

Mr. Paul Nahi
Chief Executive Officer
Enphase Energy

The 21st Century Electricity Challenge: Ensuring a Secure, Reliable, and Modern Electricity System

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Subcommittee on Energy and Power

Summary Points

- Enphase Energy provides intelligent, cost effective energy solutions for the residential and commercial solar markets, as well as energy services for utilities.
- Our technology enables solar systems to observe and then respond to the grid, thus increasing its reliability. By optimizing the grid in this manner, we can either delay or eliminate significant capital costs, thereby reducing costs for consumers.
- Our products are installed by tens of thousands of workers across the United States each day. We are creating both blue and white collar jobs in our country and creating competitively priced products that make the United States a global leader in our technology class.
- Clean energy resources can play a significant role in “enhancing” our energy security. Solar and wind are local, abundant and limitless. Enphase and others will play a fundamental role in ensuring the energy security of our country.
- We take our role as a thought leader in grid cyber security seriously. Each system we ship is embedded with the most advanced security protocols and can be remotely updated as necessary to prevent new cyber threats.
- Our products have realized significant cost reductions through economies of scale and continued innovation. Our ability to further innovate and scale will result in highly cost competitive, reliable and secure energy generation.
- We have no doubt that the creation of a new energy economy will result in hundreds of thousands of new jobs for Americans, and we are looking forward to enabling those interested in participating in this industry make a smooth and successful transition.

Testimony

Chairman Whitfield, Ranking Member Rush, and Fellow Subcommittee Members,

Thank you for the opportunity to testify at the Subcommittee on Energy and Power's "21st Century Electricity Challenge" hearing.

Enphase Energy provides solar energy solutions for the residential and commercial markets, as well as energy services for utilities. Through the most sophisticated power electronics and communications technology in the world, we are able to bring a level of visibility, intelligence and control to our solar systems, which are in over eighty countries. This has enabled us to leverage solar assets to help strengthen and increase the resiliency of the grid while providing clean, affordable energy for our customers in the U.S. and all over the world.

A publicly traded company located in the San Francisco Bay Area, Enphase has grown to 600 employees since 2006, and plans to employ over 750 employees by the end 2015. Our products are now installed by tens of thousands of workers across the United States each day. We have a profitable business and continue to invest in new technologies and new markets to enable more consumers to enjoy the benefits of clean, affordable energy, while helping our utility partners strengthen and stabilize the grid. In doing so, we are creating both blue and white collar jobs in our country and creating competitively priced products that make the United States a global leader in our technology class.

The Enphase Energy Management System (EMS) consists of intelligent hardware installed at a home or business as part of the customer's solar system, and state of the art communication and data analytics software. Our advanced technology solution turns solar systems into assets on the grid, and our Energy Management System addresses the grid's needs via our intelligent communications technology. This communications technology provides the necessary support to help increase the stability and robustness of our electrical grid. In fact, we just completed an upgrade with a utility partner, to remotely modify the operating characteristics of thousands of solar systems to substantially strengthen the local grid. In essence, we enable solar systems to observe and then respond to the grid, thus increasing its reliability. With Enphase's technology, solar systems will also have the ability to provide regional grid support, as necessary, freeing up capacity from large coal, natural gas and nuclear facilities. By optimizing the grid in this manner, we can either delay or eliminate significant capital costs, thereby reducing costs for consumers.

As is implied by our product offering, it is clear that our number one job at Enphase is to help provide clean affordable energy while increasing grid stability. At the same time, we recognize the urgent need to increase the security of our energy supply. Energy security is fundamental to the health of our country. It is also a specific focus of this Congress. It must be recognized that new, clean energy resources can play a significant role in "enhancing" our energy security. Solar and wind are abundant and limitless and it is our responsibility to harness these resources responsibly. That said, Enphase and others in this new energy economy will play a fundamental role in ensuring the energy security of our country. The technologies we develop leverage years of innovation in the

semiconductor and information technology markets, and include many of our own advances. Because of this, each system we ship is embedded with the most advanced security protocols and can be remotely updated as necessary to prevent new cyber threats. We take our role as a thought leader in energy security seriously, and believe this arena will become increasingly critical over time.

In order to ensure that our efforts to provide clean energy to consumers, while strengthening the resiliency and security of the grid, continue unabated, we must also maintain our relentless pursuit of more cost effective solutions. Providing clean, secure energy is not enough; we must make it affordable for everyone. We have been able to dramatically lower the cost of our solar solutions, and are now applying the same technology to storage, where we expect to also see a dramatic decrease in costs. The same processes and semiconductor technologies used for developing and scaling the consumer electronics market are being applied by Enphase to the renewable energy market.

Technologies like the Enphase Energy Management System have the ability to realize significant cost reductions through economies of scale and continued innovation. It is my opinion that solar and other energy technologies will play a fundamental role in the new energy economy as a result of our ability to innovate and scale, resulting in highly cost competitive, reliable and secure energy generation.

Enphase Energy is built on a foundation of collaboration. We believe that a healthy industry lifts all market participants. We have no doubt that the creation of a new energy economy will result in hundreds of thousands of new jobs for Americans, and we are looking forward to enabling those interested in participating in this industry make a

smooth and successful transition. The result will be a strong and vibrant energy industry, abundant access to clean, affordable energy, a large well paid work force and a prosperous future for all Americans. The success of our company, and of other new energy participants, is a testament to the increasing demand for affordable clean energy, and we do not expect this to subside. That said, I believe our role as job creators now and in the future cannot be underestimated. With this role comes the responsibility to help others transition to our new energy economy. We must recognize the amazing accomplishments of those in the industry who carved the path before us, and provide the support necessary to enable them to participate in this new energy paradigm.

Lastly, we aim to remain competitive internationally, to ensure the United States retains a position of leadership in the world's new energy economy.

I appreciate the opportunity to testify before this committee and look forward to working with Congress as we continue to add jobs, increase grid stability, protect our citizens against cyber threats, and ensure the United States maintains its position as the global technology leader.

Sincerely,

Paul Nahi
Chief Executive Officer
Enphase Energy