



PALI MICROGRID FAQs

GENERAL

1. What is Resilient Palisades?

Resilient Palisades is a 501(c)(3) non-profit organization that was founded by residents of Pacific Palisades in 2019 and is run solely by volunteers, the vast majority of whom currently live in Pacific Palisades. Our mission is to engage with Palisadians, local businesses, schools, and other organizations on projects that help our community develop a more sustainable way of living to fight climate change and ecological degradation.

2. What is the Pali Microgrid initiative in a nutshell?

Resilient Palisades' Clean Energy Resilience team aims to dramatically increase local solar electricity generation in the Palisades, reduce emissions, save money, and increase energy resilience for our community.

Our plan for achieving this is called the Pali Microgrid.

A microgrid is a network of homes and businesses that have installed solar and storage, and that can take advantage of stored electricity in the network in order to:

(1) Reduce load on the grid – important in the Palisades as LADWP is urgently seeking additional distributed energy resources (DERs) to meet our community's growing demand for electricity; and

(2) Increase resilience by islanding from the grid in the event of brownouts and blackouts – highly relevant for the Palisades given more frequent outages (according to data provided by LADWP, 19 major outages in the El Medio Bluffs alone since 2018).

We are taking a two-phase approach to establishing the Pali Microgrid. The first phase consists of installing solar + storage across as many homes as possible. We are accomplishing this with a group purchasing program, leveraging volume to get best possible pricing from installers. In other communities where this has been attempted, pricing has been as much as 30% lower. Installers are also being selected based on: (1) Quality of equipment; (2) Customer service; and (3) Reputation, experience, and integrity. By participating in Phase One, Palisadians will not only achieve better pricing, but also greater certainty of installation and service, as installers will also be accountable to Resilient Palisades, and we have a commitment from LADWP for expedited interconnection. Phase One is expected to



start in November, once installers are selected following a comprehensive RFP process.

In 2022-23, Phase Two will consist of joining solar + storage homes into a microgrid. We will partner with LADWP and start with a small pilot in one neighborhood to demonstrate a microgrid can work in the LADWP service area. The Pali Microgrid will grow from there.

The Pali Microgrid will be the first such microgrid in the LADWP service area, and one of the first in the U.S. in an established residential community.

3. Why is a microgrid beneficial to the community?

A microgrid can provide clean and reliable energy and can island itself from the main grid as needed, enabling participants to share stored power during an outage of the main grid. Microgrids enable communities to be more resilient, sustainable, and self-reliant. Microgrids also can help improve the operation and reliability of the local utility (here, LADWP) by reducing demand on the grid and thereby reducing the chance of brownouts and blackouts in the community. Adding solar panels and home battery storage to your home or business can also increase your property value.

4. Are any for-profit entities behind the Pali Microgrid initiative?

Our Clean Energy Resilience Team, which is spearheading the Pali Microgrid initiative, has several members, all of whom currently reside in the Palisades or are former residents. The owners of Suntricity, Inc., a solar company founded in Pacific Palisades by former residents, participate in the Clean Energy Resilience Team and have provided guidance to the Team on solar electric systems. The owner of Permacity, a solar company focused on commercial installations, lives in the Palisades and has also indicated a desire to participate. However, Resilient Palisades has no financial connection to Suntricity or Permacity – it has no financial interest, is not getting paid, and is not paying either company. Rather, when Resilient Palisades issues Requests for Proposals to vendors of solar panels (see Question #2), it will issue one to Suntricity and Permacity. If those companies offer competitive bids, they each may be selected as one of the options we will be presenting to interested participants later this year.

5. What support do you have so far for the Pali Microgrid?

We have already received positive feedback on the Pali Microgrid initiative from many leaders in our community, including Councilmember Mike Bonin, State Senator Henry Stern, and experts in the field of community microgrids such as Dan Kammen and the UC Berkeley EcoBlock team, Richard Brown of Lawrence Berkeley



National Lab, Craig Lewis of Clean Coalition, and Brad Heavner of the California Solar & Storage Association.

Importantly, we have also established a working relationship with key officials at LADWP, who have expressed initial interest and support for the initiative.

6. Does Resilient Palisades plan to collaborate with other communities to establish additional community microgrids?

We hope that the Pali Microgrid will serve as a model for a successful community microgrid. Resilient Palisades has already received an inquiry from the office of Representative Barragan who represents Carson, Compton, Florence-Firestone, Lynwood, North Long Beach, Rancho Dominguez, San Pedro, South Gate, Walnut Park, Watts, Willowbrook and Wilmington, asking to be kept apprised of our progress.

PARTICIPATION

7. I don't currently have solar panels or a home battery. If I'm interested in participating in the Pali Microgrid, should I wait to install this equipment?

Resilient Palisades will be issuing Requests for Proposals to vendors of solar panels, battery storage, and control systems, with the aim of negotiating attractive group pricing from these vendors and ensuring that the equipment will be compatible with the Pali Microgrid. We hope to be able to present a shortlist of these favored vendors to the community in the Fall.

If you do not want to wait to see what packages and pricing Resilient Palisades is able to negotiate for the community, that's not a problem. We expect that most equipment will be compatible with the Pali Microgrid.

8. I live in a shaded area and haven't installed solar panels because I don't expect them to generate significant energy. Can I still participate in the Pali Microgrid?

Yes. It is technically possible to design a microgrid that will allow for sharing of solar generation and battery storage with all participating homeowners, regardless of where those resources are located. The final design of the microgrid will depend on the preferences of the community and how we decide to share resources.

9. My roof is very old and I don't think it would support solar panels. Can I still participate in the Pali Microgrid?



Even older roofs may be able to support solar panels. It depends more on the condition of the roof than its age. However, even if you're not able to install panels on your roof, see answer to #9 above.

10. Will residents of townhomes or multifamily buildings be able to participate?

Yes, there will be a way that people who live in various types of living situations to participate. The level of involvement will depend on the willingness of the building owner or Homeowner's Association to participate.

11. Are there any disadvantages to a microgrid?

It costs money to store energy and operate a microgrid. Although participants in the microgrid will bear these costs, the costs will be mitigated and offset by reduced power bills and the potential to sell energy back to the LADWP grid. Rules and regulations for multi-customer microgrids also are evolving. Also, a successful microgrid requires collaboration among many stakeholders, including electric customers, the City of Los Angeles, and LADWP.

12. I already have solar or solar + battery. What additional benefit will I get from being part of a microgrid?

If you already have solar panels, but no storage, the Pali Microgrid initiative is a good opportunity to purchase storage and a control system at the best possible price as Resilient Palisades will be negotiating volume discounts with vendors. If you already have solar and storage, joining the Microgrid will increase resilience for your home and family in the event of electricity outages or natural disasters by providing greater access to stored power. Furthermore, the community microgrid will reduce the chance of an outage to begin with, which will benefit the community as a whole. Another benefit is that when everyone "pools" their energy and battery storage, the amount of total energy available to each individual home will be greater than if that home relied solely on its own solar panels and battery system, thereby increasing the resilience of our community.

13. Will we require a commitment from those homeowners who benefit from the group discount pricing to join the microgrid?

While we plan to demonstrate that there are substantial benefits to joining the microgrid, there will be no commitment required to join the microgrid if homeowners benefit from the group discount pricing.

TECHNICAL



14. How does a microgrid work exactly?

A microgrid is a local electrical network that includes (a) one or more small “power plants” (i.e., homes or businesses with solar panels on their rooftops), (b) a means of storing electrical energy (i.e., batteries), and (c) a control system to distribute and monitor the energy.

In the event of a power outage, the microgrid can “island” itself, or disconnect, from the main electrical grid (or macrogrid) – in our case, the LADWP grid – and function autonomously. While islanded, the control system can distribute and supply stored energy to the homes and businesses that are part of the microgrid, enabling them to keep at least some electrical appliances (e.g., refrigerator/freezer, hot water, computer) running during an LADWP grid outage.

While the system is most efficient if the homes are located close to each other, technology exists to link homes together in a community microgrid even if a few buildings or homes do not participate. This technology is currently being demonstrated at the [Oakland EcoBlock](#).

You can see a graphical depiction of a microgrid here:

<https://resilientpalisades.org/wp-content/uploads/2021/04/Know-Your-Microgrids.pdf>.

15. If I already have solar panels and/or home battery storage, will I be able to connect to the Pali Microgrid or will my equipment not be compatible?

We expect that most equipment will be compatible with the Pali Microgrid. If you installed panels or battery storage many years ago, you may need to make minor modifications to your system to make it compatible with the Pali Microgrid.

If you currently lease your solar system, you may be prevented by joining the microgrid under the terms of your contract. We plan to provide assistance to help evaluate if you can join.

16. Will the microgrid be AC-based or DC-based?

We are planning an AC microgrid.

17. Who will be monitoring/operating the control systems? Will the Pali Microgrid have to hire an operator?

A microgrid controller comes with a service contract whereby the controller company monitors the system and provides real-time information to the customers. There are several companies that do this, and we will put out an RFP closer to the beginning of phase 2. There is a recurring cost associated with this service.



18. How do we connect the microgrid together in phase 2? What will homes need to be able to connect to the microgrid?

This depends on your existing electrical panel and system components. Connecting to the microgrid may require some additional hardware and cloud-based software. However, much of the work will be done on LADWP's side of your meter. All homes in the community are already connected via LADWP's distribution system. The microgrid will use this existing distribution system in tandem with controller hardware installed at each home and a cloud-based software system to manage the flow of electricity.

FINANCIAL

19. How is this project being financed?

Resilient Palisades is incurring some organizational and operational expenses. These expenses are currently being funded by member donations. However, we also plan to ask installers to contribute a portion of their marketing savings for each participating Palisadian home they install as part of Phase I of the Pali Microgrid. These fees will defray ongoing expenses, and potentially assist Resilient Palisades in making the requisite equipment purchases for Phase II.

20. What if I need financing options to buy solar panels or batteries?

We will be providing information about companies that can assist with financing or are willing to offer leasing or lease-to-own. Solar companies offering leasing options which could restrict participation in the microgrid are unlikely to be included in the packages we bring forward to the community.

21. How do I decide if it makes financial sense to invest in solar + batteries or the microgrid?

We hope to be able to provide a tool for you to do a cost/benefit analysis to help your decision-making process. However, increased resilience and climate benefits are hard to quantify.

22. What's this I hear about a proposed law in California that will increase the cost of solar for homeowners?

AB 1139 would instruct the California Public Utilities Commission to develop a new Net Energy Metering (NEM) tariff, which may increase the cost of solar for homeowners. However, it's possible that many solar installations for the Pali Microgrid could be effected before the adoption of a new NEM tariff and be



grandfathered in at a more favorable rate. It's also possible that the governing tariff will be negotiated with LADWP and bypass the NEM tariff entirely.

LADWP

23. LADWP seems resistant to the widespread use of solar energy. Do you anticipate that LADWP will support the Pali Microgrid?

Yes. LADWP has a long-range goal of significantly expanding its reliance on clean energy resources as part of its 100% clean energy initiative. In 2016, 5% of LADWP's power resources came from solar. LADWP's goal is to get to [100% renewable energy by 2045](#). Resilient Palisades believes that the Pali Microgrid will be consistent with, and further, LADWP's renewable energy goals, and that LADWP therefore will support the initiative.

Importantly, we have already established a working relationship with key officials at LADWP and expect to have an ongoing dialogue with them about the Pali Microgrid. LADWP officials appear to recognize that they will need to develop a framework for enabling microgrids and have stated they are excited to work with Resilient Palisades to develop the first microgrid in their service area. LADWP's involvement in the development of the Pali Microgrid will be critical to our success.

Although a small fraction of homes and businesses in the Palisades currently have solar installed, we expect that solar panels will become increasingly more common over time. Solar panels are now required to be installed on all newly built single-family residences and multi-family residences up to three stories high, meaning new home builds in the Palisades will have solar installed.

24. Is there a way to expedite permitting for the installation of solar panels and home battery storage?

We have already established a working relationship with key officials at LADWP and expect to have an ongoing dialogue with them about the Pali Microgrid, including on the topic of permitting and connecting participating Pali Microgrid homes to the LADWP grid in an efficient and safe way. We will update our website with relevant permitting and interconnection information as LADWP makes it available to us.