April 15, 2015

Senate Committee on Finance
219 Dirksen Senate Office Building
Washington, DC 20510

Dear Working Group on Business Income Tax:

Solar energy is the fastest growing domestic energy source, and market analysts expect new solar capacity to reach an all-time high again in 2015 with over 8 gigawatts (GW) added – nearly equivalent to half of current domestic solar capacity. According to the *National Solar Jobs Census 2014*, the solar industry accounted for one out of every 78 new jobs created in the U.S. last year. The expected boom in solar installations in 2015 will create 36,000 new jobs, boosting the solar workforce at a rate nearly eight times faster than the rates expected in the oil, gas, and coal industries over the same period.

The federal investment tax credit (ITC)[1] has been an important driver for the remarkable growth of solar. According to the *National Solar Jobs Census 2014*, almost three-fourths of solar businesses and 94 percent of solar installers stated that the 30 percent ITC has "significantly improved" their business. With the long term certainty provided by the 8-year extension of the 30-percent ITC beginning in 2008, the solar industry responded and became much more efficient, squeezing the average installation cost per watt of large-scale solar photovoltaic (PV) systems down to roughly $2 per watt today from over $7 per watt in 2009. As these installation costs have fallen precipitously, federal tax outlays have also decreased per watt of installed solar capacity. In other words, the ITC is working exactly as Congress intended when it enacted the long-term extension that passed with near unanimous support in the Senate (93-2).

All of this good news masks the looming storm ahead fueled by potential changes to federal tax policy. There is already an economic shock embedded within current law, in which the 30-percent investment tax credit (ITC) for solar and other clean energy technologies expires at the end of 2016. Leading models from the Department of Energy predict that this abrupt change could lead to a 94.3 percent decrease in distributed solar installations between 2016 and 2017 and a roughly 80 percent decrease in utility scale PV installations. Our analysis, which accounts for further reductions in installation costs and lower cost of capital, finds less drastic but still significant impacts from 2016 to 2017: 42 percent fewer utility solar installations and 15 percent fewer distributed solar installations.

[1] Under Section 48 of the Internal Revenue Code for commercial systems and Section 25D of the Internal Revenue Code for homeowners

Tax reform poses another potential threat to solar's otherwise bright future. Congress could modify or eliminate the accelerated depreciation schedule entirely, just as three recent major tax reform proposals have done. According to our analysis, lengthening the depreciation schedule would increase the cost of installing solar power by 58 percent. Even an extension of the 30-percent ITC would not be able to compensate for the costs associated with losing accelerated depreciation.

Solar power is on track to become broadly competitive across the nation free of both state and federal support within a decade or less. It is already competitive subsidy free in a few unique markets where solar resources and electricity rates are the highest. Nevertheless, these potential changes in federal tax policy come at a sensitive transition period for the solar industry. In leading solar states, solar energy markets are saturating and supportive incentives are declining, while lagging states are creating few new incentives.

We urge Congress to consider providing a softer landing for solar that will protect previous taxpayer investments and accelerate the diffusion of solar energy and its many benefits to more states. As Congress looks to simplify and fix the nation's broken tax code, we recommend continuing and expanding successful policies, detailed below.

Maintaining Accelerated Depreciation: Although accelerated depreciation is one of the top five corporate tax expenditures, eliminating it will not broaden the tax base. Its costs will change as corporate profits increase or decrease, and its repeal will merely shift near term tax expenditures to longer term tax expenditures. Eliminating accelerated depreciation may also impede growth due to its implicit preference of existing capital over new capital. A recent study found that under a "dynamic scoring" analysis of tax reform, accelerating depreciation economy-wide could more than pay for itself in revenues from induced economic growth over the long term.

Creating Parity Across Energy Technologies: Regardless of what Congress decides to do with master limited partnerships (MLPs) and real estate investment trusts (REITs), it should create parity across energy sectors. If continued, we recommend opening access to these financing structures to solar and other clean energy technologies. We also recommend explicit clarification that accelerated depreciation still applies. While these financing structures could become important to the solar industry over the long term, our analysis suggests that they will be less beneficial to solar in the near term.

Investing Across the Innovation Cycle: With the ongoing success of the solar ITC in bringing an innovative technology to full market maturity and scale, this type of support should be extended to other new and nascent energy technologies. We recommend a permanent technology-neutral ITC that includes an automatic phase-out provision for technologies based on market maturity. It would apply to any electricity generation technology and provide certainty in the marketplace to innovate. This ITC – along with other complementary innovation policies, such as public investments in research, development, and demonstration (RD&D), loan guarantees/loan loss reserves, and Small Business Investment Research (SBIR) – would incentivize the innovation and diffusion of new electricity generation technologies and help to finance them and to bring them to scale. Although a higher incentive rate for less mature, more expensive technologies would help to drive innovation, Congress could choose to set an explicit cap on such an ITC to remain at 30 percent or below. This would

ensure investment only in potential market winners because the majority of the costs would have to be financed with private capital.

It is important to note that this technology-neutral ITC differs significantly from the one proposed by former Senate Finance Chairman Baucus, both in structure and in aim. While both aim to remove the political process from picking technology winners and losers, Baucus's technology-neutral ITC, in conjunction with its production tax credit (PTC), focused on generating electricity with the least amount of carbon emissions and acted like an inverted carbon tax or carbon-free subsidy. To address the market failure of carbon externalities, we assert that a revenue neutral carbon tax system could offer a more productive use of taxpayer dollars. This technology-neutral ITC, in contrast, focuses on addressing market failures related to the innovation and diffusion of new technologies. It would accelerate the diffusion of new energy technologies and leverage previous public investments at earlier stages of the innovation cycle, allowing society to reap the rewards of its investments sooner and more completely.

Thank you for your invitation to submit comments. We look forward to working with you to make the nation's tax code simpler, fairer, and more efficient to foster further innovation throughout our economy.

Sincerely,

Amit Ronen
Director, GW Solar Institute

Enclosures:

J. Mueller and A. Ronen (2014): "Tax Reform, a Looming Threat to a Booming Solar Industry."
J. Mueller and A. Ronen (2015): "Softer Solar Landings: Options to Avoid the Investment Tax Credit Cliff."