



## Technical Assistance Request

### Expanding Solar Installation through Solar Crowdfunding

#### ABSTRACT:

The continental US has approximately 1,118 GW<sup>1</sup> of rooftops compatible for solar PV systems. Combined with historically low costs for new system, the solar market is poised for dramatic growth. Yet, for residential and commercial PV systems, the install rate has waned over the last few years, showing the greatest growth in the utility sector. This stagnation can be attributed to installation costs, posing a risk to customers that may not see break-even dates for 10+ years. By lowering the financial “bar” of entry and improving system economics through alternative funding mechanisms, like solar crowdfunding™, the industry as a whole will benefit from an increased installation rate. Therefore, if funded, Sunraise will develop a niche Crowdfunding platform, that will also assist in the funding, permitting, installation, and any other logistics associated with installing solar.

In 2019, the total sums of money raised through Crowdfunding platforms is projected to reach \$718.2M with a Compound Annual Growth Rate (CAGR) of 6.2% between 2019-2023<sup>2</sup>. The goal is to tap into this established industry in order to raise capital for solar projects. This will eliminate “regionality” that has historically proven to be a limiting factor when companies attempt to raise funds<sup>3</sup>, providing nonprofits, municipalities, individuals, school districts, and other organizations the resources to orchestrate a large fundraising campaign while also providing the project additional funding that would have otherwise not been accessible. Finally, Sunraise will eliminate the burdens of permitting, siting, and installing a solar PV system for our users, with support available from Raise-To-Rays.

Sunraise has the ambitious goal of donating up to 70% of recurring funds from any PPA systems, directly back into the communities that we site our solar arrays within. Our hope is to set up long term sources of funding for our users and their communities that may experience revenue restrictions due to local tax/business laws (ie – TABOR within CO). Our first anticipated steps will be to assess & characterize various US markets, connect with partner installers within identified regions, and identify/characterize our target customers.

---

<sup>1</sup> Gagnon, P., Margolis, R., Melius, J., Phillips, C., & Elmore, R. (2016). *Rooftop Solar Photovoltaic Technical Potential in the United States: A Detailed Assessment*. NREL; <<https://www.nrel.gov/docs/fy16osti/65298.pdf>>

<sup>2</sup> Statista (2019). *Crowdfunding*. Statista.com. <<https://www.statista.com/outlook/335/109/crowdfunding/united-states>>

<sup>3</sup> Agrawal, A., Catalini, C., & Goldfarb, A. (2011). *The Geography of Crowdfunding*. National Bureau of Economic Research; <<https://www.nber.org/papers/w16820.pdf>>

## REQUEST SUMMARY:

### 1. US Market Analysis

#### a. Assess market demand

- i. Partner with NREL's Solar Cost Modeling group to identify where installation costs would be most favorable for customers and how to determine favorable economics.

#### b. Assess market potential

- i. Partner with NREL's Energy Analysis group to update and assist in the market identification and characterization based on research that has already been performed. This assistance will help us to identify and characterize our initial marketing efforts to pursue Business Development in markets that have the lowest "bar" for entry based on our technical parameters.

#### c. Identify favorable Federal, State, and local incentives within identified markets

- i. Partner with DOE/DSIRE to ensure that their public database is up-to-date and accurate of current incentives. If possible, obtain a mass download/API connection to better digest and analyze the data

### 2. US Solar Network

#### a. Solar SME Network

- i. Partner with The American Made Network to identify solar installers, experts, regulatory professionals, developers, financiers, etc in our prospective "Phase 1" markets. This information will be helpful in identifying regional risks that may eliminate certain markets from the launch of "Phase 1".

#### b. Solar Installer Network

- i. Partner with The American Made Network to identify a network of installers within various regions. We will use this information to identify partners that will perform the solar installations once projects have been successfully crowdfunded.

#### c. Solar Manufacturer Network

- i. Partner with the NREL's Energy Analysis group and The American Made Network to identify SME's that will be able to help us design the most economical and efficient system that can be used for our customers. We are specifically needing expertise regarding electrical engineering, manufactures, micro-inverter vs standard inverter, costs, etc.

### 3. User Analysis

#### a. Identify key building segments

- i. Partner with the NREL's Energy Analysis group to better understand regional demand profiles for various building segments, meter types, and building types.

#### b. Identify laws/initiatives that motivate key customer segments

- i. Identify key trade groups, policy centers, of Government/Regulatory Affairs specialists in "Phase 1" markets to ensure Sunraise is well knowledgeable of any regulatory hurdles