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Community Shared Solar Alternative Compliance Option

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2019 Building Standards



IOU PV Programs

Net Energy Metering Options

- Net Energy Metering
 - Single customer uses onsite PVs to reduce energy bill
- Virtual Net Metering
 - MF property owner allocates PV production to tenants
- Net Energy Metering Aggregation
 - Uses PVs to serve multiple meters on properties that all belong to the same customer and are contiguous to property where PVs are located



IOU Community Shared Solar PV Program

- Green Tariff Shared Renewables (GTSR)
 - Customer subscribes to receive energy bill credits for generation from shared renewable resource
 - Customer can cancel their subscription at any time
 - If customer moves, subscription moves to new home
 - Resource must be bigger than 500 kW, is secured through a PPA with the IOU, and located somewhere in the IOU service territory



2015 IEPR Guidance

- Identify pathways of compliance for buildings where onsite renewables aren't feasible
- Anticipate “development entitlements” for offsite renewables as potential builder option
- Allow community solar as a possibility
- Administratively workable and cost effective
- Offsite renewables must enable building department enforcement
 - Identified resource exists
 - Offsets energy use of building assigned to
 - Output is not already spoken for



Expectations for a Community Shared Solar Alternative Compliance Option

- Similar to an offset which would be expected to be **additional, dedicated, quantifiable, verifiable, durable**
- Provide equivalent energy performance as what the Standards would otherwise require
 - using Standards metrics and tools
- Provide energy benefits to the home that last as long as the Standards requirement that would have been installed
 - provide these benefits to original and future owners/occupants of that home
- Be easily verified and enforced by building departments
 - exist and dedicated to the home at the time of building permit
 - conveniently located so that building department has jurisdiction and ability to physically verify compliance



Review of Existing Community Shared Solar Alternatives

- Compare alternatives to Standards requirement for onsite PVs
- Determine whether alternatives match attributes of onsite PVs



Matches Attribute of
Onsite PVs



Could be Satisfactory
but may not fully Match
Attribute of Onsite PVs



Fails to Match
Attribute of Onsite
PVs



Onsite PVs Have Important Attributes

- 😊 **Additional** – onsite PV is new resource, not meeting other obligations
- 😊 **Dedicated** – onsite PV provides benefits specific to home being permitted
- 😊 **Durable** – onsite PV generates for a 20+ year life
- 😊 **Temporal** – onsite PV generates time-specific power (TDV)
- 😊 **Quantifiable** – energy performance is modeled using CBECC-Res
- 😊 **Verifiable** – onsite PV is subject to field verification of installation quality and characteristics impacting performance
- 😊 **Benefit to home** – energy bill credits offset compliance cost
- 😊 **Enforceable** – building department can easily determine that installation is in compliance coincident with normal permitting
- 😊 **Administratively Feasible** – Legally allowable; Processes needed to administer are reasonable to all parties



Alternatives Reviewed

- PVs direct connected to home from other subdivision location
 - Panels dedicated to home in common area, dc connected to Inverter installed at home
- Green Tariff Shared Renewables Program (GTSR)
 - Community Shared Solar program authorized by the legislature for IOUs
- Builder PVs at other location sharing bill savings with homes
 - Builder administered savings allocation rides with property
- Local Government Community Facilities District (CFD)
 - Mello-Roos style infrastructure bonds repaid through property taxes



Comparison of Alternatives Attributes

| | Additional | Dedicated | Durable | Temporal | Quantifiable | Verifiable | Benefit to homes | Enforceable | Administratively Feasible |
|---|------------|-----------|---------|----------|--------------|------------|------------------|-------------|---------------------------|
| Onsite PV | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| PVs dc connected to home from other subdivision location | ● | ● | ● | ● | ● | ● | ● | ● | ●● |
| Green Tariff Shared Renewables Program (GTSR) | ● | ● | ● | ● | ● | ● | ●● | ● | ● |
| Builder PVs at other location sharing bill savings with homes | ●● | ●● | ●● | ● | ●● | ●● | ●● | ●● | ●● |
| Local Government Community Facilities District (CFD) | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● |



Enable Community Shared Solar Alternative Compliance Option

- Establish opportunities for local governments or others to create Community Shared Solar alternative compliance options
- Establish an application process in the Standards that can be used to demonstrate that Community Shared Solar delivers offset and compliance option benefits comparable to onsite PVs
- Commission can approve such Community Shared Solar approaches