Testimony of Craftstrom Solar Before the Maine Senate

Date: January 6, 2026

Subject: Testimony Regarding Regulatory Barriers for Plug-In Solar Technology

Good afternoon. My name is Michael Lee and I am representing Craftstrom as a Senior Advisor. I have been in the renewable energy industry for fifteen years, including helping build wind projects in Maine and, most recently, as the CEO of Octopus Energy US, one of the leading companies in the renewable energy industry.

Craftstrom is a manufacturer of plug-in solar and smart battery systems and has been in operations for 7 years.

Craftstrom's technology has already established a robust track record across Europe, where millions of "balcony solar" or otherwise known as "plug in solar" units are in operation, with CraftStrom contributing tens of thousands of systems and components. In those markets, simple, harmonized regulations allow consumers to purchase a kit, plug it into a standard outlet, and immediately begin offsetting their energy consumption. They require a simplified, 5-minute product registration instead of a lengthy interconnection agreement process.

To bring this successful model to the United States, we have undergone significant technical adaptations. Our systems are UL-certified and National Electric Code (NEC) compliant, under UL 1741 (ETL certified), IEEE 1547, and work within the UL 3141 framework. We have worked with the Department of Energy (American Made Solar Prize) to identify the opportunity for plugin solar in the U.S., Berkeley National Labs to identify the major safety and administrative factors to be considered in new legislations/regulations, provided consulting services to identify a possible regulatory process, based on our experiences in the Germany market, as well as provided product for testing purposes.

What is unique about our approach in the US, is that we utilize sophisticated internal communication boards that balance feed-in power against household consumption every 0.1 seconds. This ensures zero-export and prevents any risk of circuit overload, essentially making the home's existing wiring a smart, bidirectional conduit. This zero-export system means that the solar energy generated is used only for the on-site consumption at the house and is never exported back to the grid. The solar is either curtailed or sent to a battery.

From a business perspective, the primary obstacle to lowering prices in Maine is not the hardware—it is the soft costs, insurability and interconnection barrier, and this bill is helpful.

The utility's jurisdiction stops at the meter and since our product does not send power back to the grid, every utility we have worked with has already concluded that our customers do not need interconnection agreements.

This bill helps clarify this for future customers, as well as defines that boundaries to ensure balcony solar plays well with the grid.

When a technology requires a custom interconnection agreement or a site-specific utility review for a device no more complex than a window AC unit, it creates a "soft cost" wall. Unnecessarily complex and lengthy administrative processes also increase the amount of money we need to spend to convince customers that this is a safe technology. If we can remove these administrative hurdles, Craftstrom can scale its operations, move higher volumes, and pass those savings directly to Maine consumers. Buying solar should be as simple as buying any other appliance in your home. Plug and play.

The Office of the Public Advocate has rightly expressed concern that requiring a master electrician for every installation could increase the system's effective cost, placing this technology out of reach for some low-income households.

We believe there is a middle ground:

- The 5-Minute Solution: The physical installation of our power meter takes exactly five minutes. It is a straightforward task that does not require a full system redesign.
- Cost Mitigation: While a professional check-off is valuable, the cost can be mitigated. Craftstrom can facilitate a network of certified electricians specifically trained on these modular units.
- Community Support: We are also exploring community help programs where local organizations can be trained to assist with the mechanical mounting, leaving only the final plug-in for the resident.

In the Maine, rooftop solar costs approximately $3/watt[1] or $30,000 per installation.

In general, soft costs can represent up to two-thirds of this cost. Plug in solar is mostly DIY, allowing for customers to avoid expensive financing fees, interconnection fees, and extra permits, significantly reducing soft costs.

Our cost structure for plug in solar is very low. We believe that with scale in a single state, even with existing tariffs, we can get our costs down to $1.50/watt, nearly half of the cost of traditional rooftop solar. That means a 2kW plug in solar system would cost $3,000. That is one-tenth of the ticket size for the average rooftop system today. While an electrician charging $100-200/call for a 5-minute installation of a power meter is something to consider, it does not make the overall cost of the system out of reach for most people.

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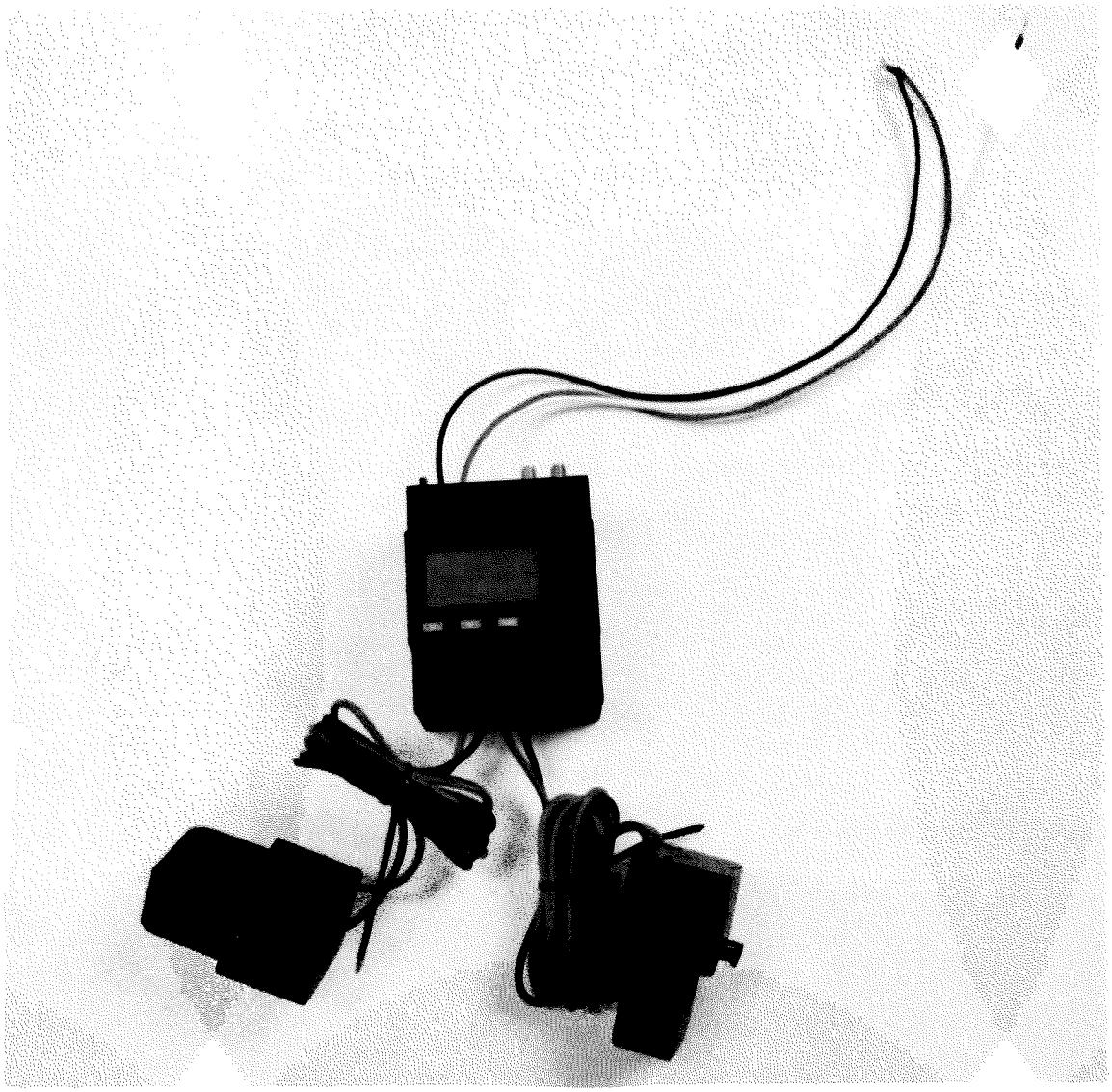
[1] https://www.energysage.com/local-data/solar-panel-cost/me/

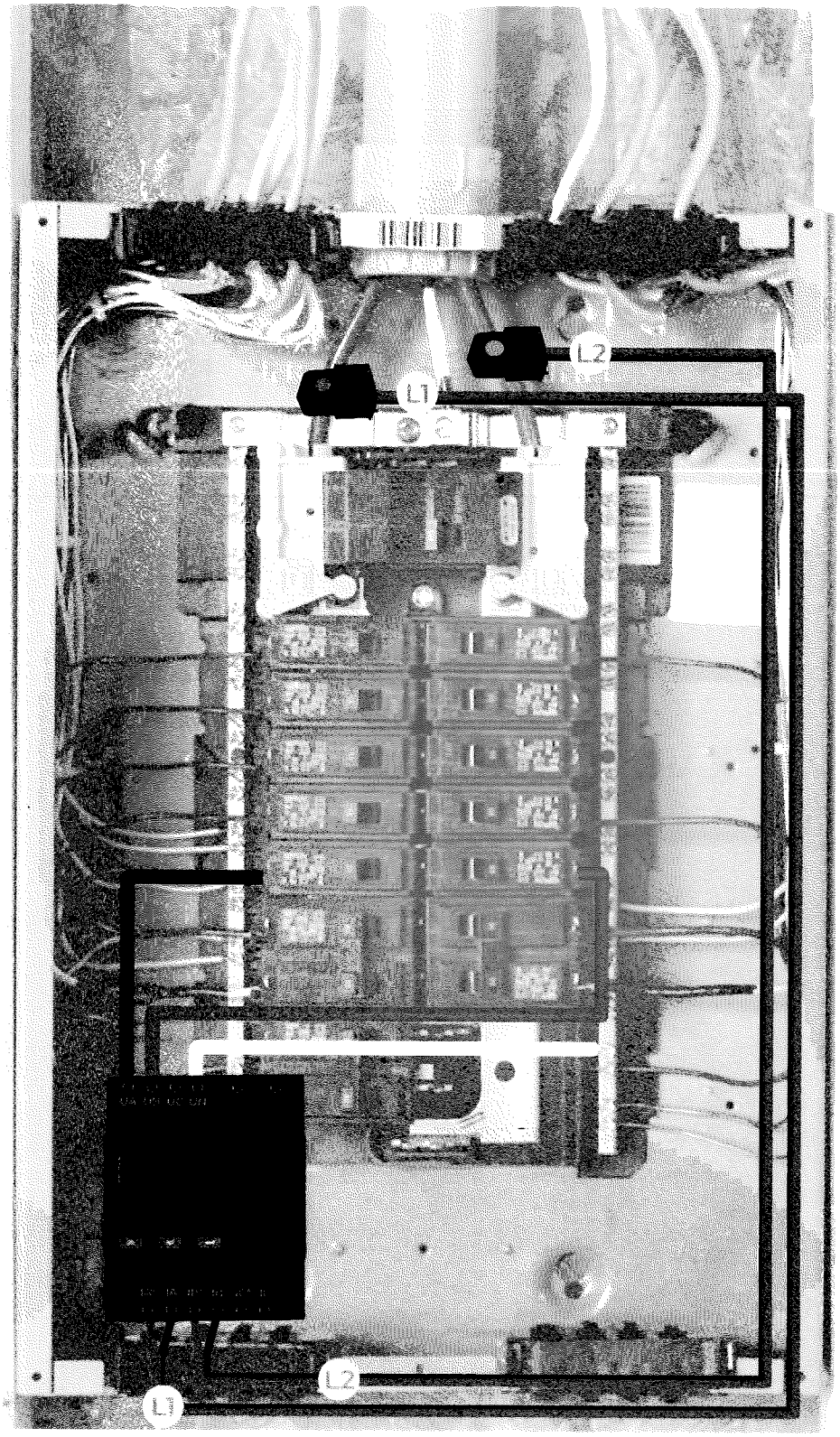
While traditional solar systems aim to cover 100% of your electricity bill, they rely heavily on net metering and often require batteries to match production with usage—especially at night. Plug-in solar, on the other hand, targets your *daily average* energy needs, not your yearly total. It's like sizing the water pipe to your home based on daily flow, not annual consumption. Even though plug-in systems are smaller, their significantly lower cost per watt makes them financially smarter, delivering a better return without overbuilding or depending on utility policies, while still covering the home's base load.

Think of plug in solar as a no regrets pathway – it opens up an opportunity for a new type of solar to be within reach for people who may not normally consider rooftop solar.

APPENDIX



Example: Power meter



Example: Power meter installation