



CASE STUDIES ON FRONT & CENTERED MEMBER'S PURSUIT OF SOLAR ENERGY

Two case studies presented in this document examine the efforts undertaken by two member organizations of Front & Centered to plan for the installation of solar energy generation projects on the rooftops of their buildings. Their efforts provide a crucial snapshot of the current state of access to solar energy in communities of color and low-income communities in Washington State.

THE VALUE

For policymakers interested in facilitating the equitable growth of solar energy, this document provides insight on some of the key remaining barriers toward this vision. For us at Front & Centered, the work of planning for solar energy itself provides valuable information and experience to change the rules so community based organizations can benefit from the transition to clean energy. The exercise our communities undertook to plan for solar has created a template for future efforts.

In the first case, we study the effort of Shiloh Baptist church in Tacoma to apply for a solar energy grant made available by its electric utility. In the second, we examine the effort of Asian Counseling and Referral Services (ACRS) to develop a plan to install a solar panel array on its headquarters in Seattle. Both efforts were initiated by Sameer Ranade, Senior Organizer at Front & Centered, and the primary author of this document.

The cases of Shiloh Baptist and ACRS are among the many important and relevant stories we seek to build on the path to equitably boost solar energy growth. Both are unique and compelling situations.

FRONT & CENTERED SOLAR PLUS

CASE STUDY #1: SHILOH BAPTIST CHURCH

In August 2019, Shiloh Baptist Church applied for a \$50,000 grant from Tacoma Public Utilities (TPU) Evergreen Options Program for an 18.86 kilowatt solar photovoltaic installation on their roof. Located in Tacoma's historically low-income and racially diverse Hilltop neighborhood, Shiloh Baptist offers social programs supporting disadvantaged residents and frequently provides the use of its venue for community gatherings and nonprofit led events. Shiloh Baptist is an anchor of the Hilltop community and a highly visible and important location for a solar energy array.



Shiloh Baptist Church in all its glory in the Hilltop neighborhood of Tacoma

The vibrant community of Shiloh Baptist Church is led by its Pastor Gregory Christopher, whose impassioned interest in social justice and climate change realized the effort to seek the solar grant. Pastor Christopher leads an active civic life, having previously been a candidate for the

Tacoma City Council and currently serving as the President of the Tacoma NAACP Chapter. In just the past year, he took an active role in advocating for the passage of the carbon fee Initiative 1631 as well as environmental justice legislation in the Washington State Legislature. Pastor Christopher's motivation and position as a community leader makes him an ideal public facing spokesperson on the benefits of this solar project.

Pastor Christopher's stated chief motivation in the grant application for Shiloh to install solar energy was to serve 'our Lord's mission of social justice and tranquility by demonstrating a viable solution to the urgent climate crisis wrought by our unsustainable consumption of energy'. The grant was also appealing because it would have paid for the entire cost of developing the project upfront and allowed for electricity bill savings to be realized immediately. Pastor Christopher appreciated that self-generated solar energy would serve as a hedge against the annual electricity price increases that were anticipated.

In its application, Shiloh sought bids from Sphere Solar and Integrity Solar (Note: Integrity Solar is not the real name as that was changed for confidentiality purposes). Due to the better proposed value and compelling story of Sphere Solar's founder Edwin Wanji, Shiloh had determined that it would select Sphere Solar. Sphere offered to develop an 18.86 kw project while Integrity offered to build a 15.4 kw project. The larger installation would generate more power and thus greater benefits. According to Sphere's estimates, their proposed solar project would offset 39% of Shiloh's electricity use. This would save \$130 on each monthly bill in the first year, growing to \$233 per month in 25 years.

TPU provided multiple criteria for grant applicants to meet in order to be funded. They covered project readiness, costs & funding, innovation, community benefits, and proposal quality. Shiloh's application was competitive on each of these fronts. In the area of innovation for example, Sphere proposed to use the latest in solar technology, with solar panels made by Hanwha and Inverters by SolarEdge Technologies



Edwin Wanji, the founder of Sphere, has an extraordinary background and promised to educate Shiloh Baptist Church members' about the solar energy display with a particular emphasis on the youth. Edwin was born in Nairobi, Kenya where the electrical grid was unreliable. He was exposed to the enormous potential of solar energy to improve lives. As a youth, he plied solar panels from calculators to charge car batteries. His innovative and entrepreneurial nature led him to the United States, where he worked as a mechanic for the City of Seattle for a number of years before founding Sphere Energy. In addition to Edwin's commitment to educate church members, Pastor Christopher and the staff at Shiloh had planned for a celebratory ribbon cutting event. The pieces of a compelling application were put into place.



Edwin Wanji teaching youth about solar. Photo credit: Crosscut

The grant award decisions were made by a vote of members of TPU's Evergreen Options program. Evergreen Options is a voluntary program offered by TPU for customers who wish to offset their personal carbon footprint by funding renewable energy projects with a surcharge on their electricity bills. Those monies would have funded renewable energy project proposals submitted to TPU during the 2019 funding cycle. Enough funds were available to fund two project proposals, and a total of three were submitted. In addition to Shiloh Baptist, Franklin School District and Jason Lee Middle School applied for funds.

Upon recognizing that it would be a highly competitive process with two schools that were likely well organized, Pastor Christopher had Front & Centered Senior Organizer Sameer Ranade speak to his congregation during his Sunday service to recruit them to join the Evergreen Options Program.

Sameer speaking at Shiloh Baptist church while Pastor Christopher looks on



While Front and Centered managed to find nine members who were interested in joining the program, the two public schools likely were able to more easily mobilize new members to join.

In late August, Shiloh was notified that its project was not among the two projects selected to be funded by Evergreen Options Program members. The vote in favor of the two schools was decided by overwhelming margins:

Vote totals shared by TPU staff

FUTURE PROSPECTS FOR SOLAR ON SHILOH

Despite the loss, Shiloh remains optimistic about the prospects of deploying solar energy on its roof in the near future and continues to pursue funding options. Sameer Ranade of Front & Centered and Mikhaila Gonzalez of Spark Northwest have committed to supporting Shiloh in seeking funding.

As a non-profit and a church, Shiloh faces several barriers to seeking financing. Among them are:

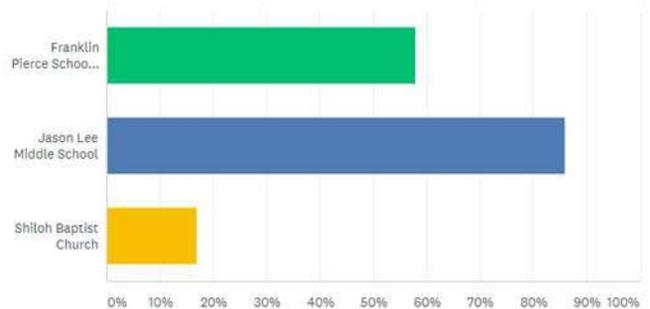
- Grant funds only approach: Pastor Christopher's staff assigned to evaluate financing options in detail

were hesitant to take out a loan. This was due to concerns about the effect of a loan on the church's overall financial stability. Moreover, it wasn't apparent that any entities were willing to securitize the loans which may have eased Shiloh's concerns. Tacoma Power not offering to allow loans to be paid back with on bill financing was another hurdle to making a loan appealing.

Q1

Please select your top 2 choices to receive a grant from the Evergreen Options program.

Answered: 242 Skipped: 0



ANSWER CHOICES	RESPONSES
Franklin Pierce School District	57.85% 140
Jason Lee Middle School	85.95% 208
Shiloh Baptist Church	16.94% 41
Total Respondents: 242	

- Current prohibition on non-profits from utilizing the 30% federal tax credit for renewable energy projects: Shiloh explored the option of working with a third party to monetize the tax credit but declined to pursue it after it proved to be too complex. If the tax credit had been utilized, it would have expanded the size of project and increased its benefits and appeal.
- Current prohibition on state clean energy funds to finance projects for churches: While public schools are eligible for such funds, churches are not. Therefore, TPU's grant was one of the few funding sources available to the church.

Grants funded by public or private philanthropy appears to be the only realistic option for Shiloh at present. Over 2020, three options appear on the horizon for Shiloh to pursue. They are:

- 1) 2020 TPU Greenpower Program: Winning the vote may require a significant campaign effort to enroll new members into the Greenpower program.
- 2) Bonneville Environmental Foundation (BEF): BEF is a 501 (c3) and receives major funding from the Bonneville Power Administration. It offers matching grants to fund solar energy generation projects primarily located in BPA's service territory to developing community owned solar projects
- 3) Centralia Coal Transition Grants: These funds were established to finance the transition away from coal powered electricity generation with the planned closure of the coal-fired plant in Centralia, Washington. Grants for solar energy projects located statewide will become available in the last quarter of 2020.

From the standpoint of economic resiliency and pollution reduction, Shiloh Baptist could benefit from a solar energy installation. It is possible that the above grants will help Shiloh realize these important goals in the near future.

CASE STUDY #2 ACRS

Headquartered in the South Seattle, the Asian Counseling and Referral Services (ACRS) is a nationally recognized nonprofit working for social justice and offers a broad array of behavioral health programs, human services, and civic engagement activities for primarily low-income Asian Americans. Utilizing a pass through grant from Front & Centered, ACRS dedicated its Administrative Director David Beers to explore financing options for building a solar photovoltaic array on its roof.



ACRS leading an advocacy campaign

Mr. Beers stated the impetus of ACRS to use solar energy as three-fold:

- 1) Prevent climate change and environmental degradation
- 2) Lower facility energy costs and allow the savings to be allocated to fund programs
- 3) Create work for minority and women owned businesses

ACRS was open to the prospect of funding the solar project through a variety of methods, including:

- Loans that could be paid back with energy cost savings
- Leasing
- Community Solar
- Grants

ACRS sought bids from two solar companies, named Star Solar and Moon Solar (note: these names have been changed for confidentiality purposes). Both companies submitted different bids, noted in the table below:

Company #1

Initially, Star Solar assessed the capacity of ACRS's roof to host a 48.8kw system at an approximate cost of \$146,400.

Upon a second assessment, Star Solar found that ACRS's roof could host 100kw but that it would entail setting up several sub-arrays and not be as cost effective. An estimated cost for this size was not provided as it would have required an in person site visit.

Company #2

Moon Solar assessed the capacity of ACRSs roof to host a 145.91kw system at an approximate cost of \$321,013. The discrepancy in system size is likely attributable to the fact that Moon Solar conducted after an initial glance of ACRS' roof space and would update it upon a site visit.



*ACRS Headquarters: Can you imagine how beautiful a solar array would look on this building?
Image credit: The Stranger*

LEASING

A leasing option was considered from Evolution Solar (renamed for confidentiality purposes) but its offering was challenging to be cost effective for ACRS. This was due to the lack of a production incentive and the extremely low price of power offered by Seattle City Light.

COMMUNITY SOLAR

This option was found to be difficult to pursue. Mr. Beers noted the challenging prospects of securing crowd funding from ACRS's network, primarily consisting of low-income clients. Furthermore, an entity that would be willing to administer the program was not easily identifiable.

GRANTS

Three sources were identified:

- 1) The Clean Energy Fund (CEF) managed by the Washington State Department of Commerce: Notice of funding for the 2020-21 cycle to be announced by June 2020)
- 2) Centralia Coal Transition grants
- 3) Bonneville Environmental Foundation (BEF) grants.

LOANS

Two sources were identified:

- 1) The Sustainable Energy Trust (SET) housed within the Washington State Housing and Financing Commission. *Loan Terms: maximum 10 years/ loans must be for at least \$50,000/ interest rate ranges between 2-5%*
- 2) Puget Sound Cooperative Credit Union (PSCCU). *Loan terms: maximum 15 years, loans can range between \$5,000 - \$49,999.99, interest rate ranges between 4.35 - 9.84% based on credit score*

Neither of these loans appeared to be designed to accommodate ACRS, especially in light of the low price of Seattle City Light's electricity. The minimum \$50,000 grant requirement of the SET made it so that ACRS could not utilize a small loan that could be matched with a grant. While PSCCU offered smaller size grants, its interest rate was higher.

THE DECISION

Mr. Beers arrived at the conclusion that any or some combination of the three grants were the best option. Of those, the Centralia Coal Transition grants offer the simplest path forward, with no restrictions on system size. This would allow for ACRS to apply for a system likely under 100kw that optimizes the balance of cost savings and solar power generation. A 100kw is the minimum size required to apply for CEF grants. As stated by Star Solar, a 100kw system was

feasible but less cost effective. The Centralia funds would enable ACRS to submit a higher value proposal. That said, Mr. Beers intends to apply for the CEF grant when the notice of funding availability is released by mid-2020. While a 100kw project may not be the most cost effective, it would still yield benefits for ACRS. Moreover, ACRS would be eligible for the 35% minimum allocation of CEF grants that must be awarded to community solar projects that benefit low-income communities. Incidentally, 100kw is also the maximum system size allowed for a renewable energy project to qualify for net-metering.

NEXT STEPS

Mr. Beers views the CEF as the first option and Centralia funds as a backup option. The timeline for the release of CEF's notice of funding and awards should be prior to when Centralia funds for solar projects becomes available in the last quarter of 2020. BEF staff have expressed an interest in funding ACRS's project and a matching commitment could be secured from them in the application for Centralia funds. The prospects for ACRS to adopt solar energy technology over the course of 2020 look bright.

Two key takeaways on how ACRSs goals on solar energy could be more easily met include:

- Washington State must replenish the renewable energy production incentive funds. Had this incentive been available, it is likely that ACRS could have moved forward with the solar lease or loan options because they would have saved money.
- Washington's solar industry must diversify to include more women and minority business owners. Although this was not an absolute requirement, Mr. Beers' stated preference was for ACRS to accept a bid from a woman or minority owned solar business. This would have limited the available options significantly under present conditions.