

Residential Solar PV Market Status & SolarAPP+

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National Renewable Energy Laboratory (NREL)

2,900+

Employees,
plus more than

400

early-career researchers
and visiting scientists



World-class

facilities, renowned
technology experts

Over
1,000

Partnerships

with industry,
academia, and
government



Campus

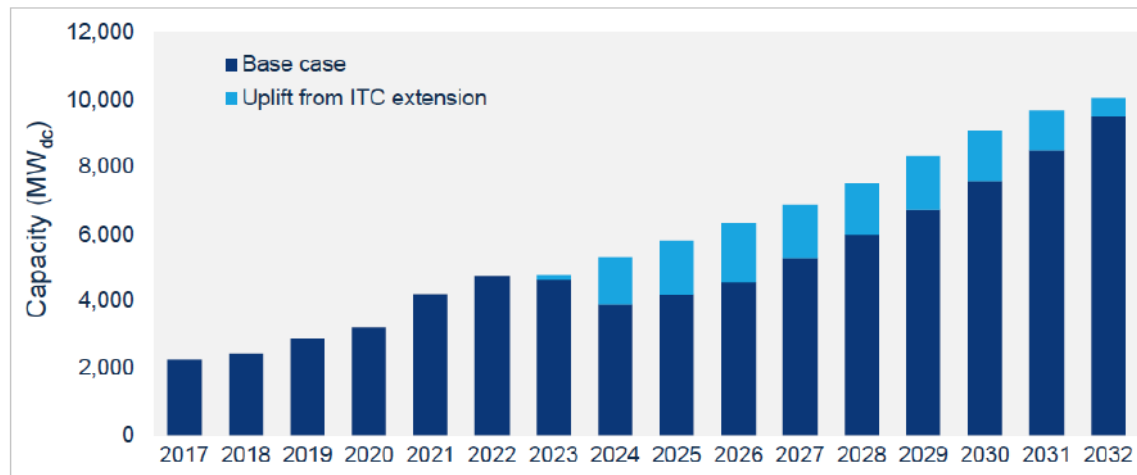
operates as a
living laboratory

\$1.4 B
annually

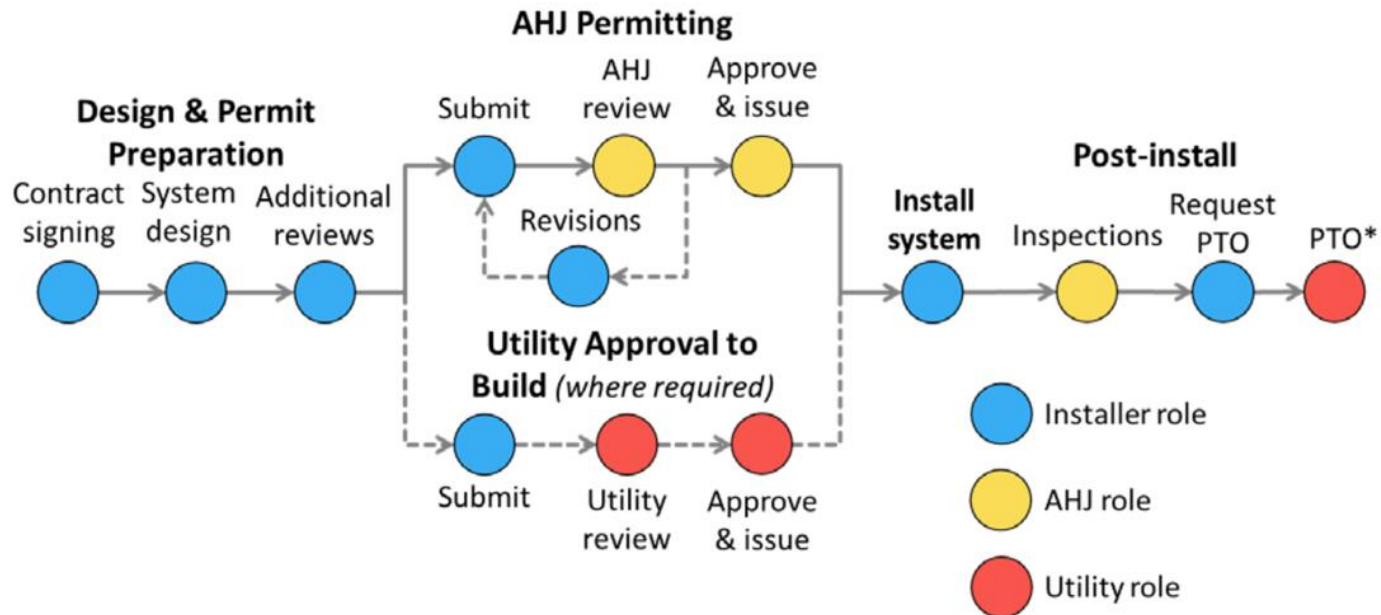
**National
economic
impact**

Residential Solar Market Status

Residential solar installations and forecast, 2018-2032



Source: Wood Mackenzie



Permitting, Inspection, & Interconnection



SolarAPP+ is a standardized plan review software that can run compliance checks and process building permit approvals for eligible rooftop solar systems.

The tool was developed through a collaborative effort to accelerate rooftop solar adoption by making it easier for local governments to quickly and safely approve rooftop PV projects for installation

SolarAPP+ Eligibility

SolarAPP+ can cover standardized systems as defined [here](#).

Current Support Parameters

- Residential PV
- Approved equipment
- NEC 2017 & 2020
- 2018 & 2021 i-Codes
- Bus <225A
- Service <400A
- PV systems <4PSF
- Single phase utility supply
- No wood shake roofs
- No metal roofs w >15PSF snow load
- Main panel upgrades
- California's Title 24

Support In Progress

- Residential storage
- Add-ons for existing systems

Planned

- EV chargers, electric appliances, roof tiles, and more...

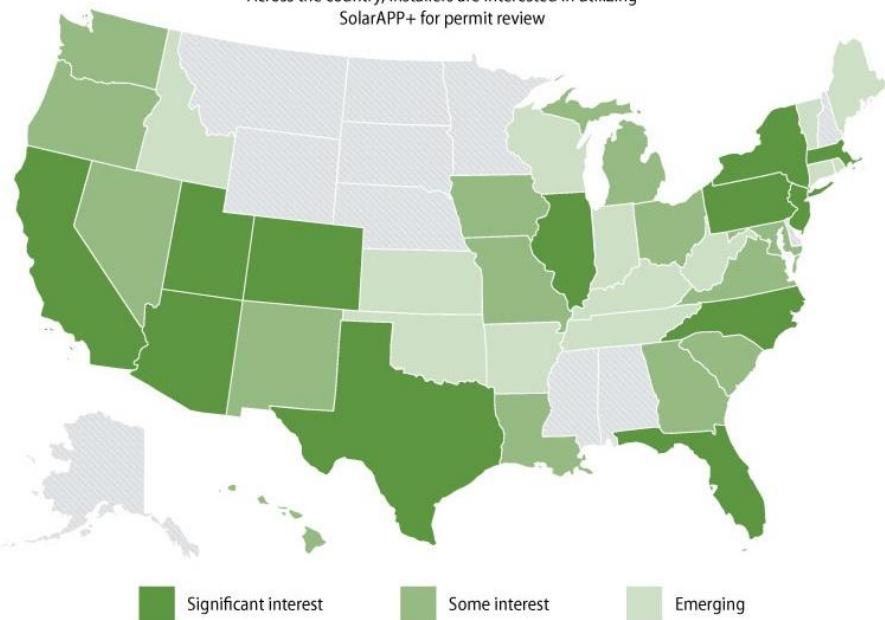


Let us know what you'd like to see next!

Interest in SolarAPP+

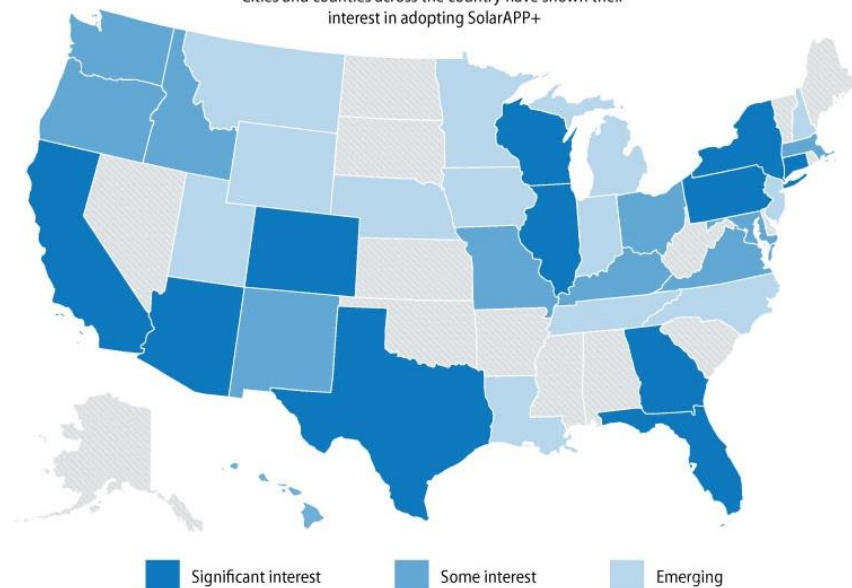
Interested Installers

Across the country, installers are interested in utilizing SolarAPP+ for permit review



Engaged Jurisdictions

Cities and counties across the country have shown their interest in adopting SolarAPP+



Tucson's Experience with SolarAPP+

- 1,870 PV permits issued to date
- 14,200+ kW approved via SolarAPP+
- Over 1,800 hours of staff time saved in plan review
- Piloting PV+ storage

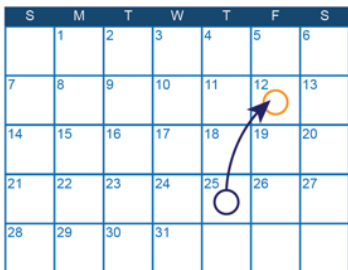


“The permitting process was taking four weeks. Now with SolarAPP+ we give a permit the same day. We just approved about 450 installations in the last 60 days alone.”

- Tucson Mayor Regina Romero

SolarAPP+ Pilot

Shorter project timelines



SolarAPP+ projects have been permitted, installed, and inspected around 13 days sooner than traditional projects based on differences in median durations

Staff time savings



SolarAPP+ has saved over 6,000 hours of jurisdiction staff time through automated permit reviews

Improved inspections



SolarAPP+ projects have been about 9% less likely to fail inspections than traditional projects, and inspections take about the same amount of time as those approved through traditional review

SolarAPP+ Flow

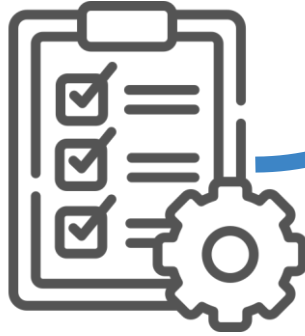
Installer submits an application with design specifications through SolarAPP

1



2

SolarAPP checks the application to ensure the system design is code compliant



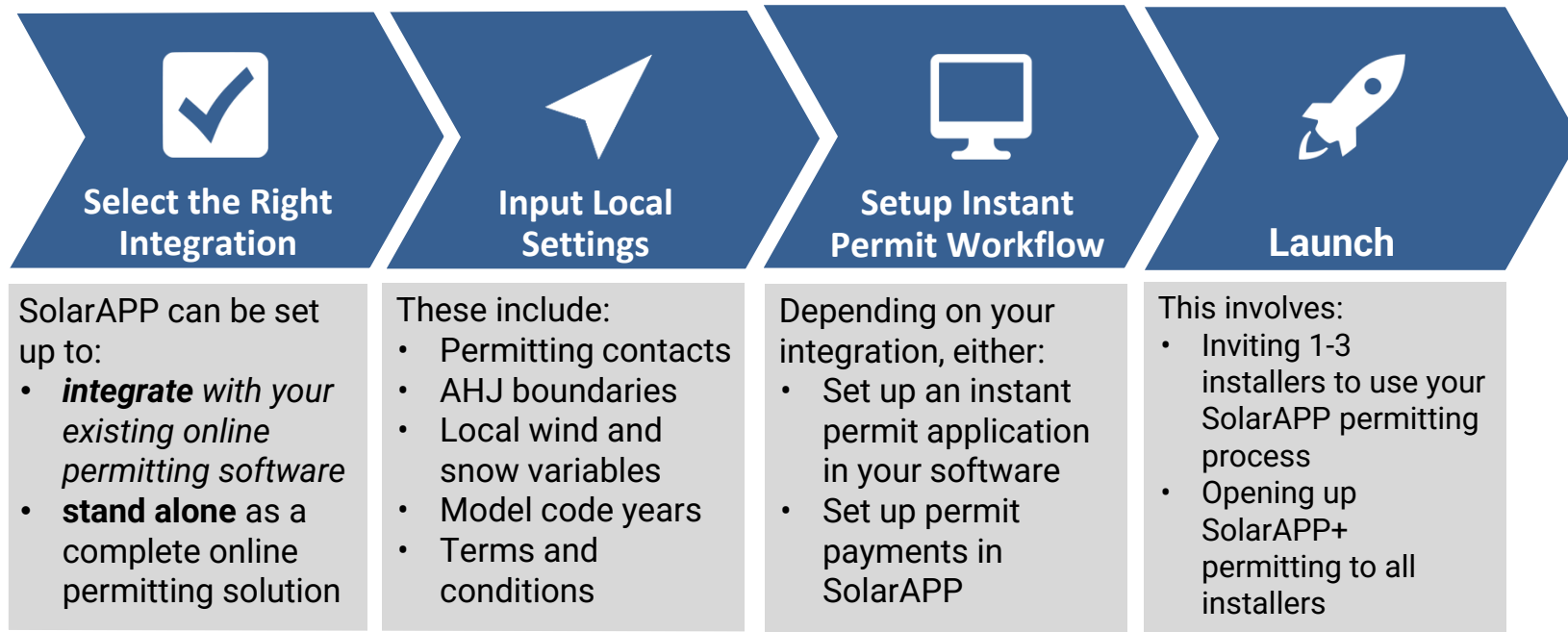
3

Code compliant applications are issued a permit instantly after fee payment

([Review sample approval docs here](#))



Four Steps to Adopting SolarAPP+



CalAPP Grant

The California Automated Permit Process Program (CalAPP) is a \$20 million funding program that provides grants to cities and counties to help implement SolarAPP+

CalAPP will be available in ~June 2022

Proposed Grant Sizes:

- Population <50,000: Up to \$40K
- Population 50,000-99,999: Up to \$60K
- Population 100,000-200,000: Up to \$80K
- Population >200,000: \$100K

Grant Can Cover:

- IT staff time on adoption
- Inspector time on training
- Time spent meeting with NREL
- And more

For more information visit: <https://www.energy.ca.gov/programs-and-topics/programs/california-automated-permit-processing-program-calapp>



Learn More about SolarAPP+

If you are interested in learning more or would like to share the tool with others in your community, we are happy to set up a demo for your chapter.

Standing demonstrations:

- Thursday, June 30th, 11 am MT
- Tuesday, July 12th, 12 am MT

To access the registration like, you can email us at team@solar-app.org, and we will send you an invite. Please invite anyone on your staff you believe appropriate. Thank you!

SolarAPP+ Help Center: help.solar-app.org

Contact Us: team@solar-app.org

Thank you!

Any questions?

APPENDIX

More information:

SolarAPP Outreach Materials

- Website:
 - <https://solarapp.nrel.gov/>
- Pilot Results:
 - <https://www.nrel.gov/docs/fy22osti/81603.pdf>
- Demonstration webinar:
 - <https://www.youtube.com/watch?v=XmXLvQevPEs>
- Where is SolarAPP+ available?
 - <https://help.solar-app.org/article/108-where-is-solarapp-available>.
- Piloting webinar:
 - <https://youtu.be/iaocESF9llg>.
- SolarAPP Benefits Memo:
 - https://solarapp.nrel.gov/docs/SolarAPP_Benefits_Memo.pdf
- For more information contact:
 - team@solar-app.org