

I. GENERAL INFORMATION

Date of application:	10-14-2016
Legal name of organization:	Solstice Initiative Inc.
Address:	50 Milk St, 17th Floor, Boston, MA 02109
Website:	solstice.us
Geographic area to be served:	Massachusetts and New York, followed by other states
Number of employees, volunteers:	10 FT employees, 5 PT volunteers
Amount of grant request:	\$150,000
Project Timeline:	Jan 2017 – Jan 2018
Organization's fiscal year:	8/1-7/31
Current annual operating budget:	\$400,00

Summary: Solstice Initiative radically expands access to clean energy by providing community-based solar power to underserved American households, particularly the 80 percent that cannot install solar panels on their roof. Under the Solstice model, any household can subscribe to a portion of a community-shared solar array, enabling them to access clean energy for the first time and save money on their utility bill—without an upfront cost.

Solstice is a startup social enterprise seeking capital to expand our reach and refine our model for national replication. Support from the Foundation will enable us to build on this success and truly bring solar into the mainstream, transforming the clean energy industry in America.

Contact:
Steph Speirs, Co-Founder and CEO
steph@solstice.us
808-778-5448

II. ORGANIZATIONAL NARRATIVE

The Problem Posed by Our Reliance on Conventional Energy

The negative impacts of our dependence on fossil fuels are felt all across the United States, and the repercussions are experienced most immediately in the public health crises that afflict the country. According to a recent study in Scientific American, conventional energy generation is responsible for tens of thousands of premature deaths, hundreds of thousands of asthma attacks, and millions of lost workdays a year.

These near-term impacts are compounded by the hazards posed by climate change. Climate change, after all, is no longer over the horizon; it is at our doorstep. While no single weather event is dispositive, the map is becoming dense with data points, in the recent wildfires raging in the American West, the droughts that have struck New England and California, and the storms that have battered the East Coast. These events exact an extraordinary toll—human, economic, and social—on the communities that fall victim to them. Lower-income Americans are particularly vulnerable to these disasters.

The Opportunity Created by Renewable Energy

The good news is that there is an extraordinary opportunity to end, once and for all, our reliance on dirty energy, and save money in the process.

The price of solar panels has declined by approximately 80% over the past five years, to the point where, in certain markets, the cost of generating solar power has broken through the cost of generating power from conventional sources of energy. In fact, owing to government incentives, many Americans can save money by switching to solar. As a consequence, people across the country are taking notice. Households have installed more solar on their roofs in the past three years than they did in the previous fifty years combined.

As it stands, however, only a small fraction of American households are poised to take advantage of solar. Just 20% of households can install solar on their own property. The remaining 4 out of 5 American households are shut out of

the market for rooftop solar, whether because they rent their homes, have roof or shade issues, or lack the credit necessary to lease a system. Solstice is committed to providing these Americans with an affordable and accessible solution because they spend a disproportionate amount of their income on electricity.

The Solstice Initiative Solution

Solstice Initiative is dedicated to solving these pressing social problems. We do so by providing community-based solar power to underserved American households.

Solstice utilizes a transformative emerging model for residential solar power called “community solar,” which enables households to subscribe to a shared solar farm in their neighborhood. Participants immediately begin saving 10% on their monthly utility bill, and there is no cost to join or roof needed.

Community-based models are the only path to solar power for most of America. Industry experts agree that community solar is the future of clean energy. In fact, the Department of Energy recently released a report forecasting that up to half of the United States’ PV capacity by 2020 will come from shared solar.

There are a handful of community solar developers operating across the country. However, no company has figured out how to deploy community solar in local communities quickly and at scale.

Solstice is changing that. Since January 2015, Solstice has been working to validate a model for community solar that can be replicated across the country. We put more projects on the ground by partnering with churches, workplaces, and local organizations to switch to solar and offer portions to their constituents. We have completed four pilot projects in Massachusetts and are actively signing up new customers.

In order to tap into the power of networks, we are planning to establish a "Solstice Leaders" program, amplifying the work we've already done on the ground. The program leverages the insight that the primary reason customers switch to solar is that a friend or neighbor went solar. We incentivize Solstice Leaders to sign up their family and friends for community solar, dramatically lowering the cost of customer acquisition for solar and creating solar neighborhoods.

By creating market demand for solar through our presence in local neighborhoods, we catalyze profoundly positive benefits for communities: we protect the health of the most vulnerable members of society; stimulate the local economy by unleashing solar savings; and accelerate the decarbonization of the greater economy. Support from the Foundation will enable us to build on our initial traction and spark the solar revolution.

Benefits

By enrolling 50,000 customers over the next five years, we will provide a total annual savings of over \$12 million to households, many of whom would not otherwise be able to access clean energy. By stimulating market demand, we will also increase the overall community solar supply, as 250 more solar projects are built and used. This helps to accelerate the decarbonization of our economy, avoiding about 285,000 tons of CO₂ a year, equivalent to 274 million pounds of coal not burned.

Future Trajectory

By the end of the funding period, Solstice plans to be present in nine states and poised to expand to additional states spanning a diverse geography. An investment by the Foundation will enable us to help thousands of American families switch to community solar and would allow us to continuously refine our model as we deploy it across the country.

Around 15 states have the enabling laws for community solar, and about as many more are currently considering it in their legislatures. Creating a national footprint and clean energy constituency will, in turn, empower us to be a leading voice advocating for the nationalization of community solar and adoption of progressive solar policies more broadly.

Organizational Progress To Date

Solstice has rapidly matured since its inception in 2014. We are already enrolling customers, and we hope to start scaling up. In recognition of our innovative work, we have received a host of accolades, including the Echoing Green Climate Fellowship, the Global Good Fund Fellowship, and the Halcyon Fellowship. We won the Kia Revisionaries

Contest, we participated in the MIT Delta V Accelerator Program and Cleantech Open Northeast, and we advanced to the next round of MassChallenge (where we are one of the top 26 finalists out of 128, with winners still to be determined). In recent months, we have grown our team from three to ten. We have incorporated, received our tax-exempt status, and assembled an Advisory Board that includes experts in impact investment, the solar industry, community development, and energy policy.

III. GRANT PROJECT PROPOSAL

Objective of Project

The goal of these pilot projects is to accomplish three goals.

- (1) Engage communities to take control of their own energy production, particularly low- to moderate-income Americans.
- (2) Gather momentum in new communities so that we can spread to nearby areas.
- (3) Refine our model as we begin to scale.

Description of Project

Solstice conducts the community organizing, outreach, and awareness-building necessary to ensure entire neighborhoods can go solar. Our work takes us to churches, schools, workplaces, and other local institutions where we introduce community leaders to shared solar and assist them in offering it to their constituents.

- (1) First, Solstice identifies community organizations (such as schools, churches, and workplaces) interested in hosting or enrolling in a solar array and in offering clean energy to its constituents.
- (2) Solstice partners with a solar developer to arrange the financing and installation of the solar array.
- (3) Solstice organizes local residents and helps them adopt the offering.
- (4) Solstice ensures solar subscribers see a credit on their monthly electricity bill.

Tangible Results To Date

We have formed partnerships with a total of four developers and recently signed a contract with Etsy to provide community solar to them and their community. Validating our model, we recently enrolled a church, and a number of congregants followed suit and signed up. In total, we have enrolled about 20 customers in more than 100 kW of solar capacity, generating over \$10,000 in revenue.

Target Population and Benefits

Our mission is to ensure that any household in America—irrespective of income level—can participate in affordable solar power. Our target population is the 80 percent of Americans that cannot install a solar system on their rooftop. Households enjoy immediate savings on their electricity bill, a hedge against long-term increases in energy costs, and easy access to renewable energy. The average household saves \$3,800 over the course of our program and never pays an upfront cost. In addition, the community organizations with whom we partner see benefits too: we boost their brand as a leader in the sustainability space, strengthen their relationship with their constituents, and make donations for their cooperation.

Constituent Feedback

Once educated about the product, customers express overwhelmingly positive reactions. However, relatively few households are currently aware that they would be well-served by residential solar, and many fewer yet know that they have the opportunity to participate in—and stand to benefit from—community solar. Solstice is eager to provide these communities with the knowledge they need to empower their neighborhoods.

Partnership with the Foundation

Solstice is the kind of organization that is interested in an ongoing and active relationship with its funders. The Foundation stands at the helm of a powerful network of advisors, and Solstice would welcome technical advice and mentorship on a variety of startup issues, including governance structure.

Innovative Advantage

Solstice is the only enterprise in the industry transforming local organizations (churches, schools, workplaces) into neighborhood solar hubs, and it is the only one with prior experience organizing these communities.

Project Significance

- The problem of solar access is too large to ignore, and solar is finally cheap enough that we can do something about it. Yet, society does not currently have a good solution.
- On the supply side of the solar market, project developers are experiencing pain points. First, they face difficulty in securing new sites for solar arrays. Secondly, they lack the experience and/or the desire to work directly with resident end-users of solar. They are looking for an entity to help them aggregate customer demand and activity for community solar, and prominent solar developers have already hired us to conduct their customer acquisition in several states.
- We have completed four pilot projects in Massachusetts and are actively signing up new customers. We are currently based in Massachusetts and are hoping to launch our first project in New York soon. Without the Foundation's support, however, we will be unable to expand further, which translates to fewer Americans accessing solar power.
- Solar is the most promising clean energy option that society has to mitigate climate change, but most Americans cannot access it. Enabling Americans to use renewables is crucial because it allows them to build local resilience, while enabling the country as a whole to battle climate change.

IV. TEAM

Management Team

Solstice Initiative is comprised of 10 full-time staff and 5 part-time volunteers. As a whole, the team possesses expertise in the solar industry, energy policy, community development, and finance. Drawing on grassroots techniques our co-founders honed during their work with the Obama campaign, Solstice is the first enterprise to successfully deploy innovative community organizing to the community solar space.

Steve Moilanen: Co-Founder and President

Responsible for internal operations, sales, regulatory affairs, budgeting, HR, and legal.

Steve has spent years working for the federal government, international organizations, and political campaigns in support of social change. He was previously employed by the White House Office Energy and Climate Change, which worked to reduce carbon emissions from the electricity industry, promulgate fuel efficiency standards, and manage the federal response to the BP Deepwater Horizon oil spill. In connection with his work on Solstice, Steve was selected as a Halcyon Fellow and Echoing Green Climate Fellow, which both recognize and support outstanding young entrepreneurs with ambitious visions of social change. Steve's experience also includes employment with the United Nations Environment Programme, the U.S. Department of Energy, and Obama for America. Steve graduated magna cum laude from Brown University and holds a Master in Public Affairs (MPA) degree from Princeton.

Steph Speirs: Co-Founder and CEO

Responsible for external outreach, marketing, fundraising, business development, and product development.

Steph is a social entrepreneur and community builder with eight years of operational experience in multiple countries. She was selected as an Echoing Green Climate Fellow and an Acumen Global Fellow, both of which recognize emerging leaders in social enterprise. She previously worked as the Innovation Manager in sales and marketing at d.light India, a solar products company powering areas without reliable electricity; spearheaded Acumen's renewable energy sector investment strategy in Pakistan; developed Middle East policy as the youngest-ever Director at the White House National Security Council; and managed field operations in seven states for the first Obama presidential campaign. She holds a BA from Yale and an MPA with distinction from Princeton, and is an MBA candidate at MIT Sloan School of Management, where she is a recipient of the Paul and Daisy Soros Fellowship for New Americans.

Sandhya Murali: CFO

Responsible for finances, accounting, and financial inclusion initiatives.

Sandhya began her career in Barclays' investment banking division in New York and London, advising on and executing public equity transactions for Technology, Media and Telecom companies, and was also deeply involved in Barclays Philanthropy. Her volunteer work included Endeavor, Women's World Banking, and Barclays' Social Innovation Fund. During graduate school, Sandhya worked at Buen Power Peru, a for-profit social enterprise that distributes solar lamps and water heaters to off-grid communities in Peru. She holds a BBA from the University of Michigan and an MBA from the MIT Sloan School of Management, where she received the Sustainability Certificate.

Advisory Board

- Will Byrne, Co-Founder, Groundswell
- Batool Hassan, Director, Acumen Fund
- Dawn Dzurilla, Founder and President, Gaia Human Capital
- Tom Leyden, VP, SunEdison
- Joy Hughes, Founder, Solar Garden Institute
- Nathan Ratledge, Former Executive Director, Community Office for Resource Efficiency
- Adam Gibbons, Founder, Community Collaborative Consulting
- Adje Mensah, CEO, A.F. Mensah Inc. and Former Founder, Petra Solar
- George Foote, Partner, Dorsey & Whitney LLP
- Leyla McCurdy, Former Director, Public Education and Outreach, American Lung Association
- Tom Hardart, Founder, XOL Ventures
- Brian Trelstad, Partner, Bridges Ventures

V. PROJECT EVALUATION

Project Success

The Solstice model allows any household to access clean energy for the first time and save money on their utility bill, with no cost to join. We posit that if solar products are more affordable and accessible, we will see broad-based adoption of solar power, and the transition to carbon-free electricity will accelerate.

Over the course of the project, we would utilize the Foundation grant to enroll over 5,000 households in community solar. This will translate into a total annual savings of over \$1.2 million to households and the deployment of 25 new solar projects. The effect will be about 28,500 tons of CO₂ avoided each year, equivalent to 27.4 million pounds of coal not burned.

Evaluating Impact

At Solstice, we take impact evaluation seriously. We need to measure whether we are enlisting more households for solar than would be participating under the status quo, that those households fall within our target demographics, and that those households are seeing an economic benefit from switching to clean energy. We intend to evaluate these outcomes and are currently collecting customer information to do so, including income, household ownership data, energy savings, carbon offset calculations, and repayment rates.

We intend to collect this customer data at the conclusion of the resident enrollment process. We also plan to survey the customer on process and product improvements. Evaluation results will be used to make decisions and iterations on product design/customer engagement.

The primary benchmark for the success of the Foundation's direct investment is ensuring we help 5,000 households switch to solar. However, as we've seen with our current activities on the ground, to get there takes a lot of other work. Here are some other specific definitions of success we've set as our objectives.

- 5,000 households enrolled
- 25,000 Households contacted
- 50,000 Households attempted
- 120 Community organization partners signed on
- 480 Community organizations contacted / Community outreach meetings held
- 1,000 Community organizations attempted

It may also help to know that we have taken care to implement routine check-ins on our activities to ensure we are reaching our goals. For example, we have daily check-in meetings for our team; weekly meetings on operations; and a weekly retrospective meeting where we grade our outreach efforts against a report card of goals.

Achieving Sustainability

Customer sustainability:

Solstice believes community engagement and empowerment yields higher levels of solar customer retention, which informs our community organizing strategy. Furthermore, a Yale study found that the primary reason customers switch to solar is they have a friend or neighbor that went solar, so solar is literally contagious.

Financial sustainability:

As a social enterprise dedicated to achieving financial sustainability, we have identified sources of cost recovery that will allow us to scale operations more quickly. We are already leveraging referral fees from solar developers for new customers and new sites we secure for community solar.

Organizational sustainability:

Solstice is implementing key HR (training, coaching, and evaluation) processes to ensure organizational sustainability and seamless long-term growth.

Mitigating Risks

Utilities threaten to slow the growth of distributed generation through their characteristic opposition to community solar legislation. In order to mitigate this risk, we engage in advocacy around community solar, including building coalitions of support, interfacing with allies, and drafting public-facing communications in favor of supportive policy.

VI. FUNDING NARRATIVE

This “Solar for All” project under consideration would initially serve Massachusetts and New York, and by the end of the funding period, seven additional states in the US (Rhode Island, Vermont, California, Colorado, Minnesota, Maryland, Connecticut). With \$150,000 from the Foundation, Solstice Initiative can help 5,000 American households switch to community solar in their neighborhoods.

Funding Received to Date

We have not yet received funding for funding in New York. The funding sources we’ve received to date have contributed towards pilot projects in Massachusetts.

Monetary Awards

To date, we have received major funds from a variety of sources, but we have yet to be successful with foundations.

- Massachusetts Clean Energy Center Scholarship – \$5,000 for 2016
- MIT Delta V Accelerator Program - \$50,000 for 2016
- Obvious Ventures #worldpositive Award - \$50,000 for 2016
- Echoing Green Climate Fellowship – \$90,000 for 2015-2017
- Halcyon Incubator and seed funding – \$15,800 in 2015
- Princeton eLab incubator and seed funding – \$18,000 in 2014

In addition to financial resources, Solstice has identified and leveraged a variety of professional services on a pro bono basis, including legal, accounting, and graphic design.

Fundraising Strategy

First, we are collecting fees from solar developers for each customer we acquire, as per industry norms. Second, we are pursuing philanthropic capital from a number of institutional funders, using relationships we have built with institutional donors in the energy and community development space.

Fund Priorities

In the event that the Foundation is unable to meet our full request, our most acute needs are the costs associated with the on-the-ground community organizing around shared solar that we do in local neighborhoods. This involves contracting and training field staff, the outreach costs to local churches and organizations, and the printing of household engagement materials.