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July 28, 2022

FILED VIA EDIS

The Honorable Katherine M. Hiner
Acting Secretary to the Commission
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

Re: *Certain Solar Power Optimizers, Inverters, and Components Thereof*

Dear Acting Secretary Hiner,

Enclosed for filing please find documents in support of a request by Ampt, LLC (“Complainant”) that the U.S. International Trade Commission institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, concerning certain power optimizers, inverters, and components thereof, sold for importation, imported, or sold within the United States after importation. We are submitting a separate letter requesting confidential treatment for the unredacted versions of confidential exhibits 7C–11C included with this filing.

On March 16, 2020, the Commission issued a notice that it was temporarily waiving and amending certain of the Commission’s rules that require the filing of papers copies, CD-ROMs, and other physical media in section 337 investigation to address concerns about COVID-19. *See* 85 Fed. Reg. 15798 (Mar. 19, 2020). The Commission also indicated it would permit parties to file section 337 complaints, exhibits, attachments, and appendices electronically. *See id.* Accordingly, Complainant’s filing only contains electronic documents.

Specifically, Complainant’s filing includes the following:

1. One (1) electronic copy of Ampt, LLC’s Verified Complaint, pursuant to Commission Rule 210.8(a)(1)(i);
2. One (1) electronic copy of the public exhibits and appendices to the Verified Complaint, pursuant to Commission Rule 210.8(a)(1)(i);

3. One (1) electronic copy of each confidential exhibit to the Verified Complaint, pursuant to Commission Rule 210.8(a)(1)(ii);
4. A letter requesting confidential treatment for the information contained in confidential exhibits 7C – 11C to the Verified Complaint, pursuant to Commission Rules 201.6(b) and 210.5(d); and
5. A Public Interest Statement regarding the requested relief, pursuant to Commission Rule 210.8(b).

Complainant confirms that, upon notice of institution of an investigation, it will serve all nonconfidential copies of the complaint, exhibits, and appendices on the Proposed Respondents and all other appropriate entities, per the Commission's March 16, 2020, Notice.

Please contact me with any questions regarding this filing.

Respectfully submitted,

Scott Bornstein
Scott J. Bornstein

Counsel for Complainant Ampt, LLC

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500 E Street, SW
Washington, DC 20436

Re: *Certain Solar Power Optimizers, Inverters, and Components Thereof*

Dear Acting Secretary Hiner,

Pursuant to Commission Rule 201.6, Complainant Ampt, LLC (“Complainant”) respectfully requests confidential treatment of certain confidential business information contained in Confidential Exhibits 7C-11C to the Verified Complaint.

The information in the exhibits to the Verified Complaint for which Complainant seeks confidential treatment consists of proprietary commercial information, including technical information related to domestic articles protected by Complainant’s Asserted Patents, financial data regarding the same, and identification of customers of the Complainant. This information qualifies as confidential business information under Commission Rule 201.6 because substantially-identical information is not available to the public, the disclosure of this information would cause substantial competitive harm to Complainant, and the disclosure of this information would likely impede the Commission’s efforts and ability to obtain similar information in the future.

Please contact me with any questions regarding this request for confidential treatment.

Respectfully submitted,

/s/ Scott Bornstein
Scott J. Bornstein

Counsel for Complainant Ampt, LLC

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SOLAR POWER
OPTIMIZERS, INVERTERS, AND
COMPONENTS THEREOF**

Inv. No. 337-TA-_____

COMPLAINANT AMPT, LLC'S PUBLIC INTEREST STATEMENT

Pursuant to U.S. International Trade Commission ("Commission") Rule 210.8(b), Ampt, LLC ("Complainant" or "Ampt") submits this separate Statement of Public Interest regarding how the issuance of the remedial orders that Complainant is seeking against Proposed Respondents SolarEdge Technologies, Inc. and SolarEdge Technologies Ltd. ("Proposed Respondents"), as set forth in its concurrently-filed Complaint, could affect the public health and welfare in the U.S., competitive conditions in the U.S. economy, the production of like or directly competitive articles in the U.S., or U.S. consumers.

This proceeding concerns the importation, sale for importation, and/or sale after importation into the United States of certain solar power systems and components thereof, specifically (i) power optimizers for solar power systems, (ii) inverters for solar power systems, and (iii) components thereof ("the Accused Products") that infringe one or more claims of Ampt's U.S. Patent Nos. 9,673,630 and 11,289,917 ("the Asserted Patents"). Ampt seeks a limited exclusion order under 19 U.S.C. § 1337 barring from entry into the United States any Accused Products of the Proposed Respondents that infringe certain claims of the Asserted Patents, as well as a cease and desist order directed to each of the Proposed Respondents. The requested remedial orders would serve the public interest in enforcing Ampt's valuable intellectual property rights. And as explained below, the requested relief would not

have any adverse effects on the public interest factors. Thus, the Commission need not delegate public interest issues to the administrative law judge.

A. How the Accused Products Are Used in the United States¹

The Accused Products are certain solar power optimizers, inverters, and components thereof, which are used in solar power systems. Photovoltaic (PV) cells, arranged in solar panels, convert light into electric current. The solar panels are connected to inverters, which convert the direct-current (DC) output from solar panels to direct to alternating current (AC). In addition, power optimizers are used in many PV systems including both residential and commercial systems. Power optimizers are DC-to-DC converters that can be connected to solar panels or embedded by solar panels manufacturers into their panels as part of the manufacturing process. Power optimizers take the DC power from a solar panel and “optimize” it to output a voltage and current that best suits the overall solar power system. Power optimizers are capable of increasing the efficiency of a solar power system and decreasing its overall cost per kilowatt-hour produced.

B. No Public Health, Safety, or Welfare Concerns Exist

The issuance of the requested remedial orders would raise no public health, safety, or welfare concerns. The Accused Products currently used in the United States do not have any unique public health or safety-related features. For example, the Accused Products are not approved medical devices, drugs, vaccines, or products used for medical purposes or in medical or scientific research. *See Certain Inclined Field Acceleration Tubes*, Inv. No. 337-TA-67, Comm’n Op. at 29-30 (Dec. 1980) (declining to issue an exclusion order for infringing products “essential to research programs affecting the public health and welfare”); *Certain Fluidized Supporting Apparatus and Components*

¹ The description of the Accused Products at issue and their use is provided for purpose of general information and understanding and is not meant to be a position with respect to claim construction and /or other technical aspects of patent law.

Thereof, Inv. No. 337-TA-182/188, Comm’n Op. at 25 (declining relief due to “public health considerations” related to the availability of the accused “burn beds” for hospital patients); *Certain Microfluidic Devices*, Inv. No. 337-TA-1068, Comm’n Op. at 53-54 (Jan. 10, 2020) (tailoring the scope of remedial orders to provide an exemption for infringing products used in ongoing cancer research). While the Accused Products are used in the generation of so-called “clean energy,” as discussed below, there are multiple other non-accused manufacturers that can easily replace the volume of the Proposed Respondents’ Accused Products with like or directly competitive articles. These non-accused manufacturers and suppliers of like or directly competitive articles will remain unaffected by the requested remedial orders, which would be directed specifically to the Accused Products of the Proposed Respondents. There are therefore no public health, safety, or welfare concerns raised by Ampt’s requested relief.

C. There Are Like or Directly Competitive Articles That Could Replace the Accused Products If They Were to Be Excluded

In the event that the Accused Products were to be excluded from the U.S., there are third parties that could supply replacement articles used in solar power systems. While it would not be possible for SolarEdge to continue selling the Accused Products, there are numerous other non-accused companies that supply directly competitive components such as optimizers and inverters and/or complete solar power systems. These that are expected to replace the Proposed Respondents’ Accused Products if the Commission issues the requested relief. The Proposed Respondents have admitted that the “[t]he markets for our solar products are competitive[.]”² For example, SolarEdge identifies its competitors to be “traditional inverter manufacturers, such as SMA Solar Technology AG, ABB Ltd. and Huawei Technologies Co. Ltd. as well as . . . other Chinese inverter manufacturers.

² SolarEdge 2021 Annual Report at 13, available at <https://investors.solaredge.com/static-files/80b8d94d-06b2-4bf3-b059-2e4c4e609af7>.

In the North American residential market, we compete with traditional inverter manufacturers, as well as microinverter manufacturers such as Enphase Energy, Inc.”³ Accordingly, competitive conditions in the U.S. will be unaffected, as like or directly competitive inverters, optimizers, and systems from third parties will remain available even if the Accused Products are excluded from the U.S. market.

D. There Exists Capacity to Replace the Volume of Accused Products in a Commercially Reasonable Time

Given the number of competitors in the market, there exists sufficient capacity to replace the volume of the Proposed Respondents’ Accused Products subject to the requested remedial orders in a commercially reasonable time. Specifically, the aforementioned entities that compete with the Proposed Respondents are expected to be able to replace the volume of Accused Products subject to exclusion in a commercially reasonable time. For example, with respect to the inverter market in the United States, SolarEdge’s competitor Enphase has reportedly been steadily gaining market share in recent years.⁴ In the past two years, Enphase has brought on “additional manufacturing capacity in Mexico and India.”⁵ And Enphase more recently announced that it will begin manufacturing in Romania starting in the first quarter of 2023.⁶ On information and belief, it is therefore likely that

³ *Id.* at 14; *see also* Enphase 2021 Annual Report at 13, available at <https://investor.enphase.com/static-files/062e506e-1ef8-41ed-8f19-19c276ab02f3> (“Competitors in the inverter market include, among others, SolarEdge Technologies, Inc., Fronius International GmbH, SMA Solar Technology AG, AP Systems, Generac, Tesla, Inc., Huawei Technologies Co. Ltd., Delta, Jinglong, Sungrow, Solax and other companies offering string inverters with and without solar optimizers.”).

⁴ Tim Sylvia, *Enphase Challenging SolarEdge in US Inverter Market*, PV Magazine (Feb. 9, 2021), available at <https://www.pv-magazine.com/2021/02/09/enphase-set-to-challenge-solaredge-in-us-inverter-market/>.

⁵ Enphase 2021 Annual Report at 10, available at <https://investor.enphase.com/static-files/062e506e-1ef8-41ed-8f19-19c276ab02f3>.

⁶ Emiliano Bellini, *Enphase to Produce Micro-Inverters in Romania*, PV Magazine (Apr. 4, 2022), available at <https://www.pv-magazine.com/2022/04/04/enphase-to-produce-micro-inverters-in-romania/>.

Enphase and other competitors will be able to replace the Accused Products within a reasonable time in the event the requested relief is granted.

E. How the Requested Remedial Orders Would Impact Consumers

Ampt's requested relief would have no adverse impact on U.S. consumers because non-accused companies produce an adequate supply of optimizers and inverters for use in solar power systems. As discussed above, there are additional manufacturers that can fill the modest void that may result from the requested remedial orders. Thus, U.S. consumers will not be impacted and will continue to have access to products used in the production of solar energy for either residential or commercial applications.

F. Conclusion

There are no public interest concerns raised by the relief Ampt is seeking. Exclusion of the Proposed Respondents' Accused Products would not raise any public health, safety, or welfare concerns, nor would it adversely affect competition or U.S. consumers. To the contrary, if the Commission grants Ampt's requested relief, the public interest will be served—specifically, the strong public interest in protecting and enforcing valid U.S. intellectual property rights against infringement. *See Certain Two-Handle Centerset Faucets & Escutcheons, & Components Thereof*, Inv. No. 337-TA-422, Comm'n Op. at 9 (July 21, 2000) (explaining “the public interest favors the protection of U.S. intellectual property rights by excluding infringing imports”). Ampt is a innovator that has made substantial investments with respect to its products protected by the Asserted Patents and is now seeking to protect its patented technology and halt the infringing imports of the Proposed Respondents.

Dated: July 28, 2022

Respectfully submitted,

By: /s/ Scott Bornstein

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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SOLAR POWER
OPTIMIZERS, INVERTERS, AND
COMPONENTS THEREOF**

Inv. No. 337-TA-_____

**VERIFIED COMPLAINT UNDER SECTION 337
OF THE TARIFF ACT OF 1930, AS AMENDED**

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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THE PARTIES	3
	A. Complainant.....	3
	B. Proposed Respondents	3
III.	THE TECHNOLOGY AT ISSUE	3
IV.	THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTIONS OF THE INVENTIONS	7
	A. U.S. Patent No. 9,673,630	7
	1. Identification and Ownership of the '630 Patent	7
	2. Non-Technical Description of the Invention	8
	3. Foreign Counterparts	8
	B. U.S. Patent No. 11,289,917.....	9
	1. Identification and Ownership of the '917 Patent	9
	2. Non-Technical Description of the Invention	10
	3. Foreign Counterparts	10
V.	LICENSEES	10
VI.	UNLAWFUL AND UNFAIR ACTS OF RESPONDENTS—PATENT INFRINGEMENT	10
	A. Infringement of the '630 Patent	11
	B. Infringement of the '917 Patent	13
VII.	HARMONIZED TARIFF SCHEDULE ITEM NUMBERS	15
VIII.	SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE	15
IX.	THE DOMESTIC INDUSTRY	17
	A. Technical Prong	17
	B. Economic Prong.....	18
X.	RELATED LITIGATION	19
XI.	RELIEF REQUESTED.....	19

TABLE OF EXHIBITS

Exhibit Number	Description
1	Certified Copy of U.S. Patent No. 9,673,630
2	Certified Copy of U.S. Patent No. 11,289,917
3	Certified Copy of Assignments for U.S. Patent No. 9,673,630
4	Certified Copy of Assignments for U.S. Patent No. 11,289,917
5	Claim Chart Showing Infringement of U.S. Patent 9,673,630
6	Claim Chart Showing Infringement of U.S. Patent 11,289,917
7C	Claim Chart for U.S. Patent No. 9,673,630 and Ampt D2B Optimizers
8C	Claim Chart for U.S. Patent No. 11,289,917 and Ampt D2B Optimizers
9C	Claim Chart for U.S. Patent No. 11,289,917 and Ampt i12 Optimizers
10C	Claim Chart for U.S. Patent No. 11,289,917 and Ampt i20 Optimizers
11C	Confidential Declaration of Levent Gun
12	SolarEdge 2021 Annual Report
13	SolarEdge Website - Power Optimizer, For North America, P370 / P400 / P401 / P485 / P505
14	SolarEdge Website - PV Monitoring Platform
15	SolarEdge Website - SolarEdge U.S. Distributors
16	Record from ImportGenius.com
17	SolarEdge Website - Residential Power Optimizers
18	SolarEdge Website - C&I Power Optimizers
19	Receipt from Consolidated Electrical Distributors, Inc.
20	Photographs of the SolarEdge P401 Power Optimizer
21	Table of Foreign Counterparts

TABLE OF APPENDICES

Appendix	Description
A	Certified Copy of Prosecution History of U.S. Patent No. 9,673,630
B	Certified Copy of Prosecution History of U.S. Patent No. 11,289,917
C	Copies of References in Prosecution History of U.S. Patent No. 9,673,630
D	Copies of References in Prosecution History of U.S. Patent No. 11,289,917

I. INTRODUCTION

1. Complainant Ampt, LLC, of Fort Collins, Colorado (hereinafter, “Ampt” or “Complainant”), requests that the United States International Trade Commission commence an investigation under Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, based on the unlawful importation into the United States, sale for importation, and/or sale within the United States after importation of certain solar power systems and components thereof (collectively, “the Accused Products”).

2. The proposed respondents are SolarEdge Technologies, Inc. (“SolarEdge Inc.”) and SolarEdge Technologies Ltd. (“SolarEdge Ltd.”) (collectively, “SolarEdge” or “Proposed Respondents”). On information and belief, the Accused Products are manufactured and assembled overseas by or on behalf of SolarEdge. The Accused Products are then sold for importation into the United States, or imported into the United States, or sold within the United States after importation by or on behalf of SolarEdge.

3. This Complaint is directed to the Accused Products of the Proposed Respondents that directly or indirectly infringe, either literally or under the doctrine of equivalents, one or more claims of U.S. Patent Nos. 9,673,630 (“the ’630 patent”) and 11,289,917 (“the ’917 patent”) (collectively, the “Asserted Patents”). Certified copies of the Asserted Patents are attached as Exhibits 1-2, respectively.

4. Pursuant to Commission Rule 210.12(a)(9)(vii), Ampt identifies the following claims of the Asserted Patents that cover the Accused Products of the Proposed Respondents:

U.S. Patent No.	Claim(s)
U.S. Patent No. 9,673,630	Claims 1, 3-5, 7-10, 17
U.S. Patent No. 11,289,917	Claims 1-3, 9-10, 12

5. Ampt seeks as relief a permanent limited exclusion order that bars from entry into the United States the Accused Products that infringe the Asserted Patents and that are imported, sold for importation, or sold within the United States after importation by or on behalf of the Proposed Respondents, their subsidiaries, related companies, or agents in violation of Section 337.

6. Ampt also seeks permanent cease and desist orders prohibiting the Proposed Respondents, their subsidiaries, related or affiliated companies, and agents from conducting any of the following activities in the United States: importing, selling, offering for sale, marketing, advertising, demonstrating, distributing, transferring (except for exportation), testing, licensing, and/or soliciting U.S. agents or distributors for Accused Products.

7. Ampt also seeks the imposition of a bond under Section 337(j) that covers the importation, sale, or other transfer of the Accused Products during the 60-day Presidential review period.

8. Pursuant to Commission Rule 210.12(a)(12), the category of products accused are (i) power optimizers for solar power systems, (ii) inverters for solar power systems, and (iii) components thereof.

9. As required by 19 U.S.C § 1337(a)(2) and (3), an industry in the United States related to the articles protected by the Asserted Patents exists or is in the process of being established.

10. Pursuant to Commission Rule 210.12(a)(1), accompanying this Complaint is a verification by Levent Gun attesting to the representations required by Commission Rule 210.4(c)(1)-(3).

II. THE PARTIES

A. Complainant

11. Complainant Ampt, LLC is a Colorado limited liability company with a principal place of business at 4850 Innovation Drive, Fort Collins, Colorado 80525. Ampt was founded in 2007 and is a recognized leader in photovoltaic (PV) power technology. Ampt serves the global solar market to provide system level optimization that lowers the cost and increases the energy production of large-scale PV systems.

B. Proposed Respondents

12. On information and belief, SolarEdge Inc. is a Delaware corporation having its principal place of business in the United States at 700 Tasman Drive, Milpitas, California 95035. SolarEdge describes itself as a “leading provider of an optimized inverter solution that changed the way power is harvested and managed in photovoltaic (also known as PV) systems.” Exhibit 12 (SolarEdge 2021 Annual Report) at 1. SolarEdge is a publicly-traded company, trading on the NASDAQ exchange as SEDG. *See id.* at 38.

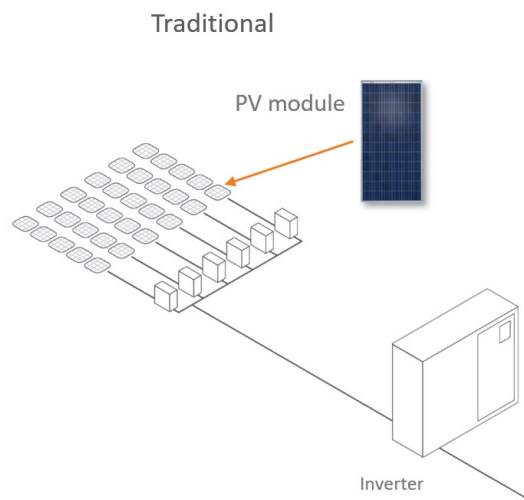
13. On information and belief, SolarEdge Ltd. is a limited-liability company organized under the laws of Israel with its principal place of business located at 1 HaMada Street, Herzliya, Israel, and is wholly owned by SolarEdge Inc.

III. THE TECHNOLOGY AT ISSUE¹

14. Solar power systems generate electrical power from sunlight. Photovoltaic (PV) cells, arranged in solar panels, convert light into electric current. The solar panels are connected

¹ The description of the technology at issue is provided for purpose of general information and understanding and is not meant to be a position with respect to claim construction and /or other technical aspects of patent law.

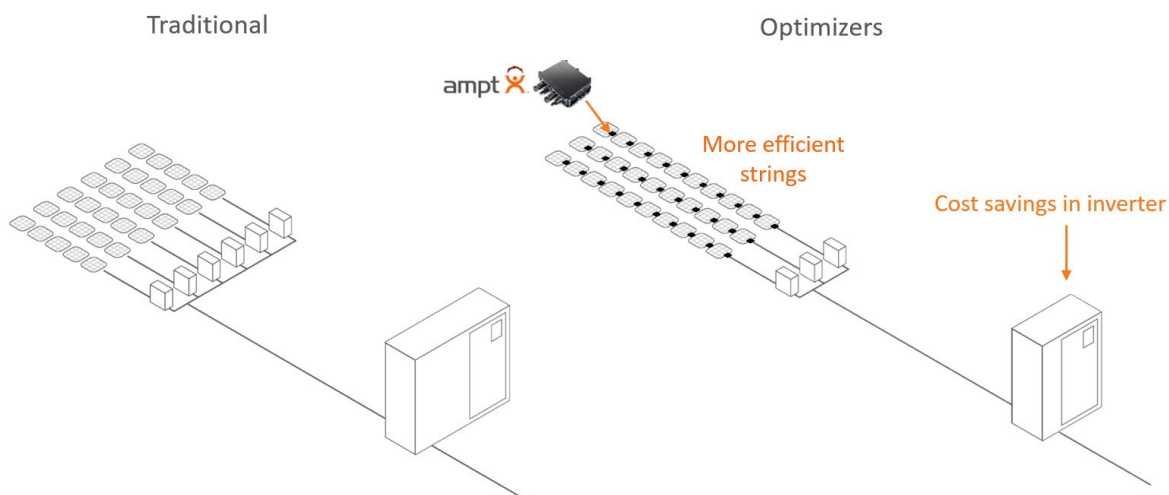
to inverters, which convert the direct-current (DC) output from solar panels to alternating current (AC).



15. Solar panels are typically connected together in series in what are called “strings” in order to provide the voltage needed by the inverter. However, this arrangement has inefficiencies. The panels need to be arranged so that the system can produce power both during times with full sun (*e.g.*, noon in the summer) and times with less sun (*e.g.*, 2 pm in the winter). At the same time the inverters need to be able to handle a wide range of operating conditions, again so that the system can produce power both during times with full sun and times with less sun. Additional problems arise because different panels in the same string can produce different amounts of power at the same time, for example when some panels are shaded by a cloud, a tree, or a building. In such situations, the low-power panel (or panels) can inhibit the production of the entire string of panels.

16. Adding power optimizers helps address these problem by allowing the voltage output by individual solar panels in a string to be either raised or lowered to maximize the power output of each panel in the context of the string. This allows the maximum available power of each panel to be delivered, and allows longer and more flexible strings of panels. It also allows inverters

that handle a smaller range of operating conditions. Together, this allows solar systems that are more cost-effective (*i.e.*, have a lower cost per kilowatt hour produced) and thus more efficient from an economic point of view.



17. However, the electronics in the power optimizers need to be protected from conditions that could damage them. In situations where different panels in the same string are producing different amounts of power (typically because of shading), the electrical conditions experienced by a particular optimizer can be damaging. While it is possible to protect the panels/power optimizers that are experiencing potentially-damaging conditions by bypassing them, this loses the power output of those panels/power optimizers, which may negate the benefits of using power optimizers in the first place.

18. Ampt invented solar power systems that solve these problems using power optimizers that contain high-efficiency power converters that both allow maximum power-point output, and use operational boundary conditions that continue producing power during conditions that might otherwise require the optimizer to be bypassed. The combination of these elements both enhances efficiency and reduces the overall cost per kilowatt-hour of the solar power system. The inventive solar power systems and power optimizers are described in the Asserted Patents.

19. For example, Figure 5 in each of the Asserted Patents shows the power optimizer circuits of Ampt's inventions, which describe a dual-mode configuration that provides high efficiency for their specific use-case. For example, Figure 5A (below) shows a power optimizer circuit that includes both a buck converter circuit (described for example in the '630 patent at 11:58-12:8) and a boost converter circuit (described for example in the '630 patent at 12:9-25).

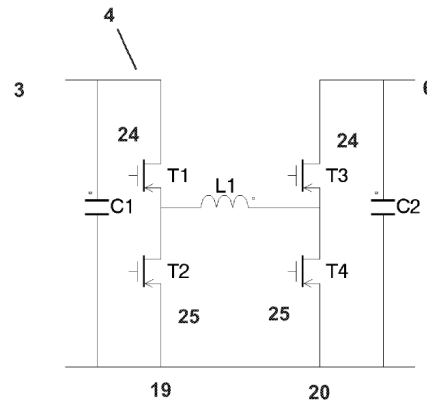


Fig. 5A

20. Additionally, Figure 7 in each of the Asserted Patents shows a power optimizer's operation with both maximum power point (MPP) tracking and the operational boundary conditions of Ampt's inventions: the "overcurrent limit" and the "overvoltage limit."

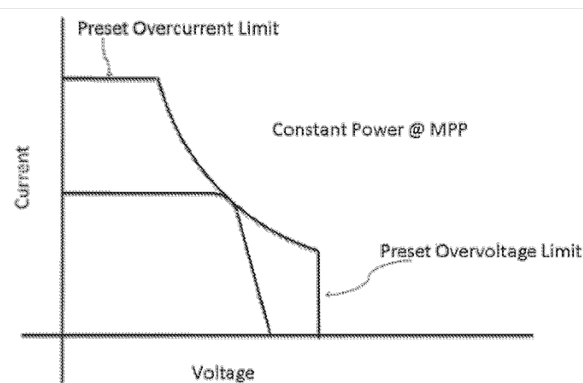


Fig. 7A

IV. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTIONS OF THE INVENTIONS

21. Ampt asserts two (2) U.S. patents in this Complaint: U.S. Patent Nos. 9,673,630 (“the ’630 patent”) and 11,289,917 (“the ’917 patent”) (collectively, the “Asserted Patents”). In accordance with Commission Rule 210.12(a)(9), set forth below for each Asserted Patent is an identification of the patent and its ownership, the date of expiration, a non-technical description of the invention, and any known foreign patents or patent applications corresponding to the patent and the status of any such foreign patent applications.

A. U.S. Patent No. 9,673,630

1. Identification and Ownership of the ’630 Patent

22. The ’630 patent, entitled “Protected Conversion Solar Power System,” issued on June 6, 2017, to inventors Anatoli Ledenev and Robert M. Porter. *See* Exhibit 1. The ’630 patent issued from U.S. Patent Application No. 15/219,149, which was filed on July 25, 2016. *Id.* The ’630 patent claims priority to provisional application No. 60/980,157, filed on October 15, 2007, provisional application No. 60/982,053, filed on October 23, 2007, and provisional application No. 60/986,979, filed on November 9, 2007.

23. The ’630 patent has 2 independent claims (claims 1 and 26) and 39 dependent claims (claims 2-25 and 27-41). Ampt is asserting claims 1, 3-5, 7-10, and 17 of the ’630 patent in this Investigation. Further investigation and discovery may lead to the assertion of additional claims.

24. The Asserted Claims of the ’630 patent are valid, enforceable, and currently in full force and effect until the expiration of the ’630 patent on March 14, 2028. Ampt owns by assignment the entire right, title, and interest in the ’630 patent. As required by Commission Rule

210.12(a)(9)(ii), a certified copy of each recorded assignment of the '630 patent is attached to this Complaint as Exhibit 3.

25. This Complaint is accompanied by one certified copy of the '630 patent, as required by Commission Rule 210.12(a)(9)(i). *See* Exhibit 1.

26. This Complaint is also accompanied by one certified copy of the prosecution history of the '630 patent, and copies of all patent references and portions of technical references mentioned during prosecution, pursuant to Commission Rule 210.12(c).² *See* Appendices A and C.

2. Non-Technical Description of the Invention

27. The '630 patent relates to the field of solar power. It describes improved ways of converting electrical power from solar energy sources to make it available for use by the grid or in other applications. More specifically, it describes solar power systems that use inverters coupled to power optimizers that use dual-mode power converters and operational boundary conditions to achieve efficiencies that are significantly higher than traditional systems.

3. Foreign Counterparts

28. In accordance with Commission Rule 210.12(a)(9)(v), Exhibit 21 contains a list of each foreign patent, pending foreign patent application not already issued as a patent, or foreign patent application that has been denied, abandoned, or withdrawn, that shares a priority claim with the '630 patent, along with the prosecution status of each such pending application.

² The applicable pages of each technical reference mentioned during prosecution are forthcoming.

B. U.S. Patent No. 11,289,917

1. Identification and Ownership of the '917 Patent

29. The '917 patent, entitled "Optimized Photovoltaic Conversion System," issued on March 29, 2022, to inventors Anatoli Ledenev and Robert M. Porter. *See* Exhibit 2. The '917 patent issued from U.S. Patent Application No. 17/379,516, which was filed on July 19, 2021. *Id.* The '917 patent claims priority to provisional application No. 60/980,157, filed on October 15, 2007, provisional application No. 60/982,053, filed on October 23, 2007, and provisional application No. 60/986,979, filed on November 9, 2007.

30. The '917 patent has 2 independent claims (claims 1 and 2) and 13 dependent claims (claims 3-15). Ampt is asserting claims 1-3, 9-10, and 12 of the '917 patent in this Investigation. Further investigation and discovery may lead to the assertion of additional claims.

31. The Asserted Claims of the '917 patent are valid, enforceable, and currently in full force and effect until the expiration of the '917 patent on March 14, 2028. Ampt owns by assignment the entire right, title, and interest in the '917 patent. As required by Commission Rule 210.12(a)(9)(ii), a certified copy of each recorded assignment of the '917 patent is attached to this Complaint as Exhibit 4.

32. This Complaint is accompanied by one certified copy of the '917 patent, as required by Commission Rule 210.12(a)(9)(i). *See* Exhibit 2.

33. This Complaint is also accompanied by one certified copy of the prosecution history of the '917 patent, and copies of all patent references and portions of technical references mentioned during prosecution, pursuant to Commission Rule 210.12(c).³ *See* Appendices B and D.

³ The applicable pages of each technical reference mentioned during prosecution are forthcoming.

2. Non-Technical Description of the Invention

34. The '917 patent similarly relates to the field of solar power. It describes improved ways of converting electrical power from solar energy sources to make it available for use by the grid or in other applications. More specifically, it describes photovoltaic power modules coupled to DC-DC power optimizers that use multiple power-conversion circuit topologies combined with circuitry setting operational boundary conditions in order to achieve efficiencies that are significantly higher than traditional systems.

3. Foreign Counterparts

35. In accordance with Commission Rule 210.12(a)(9)(v), Exhibit 21 contains a list of each foreign patent, pending foreign patent application not already issued as a patent, or foreign patent application that has been denied, abandoned, or withdrawn, that shares a priority claim with the '917 patent, along with the prosecution status of each such pending application.

V. LICENSEES

36. In accordance with Commission Rule 210.12(a)(9)(iii), Ampt states that there are no licensees to any of the Asserted Patents. Ampt holds all right, title, and interest in and to the Asserted Patents.

VI. UNLAWFUL AND UNFAIR ACTS OF RESPONDENTS—PATENT INFRINGEMENT

37. On information and belief, the Proposed Respondents engage in, and have engaged in, unlawful and unfair acts, including the importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation of Accused Products that directly or indirectly infringe, literally or under the doctrine of equivalents, one or more claims of the Asserted Patents. These activities by the Proposed Respondents constitute a violation of Section 337. Specific instances of importation and related activities that

constitute infringement under 35 U.S.C. § 271 are set forth below as illustrative and nonexhaustive examples.

38. On information and belief, SolarEdge Inc. imports into and sells within the United States the Accused Products that use Ampt's patented technology. As described in SolarEdge's 2021 Annual Report, "the end-markets we serve, includ[e] the residential and commercial sectors in the United States and Europe." Exhibit 12 (2021 Annual Report) at 21. "In the third quarter of 2020 we began commercial shipments to the United States of optimizers and inverters from Sella 1, which reached full manufacturing capacity in the second quarter of 2021." *Id.* at 43.

39. On information and belief, SolarEdge Ltd. develops, manufactures, and/or sells for importation into the United States the Accused Products that use Ampt's patented technology. As described in SolarEdge's 2021 Annual Report, "[in] 2021, we reached full manufacturing capacity in our manufacturing facility located in the North of Israel 'Sella 1', from which we began commercial shipments to the U.S. of optimizers and inverters in 2020. The proximity of Sella 1 to our R&D team and labs enables us to accelerate new product development cycles as well as define equipment and manufacturing processes of newly developed products which can then be adopted by our contract manufacturers worldwide." Exhibit 12 (2021 Annual Report) at 11.

A. Infringement of the '630 Patent

40. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by SolarEdge infringe claims 1, 3-5, 7-10, and 17 of the '630 patent, either literally or under the doctrine of equivalents.

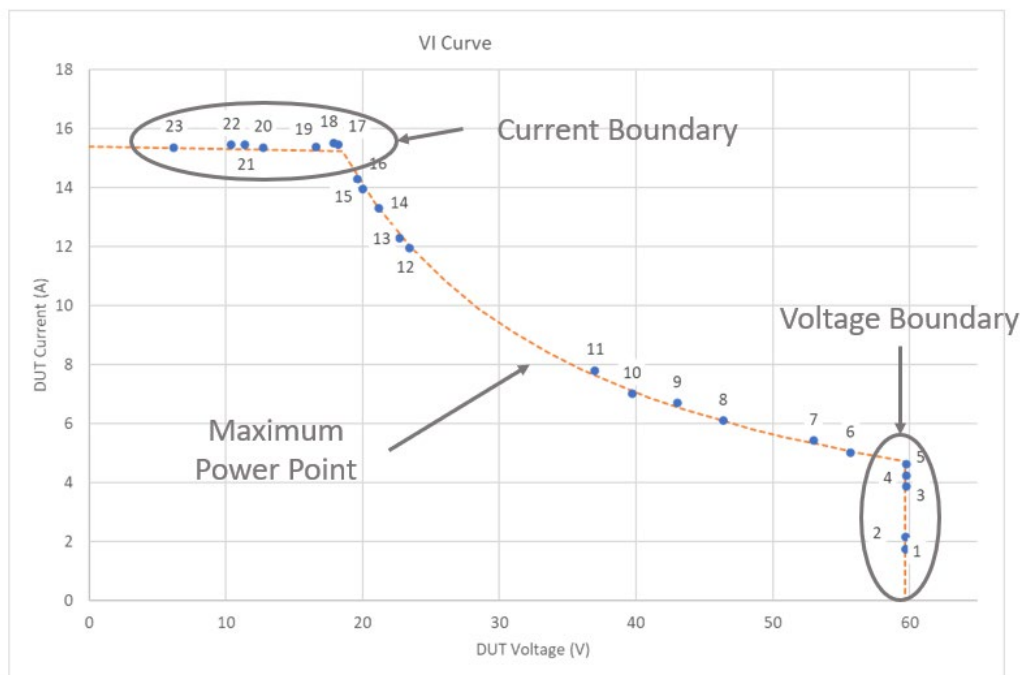
41. On information and belief, SolarEdge directly infringes one or more of the Asserted Claims of the '630 patent through its manufacture, sale for importation, importation, use (including its testing of the Accused Products), and sale after importation of one or more Accused Products.

42. On information and belief, SolarEdge knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '630 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to end users, distributors, and installers, to make, use, sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '630 patent. For example, SolarEdge induces infringement by creating and distributing datasheets, manuals, brochures, and similar documentation and materials related to the installation and use of the Accused Products, and by configuring its devices to require installers to authorize those devices with SolarEdge before they can be used. *See, e.g.*, Exhibit 13 (Power Optimizer, For North America, P370 / P400 / P401 / P485 / P505). SolarEdge also offers its cloud-based monitoring platform ("PV Monitoring Platform") that allows residential and commercial end users the ability to monitor their solar power systems' technical performance when that system is installed according to SolarEdge's requirements. *See* Exhibit 14 (PV Monitoring Platform). On information and belief, SolarEdge was aware of the '630 patent or acted with willful blindness as to its existence at least as a result the filing of this Complaint and the filing of the district court complaint that accompanied the filing of this Complaint.

43. On information and belief, SolarEdge contributes to the infringement of one or more of the Asserted Claims of the '630 patent by offering to sell or selling and/or importing a patented component, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

44. A claim chart that applies the asserted independent claim and dependent claim 3 of the '630 patent to a representative Accused Product is attached to this Complaint as Exhibit 5. As

explained in the claim chart, testing of a representative Accused Product shows that it uses the operational current boundary and voltage boundary conditions that Ampt invented:



B. Infringement of the '917 Patent

45. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by SolarEdge infringe claims 1-3, 9-10, and 12 of the '917 patent, either literally or under the doctrine of equivalents.

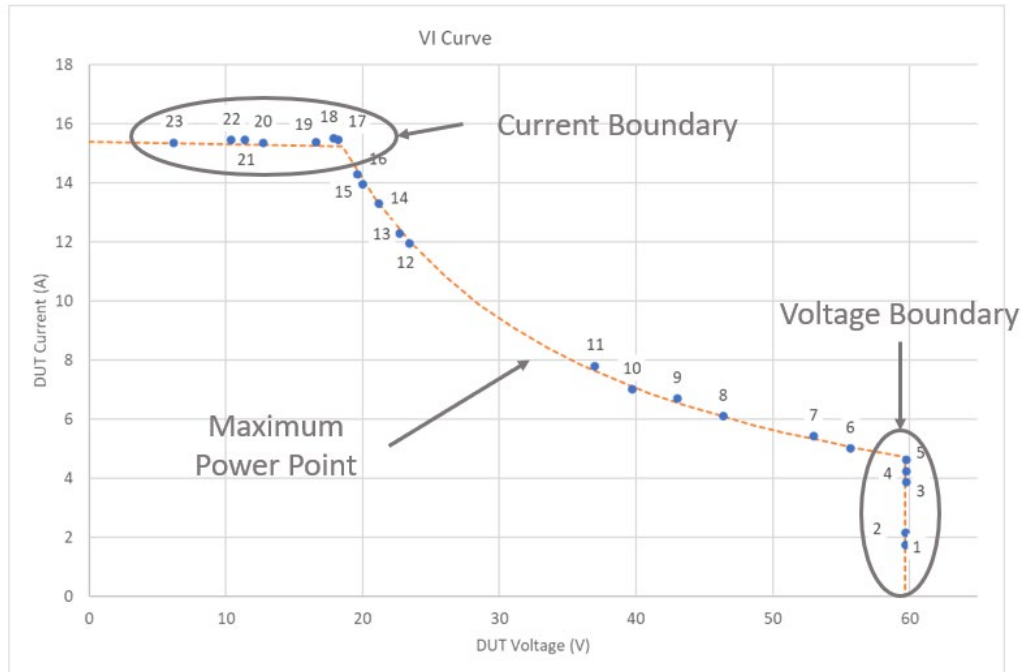
46. On information and belief, SolarEdge directly infringes one or more of the Asserted Claims of the '917 patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products.

47. On information and belief, SolarEdge knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '917 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to end users, distributors, and installers, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's

importation into the United States, in a manner that infringes the '917 patent. For example, SolarEdge induces infringement by creating and distributing datasheets, manuals, brochures, and similar documentation and materials related to the installation and use of the Accused Products, and by configuring its devices to require installers to authorize those devices with SolarEdge before they can be used. *See, e.g.*, Exhibit 13 (Power Optimizer, For North America, P370 / P400 / P401 / P485 / P505). SolarEdge also offers its cloud-based monitoring platform ("PV Monitoring Platform") that allows residential and commercial end users the ability to monitor their solar power systems' technical performance when that system is installed according to SolarEdge's requirements. *See* Exhibit 14 (PV Monitoring Platform). On information and belief, SolarEdge was aware of the '917 patent or acted with willful blindness as to its existence at least as a result of the filing of this Complaint.

48. On information and belief, SolarEdge contributes to the infringement of one or more of the Asserted Claims of the '917 patent by offering to sell or selling and/or importing a patented component, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

49. A claim chart that applies each of the asserted independent claims 1 and 2 of the '917 patent to a representative Accused Product is attached to this Complaint as Exhibit 6. As explained in the claim chart, testing of a representative Accused Product shows that it uses the operational current boundary and voltage boundary conditions that Ampt invented:



VII. HARMONIZED TARIFF SCHEDULE ITEM NUMBERS

50. On information and belief, the Harmonized Tariff Schedule of the United States (“HTS”) item numbers under which the Accused Products may be imported into the United States include at least 8504.40.9540.⁴

VIII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

51. On information and belief, the Accused Products are manufactured at foreign facilities, including in China, Vietnam, Hungary, and Israel. *See* Exhibit 12 (SolarEdge 2021 Annual Report) at 11-12. For example, a SolarEdge subsidiary manufactures the Accused Products at the company’s “Sella 1” factory, located in Israel. *See id.* On information and belief, SolarEdge Inc. then imports into the United States, sells for importation, and/or sells within the United States

⁴ These HTS numbers are based on Complainant’s current knowledge and the 2022 HTS, Revision 4, published April 2022. They are not intended to, nor should they be interpreted to, restrict the scope of the Accused Products.

after importation the Accused Products through distributors or directly to customers. *See* Exhibit 12 (SolarEdge 2021 Annual Report at 11) (“[W]e began commercial shipments to the U.S. of optimizers and inverters in 2020.”); Exhibit 15 (SolarEdge U.S. Distributors). For example, according to importation records, SolarEdge Ltd. was identified as the “Shipper” for multiple containers of products described as “SOLAR EQP” from Haifa, Israel, to consignee SolarEdge Inc. in Long Beach, CA, that arrived on on August 8, 2021. *See* Exhibit 16 (Record from ImportGenius.com). On information and belief, SolarEdge Ltd. has sold for importation into the United States additional optimizers and inverters since that time.

52. On information and belief, a large number of models of SolarEdge’s Accused Products are available for purchase in the United States. For example, as shown on SolarEdge’s U.S. website, many models of SolarEdge’s Accused Products are available for purchase in the United States. *See* Exhibit 17 (Residential Power Optimizers); Exhibit 18 (C&I Power Optimizers). In addition, SolarEdge’s website shows that there are 20 distributors in the United States where the Accused Products may be purchased. *See* Exhibit 15.

53. A Solar Edge P401 power optimizer was purchased from Consolidated Electrical Distributors, Inc. in Denver, CO, on May 2, 2022. The receipt for this transaction is included in Exhibit 19. Photographs of the P401 power optimizer are included in Exhibit 20. The P401 power optimizer states that it was manufactured in the “EU.” *See id.* On information and belief, the P401 power optimizer is then imported into the United States and sold within the United States after importation.

54. It is not practical for Ampt to identify all of SolarEdge’s Accused Products sold for importation into the United States, imported into the United States, and/or sold within the United

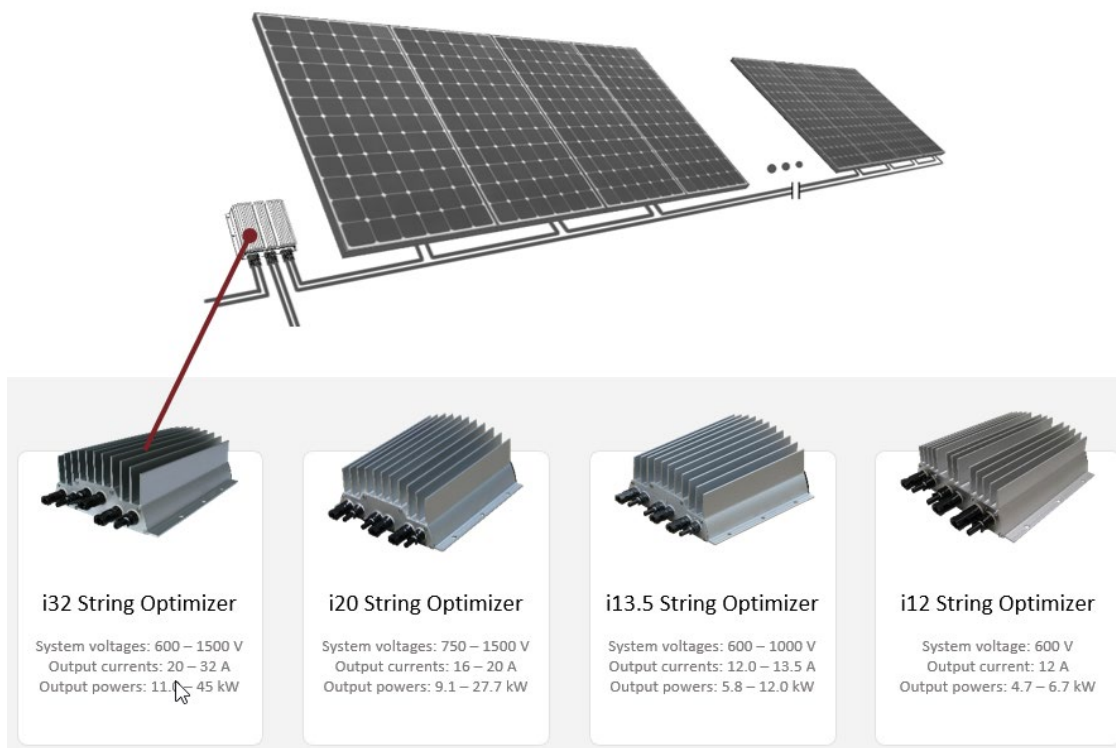
States after importation. Ampt reserves its right to supplement its allegations, to amend the Complaint and to add respondents in the future.

IX. THE DOMESTIC INDUSTRY

55. In accordance with Section 337(a)(2) and (a)(3), 19 U.S.C. § 1337(a)(2)-(3), a domestic industry exists in the United States and/or is in the process of being established in connection with the Asserted Patents. Specifically, Ampt has made a significant investment in plant and equipment and significant employment of labor and capital with respect to products protected by the Asserted Patents.

A. Technical Prong

56. Ampt has made significant and substantial investments in the United States in connection with products that practice the Asserted Patents. These products include Ampt's string optimizers product lines as shown below (the i32 Series, the i20 Series, the i13.5 Series, and the i12 Series), as well as a prototype optimizer product currently under development (D2B prototype).



57. The following table provides a summary of the Asserted Patents and claims practiced by Ampt's products:

U.S. Patent No.	Claim	Domestic Industry Product
9,673,630	1	Ampt D2B prototype product
11,289,917	1	Ampt's i32 Series, i20 Series, i13.5 Series, and i12 Series string optimizers; Ampt D2B prototype product

58. In accordance with Commission Rule 210.12(a)(9)(ix), attached as Exhibit 7C is a chart that applies exemplary claim 1 of the '630 Patent to Ampt's D2B prototype product .

59. In accordance with Commission Rule 210.12(a)(9)(ix), attached as Exhibit 8C is a chart that applies exemplary claim 1 of the '917 Patent to Ampt's D2B prototype product.

60. In accordance with Commission Rule 210.12(a)(9)(ix), attached as Exhibit 9C is a chart that applies exemplary claim 1 of the '917 Patent to Ampt's i12 Series string optimizer.

61. In accordance with Commission Rule 210.12(a)(9)(ix), attached as Exhibit 10C is a chart that applies exemplary claim 1 of the '917 Patent to Ampt's i20 Series string optimizer.

B. Economic Prong

62. A domestic industry in the United States exists and/or is in the process of being established under 19 U.S.C. §§ 1337(a)(2) and (3) based on Ampt's: (i) significant investment in plant and equipment under 19 U.S.C. § 1337(a)(3)(A) and (ii) significant employment of labor and capital under 19 U.S.C. § 1337(a)(3)(B) related to articles covered by the Asserted Patents.

63. Ampt conducts a variety of activities in the United States related to its products protected by the Asserted Patents. These activities include but are not limited to research and development, engineering, testing, quality assurance, and product support for customers who have

purchased and deployed Ampt's products. Confidential Exhibit 11C (Gun. Decl.) contains additional information regarding Ampt's activities and investments in the United States related to articles protected by the Asserted Patents.

64. Ampt's domestic investments and activities relate in part to an Ampt product currently under development that practices the Asserted Patents (Ampt's D2B prototype product). Ampt is actively engaged in and has taken significant, tangible steps towards the establishment of a domestic industry related to this product including investment in plant and equipment under 19 U.S.C. § 1337(a)(3)(A) and employment of labor and capital under 19 U.S.C. § 1337(a)(3)(B), as described in Confidential Exhibit 11C. For example, Ampt has developed the Ampt D2B prototype product that practices the Asserted Patents and has engaged with a customer in a plan to test the product. Ampt has also determined that there is customer demand for a commercial product based on the Ampt D2B prototype product. As a result of Ampt engaging in these steps, there is a significant likelihood that a domestic industry with respect to products protected by the Asserted Patents will be established in the future.

X. RELATED LITIGATION

65. In accordance with Commission Rule 210.12(a)(5), Ampt states that the Asserted Patents have not been the subject of any prior court or agency litigation. However, the Asserted Patents are being asserted against SolarEdge in a companion district court action concurrently filed in the U.S. District Court for Delaware.

XI. RELIEF REQUESTED

WHEREFORE, by reason of the foregoing, Ampt respectfully requests that the United States International Trade Commission:

(a) Institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to Proposed Respondents' violations of Section 337

based on the importation into the United States, sale for importation, and/or sale within the United States after importation of Proposed Respondents' Accused Products that infringe the Asserted Patents;

(b) Schedule and conduct a hearing on permanent relief pursuant to 19 U.S.C. § 1337(c) for the purposes of receiving evidence and hearing argument concerning whether there has been a violation of Section 337, and following the hearing to determine that there has been such a violation;

(c) Issue a limited exclusion order specifically directed to each of the Proposed Respondents and their subsidiaries and affiliates, barring from entry into the United States all Accused Products that infringe one or more claims of the Asserted Patents.

(d) Issue a permanent cease and desist order, pursuant to 19 U.S.C. § 1337(f), prohibiting each of the Proposed Respondents and any affiliated companies or divisions from conducting any of the following activities in the United States: importing, selling, offering for sale, marketing, advertising, demonstrating, distributing, transferring (except for exportation), testing, licensing, or soliciting U.S. agents or distributors with respect to Accused Products covered by one or more claims of the Asserted Patents;

(e) Impose a bond during the Presidential Review Period, pursuant to 19 U.S.C. § 1337(j), on the importation of any Accused Products that infringe one or more claims of the Asserted Patents; and

(f) Issue such other and further relief as the Commission deems just and proper under the law based on the facts determined by the investigation and the authority of the Commission.

Dated: July 28, 2022

Respectfully submitted,

By: /s/ Scott Bornstein

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Counsel for Ampt, LLC

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SOLAR POWER
OPTIMIZERS, INVERTERS, AND
COMPONENTS THEREOF**

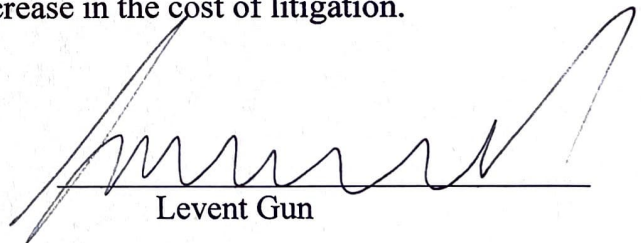
Inv. No. 337-TA-_____

VERIFICATION OF COMPLAINT

I, Levent Gun, am the Chief Executive Officer of Ampt, LLC ("Ampt"). I am authorized to execute this verification on behalf of Ampt. I have read the Complaint and am aware of its contents. To the best of my knowledge, information, and belief, formed after a reasonable inquiry under the circumstances, I hereby certify that:

1. The allegations contained in the Complaint are well grounded in fact and have evidentiary support, or are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery;
2. The claims and other legal contentions set forth in the Complaint are warranted by existing law or by a good faith, non-frivolous argument for the extension, modification, or reversal of existing law, or by the establishment of new law; and
3. The Complaint is not being filed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation.

Dated: July 28, 2022



Levent Gun