENT ASSIGNMENT COVER SHEET

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 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ROBERT M. PORTER JR.	05/10/2019
JOHN DORRENBACHER	05/10/2019

RECEIVING PARTY DATA

Name:	ADVANCED ENERGY INDUSTRIES, INC.
Street Address:	1625 SHARP POINT DRIVE
City:	FORT COLLINS
State/Country:	COLORADO
Postal Code:	80525

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16405251

CORRESPONDENCE DATA

Fax Number: (720)536-4910

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

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Email: rene@nodiplaw.com

Correspondent Name: NEUGEBOREN O'DOWD PC Address Line 1: 1227 SPRUCE STREET

Address Line 2: SUITE 200

Address Line 4: BOULDER, COLORADO 80302

ATTORNEY DOCKET NUMBER:	AE2017-002US
NAME OF SUBMITTER:	STEPHEN S. GRUBER
SIGNATURE:	/Stephen S. Gruber/
DATE SIGNED:	05/31/2019

Total Attachments: 2

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PATENT 505502957 REEL: 049331 FRAME: 0209

ASSIGNMENT OF PATENT APPLICATION

FOR GOOD AND VALUABLE CONSIDERATION:

We, the undersigned (each) have agreed and hereby agree to assign for good and valuable consideration, receipt of which is hereby expressly acknowledged, and do hereby sell, assign and transfer unto

Advanced Energy Industries, Inc.

a corporation organized under the laws of the state of Delaware as Assignee, and its successors, assigns and legal representatives, the entire right, title and interest, for all countries in and to certain inventions relating to

ADDITIVE SYNTHESIS OF INTERLEAVED SWITCH MODE POWER STAGES FOR MINIMAL DELAY IN SET POINT TRACKING

described in an application for Letters Patent of the United States, identified as Attorney Docket No. <u>AE2017-002US</u>, at Neugeboron O'Dowd PC, 1227 Spruce Street, Suite 200, Boulder, CO 80302 and filed on <u>5/1/2019</u>, as Application Serial No. <u>16/405.251</u>, and the invention(s) and improvement(s) set forth therein, and any and all provisionals, non-provisionals, continuations, continuations-in-part, divisionals, and renewals of and substitutes for said application for said Letters Patent, and all the rights and privileges under any and all Letters Patent that may be granted therefor in any country, and any reissues, or reexaminations, or extensions of said Letters Patent. We request that any and all Letters Patent for said inventions be issued to said Assignee, its successors, assigns and legal representatives, or to such nominees as it may designate.

We agree that, when requested, we will, without charge to said Assignee but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents for said inventions in any and all countries and for vesting title thereto in said Assignee, its successors, assigns and legal representatives or nominees.

We authorize and empower the said Assignee, its successors, assigns and legal representatives or nominees, to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from us.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said Assignee or nominee to claim the aforesaid benefit of the right of priority provided by the International convention which may henceforth be substituted for it.

We covenant with said Assignee, its successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of any encumbrance, and that we have full right to convey the same as herein expressed.

IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below Inventor's Signature JENNIFER K ANDERSON **NOTARY PUBLIC** Robert M. Porter TATE OF COLORADO Inventor's Printed Name NOTARY ID 20054037136 MY COMMISSION EXPIRES 09/23/2021 STATE OF ssCOUNTY OF $\Omega(4)$, before me personally came the above named Robert M. Porter who is personally known by me day of or proved to me on the basis of satisactory evidence to be the same individual who executed the foregoing assignment, and who acknowledged to me that he/she executed the same of his/her own free will for the use and purposes therein set forth.

John Dorrenbacher Inventor's Printed Name

JENNIFER K ANDERSON NOTARY PUBLIC STATE OF COLORADO NOTARY ID 20054037138 '''V COMMISSION EXPIRES 09/23/2021

STATE OF

COUNTY OF

) SS

On this 10-10 day of 2011 before me personally came the above named John Dorrenbacher who is personally known by me or proved to me on the basis of satisfactory evidence to be the same individual who executed the foregoing assignment, and who acknowledged to me that he/she executed the same of his/her one free will for the use and purposes therein set forth.

By Commission Expires: