OpenSolar

Solar APP+

Clean Power Research

From Design to Permit to Interconnection, Seamlessly

Speakers

Andrew Birch
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OpenSolar

Matthew McAllister
CEO

SolarAPP+

Joe Beer
VP Product Management

Clean Power Research

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End of IRA economics

September 2025

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What's changing at the end of 2025?

ITC

30% tax credit on residential installs goes to 0%

Solar leases & PPA's vs Loans

Removes tax credit for loans, and preserves the tax credit for solar leases and PPAs (third-party owned systems under Section 48E) through the end of 2027

How we operate

We have to attack our cost stack in four areas in order to survive, and thrive!

Customer proposition
post IRA

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What happens to US resi solar if we don't adapt

Solar will become more expensive than grid energy **40%**

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USA Stack Attack

Aggressively eliminating costs
to stay competitive

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Competitive pricing post IRA

$2.49 / watt is achievable if we attack the stack in **four key ways**, saving the US customer 30% vs grid energy

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1. Automated permitting

with SolarAPP+

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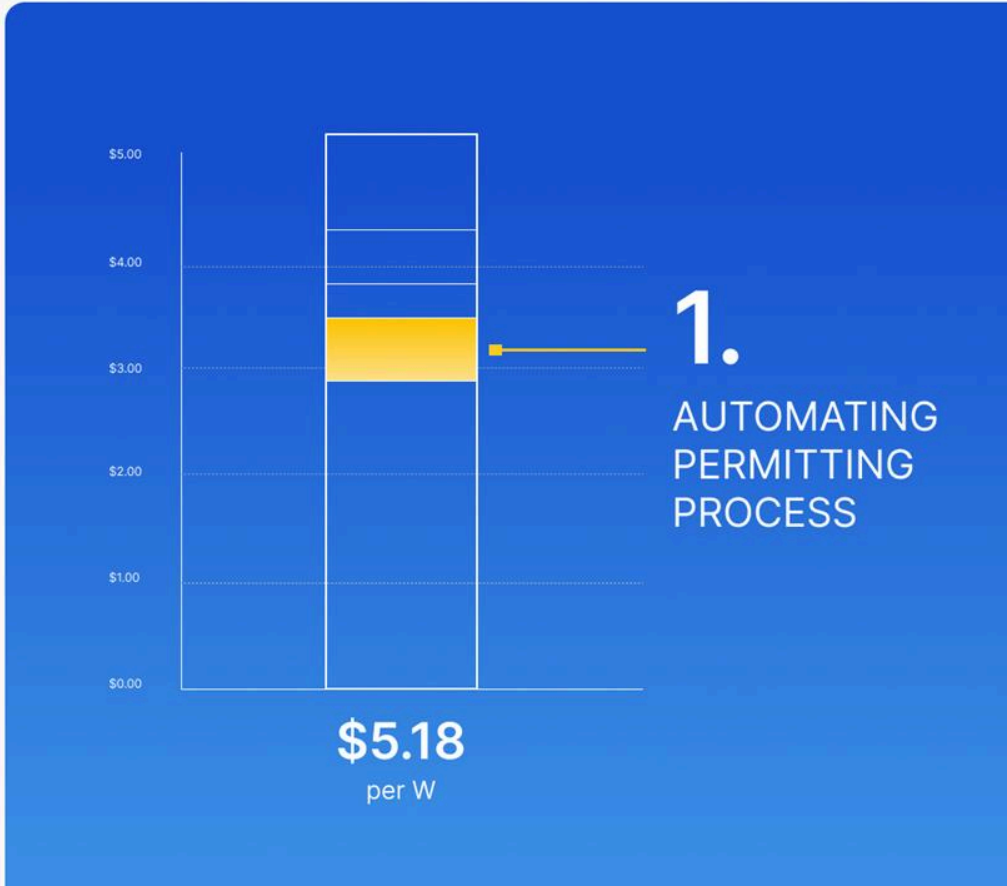
Automated permitting slashes soft costs by reducing permitting timelines



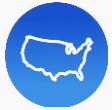
Standardized plan review benefits everyone

Fewer iterations for jurisdictions to review

Potential errors are automatically flagged within the system

Faster permitting times for installers

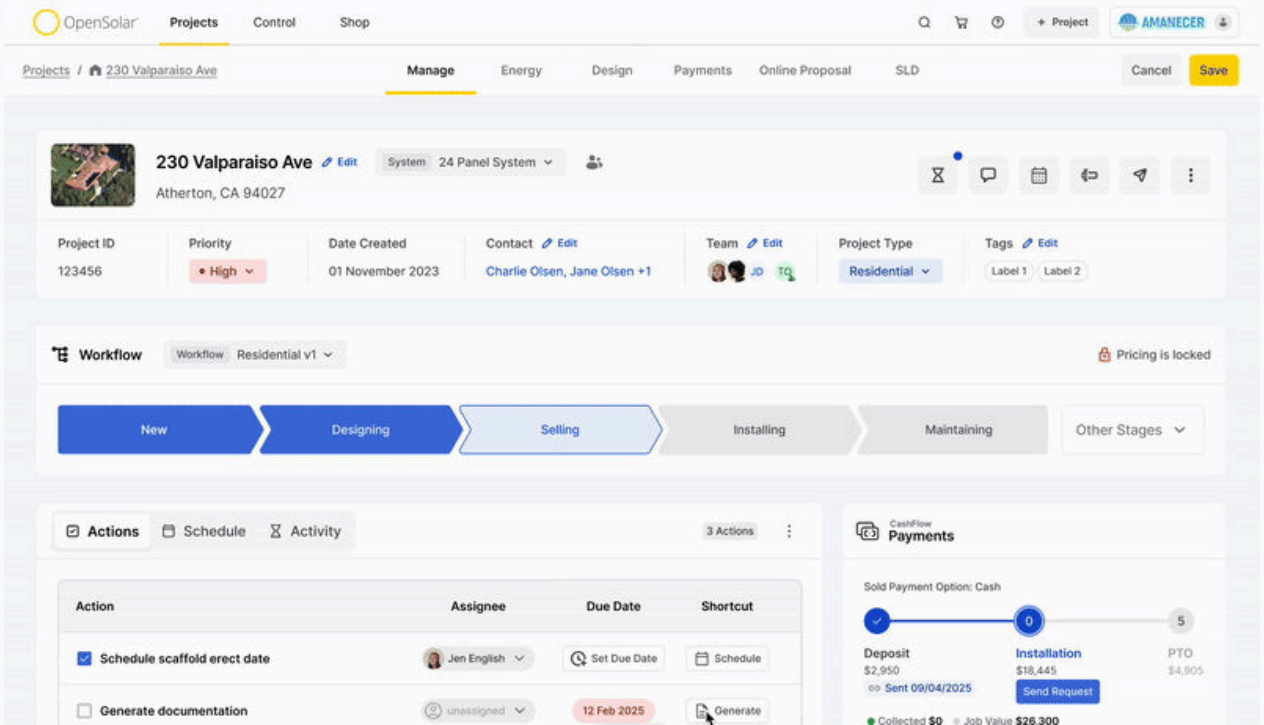
Print the permit once approved, no need to visit city offices



Easily replicated for expanded impact

Standardized format allows for maximum impact across the cities across the country

Integrations across the industry



2. Cut hardware and software costs

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Reducing hardware costs by $0.71 per watt

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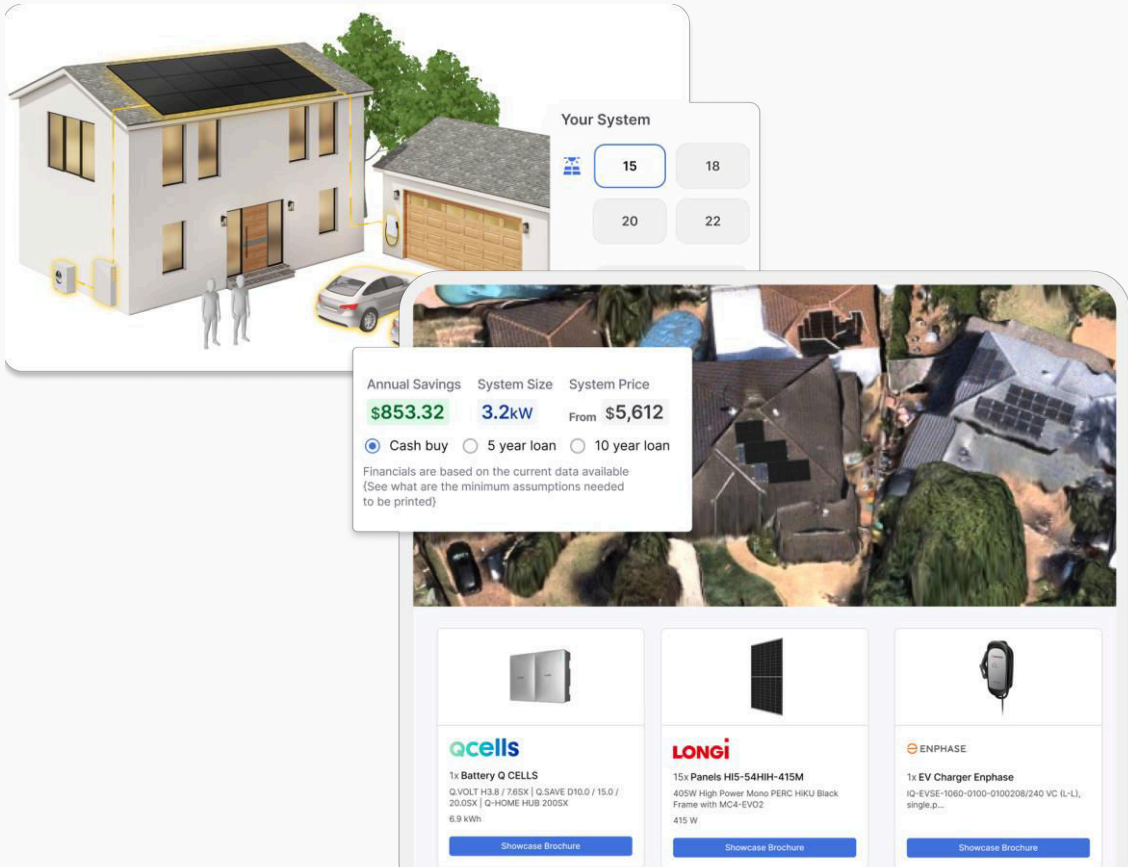
Reducing software costs, saving 5-10% on overheads



3. Reduce customer acquisition costs

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Reduce CAC by $0.43 / watt

Join us at the launch of OS 3.0

4. Slash finance and other overheads

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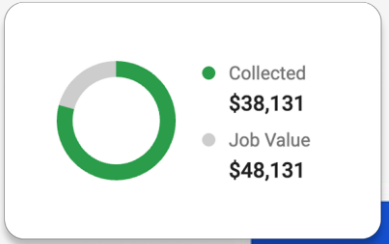
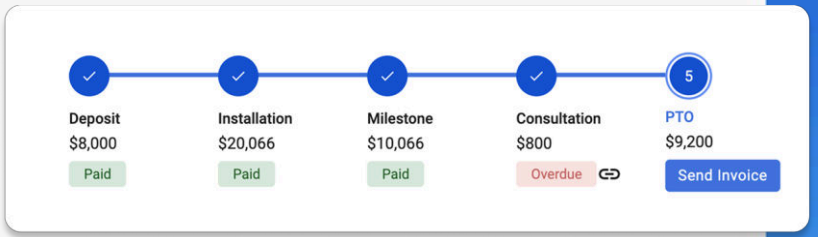


Automate:

- payments
- ordering
- project management



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Enhanced Customer proposition post IRA

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How resi solar survives and thrives if we adapt

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OpenSolar

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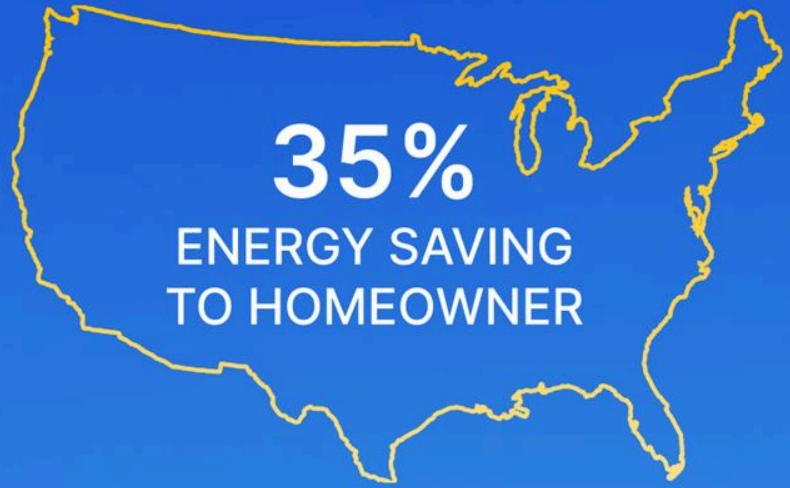

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2029

REMOVE THE TARIFFS

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33%

OF HOMES HAVE SOLAR


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OpenSolar
35,000,00
homes
$300,000,000,000
in sales

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Let’s start to adapt right now

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Clean Power Research®

Advancing the energy transformation for 25+ years

Trusted Software & Data Products

PowerClerk®

No-code workflow automation

FleetView®

Your view behind the meter

WattPlan®

Trusted energy advisor

SolarAnywhere®

Solar data & intelligence

Utilities are Reducing Time and Costs with Workflow Automation

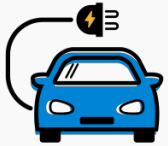
Common workflows/use cases we see automated:

Distributed Generation (DG) Interconnection

~50%

of USA PV interconnection applications

Utility-scale (FERC) Interconnection



Transportation Electrification

Building Electrification

Large Load & Other Service Requests

Joint Use Management

Our insights come from: ~200 "programs", 3.1+ million "applications", across 85+ Utilities and Energy Agencies

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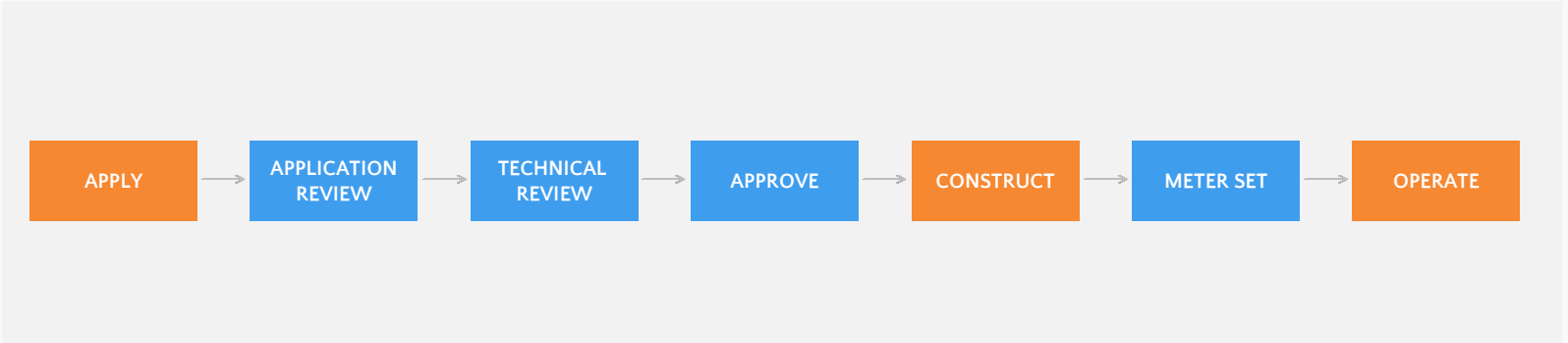
Interconnection Workflow – Common Steps

Basic automation: Gain core operational efficiency and meet regulatory deadlines

What is an interconnection workflow? *(exemplary common steps)*

APPLICANT

INTERNAL USERS



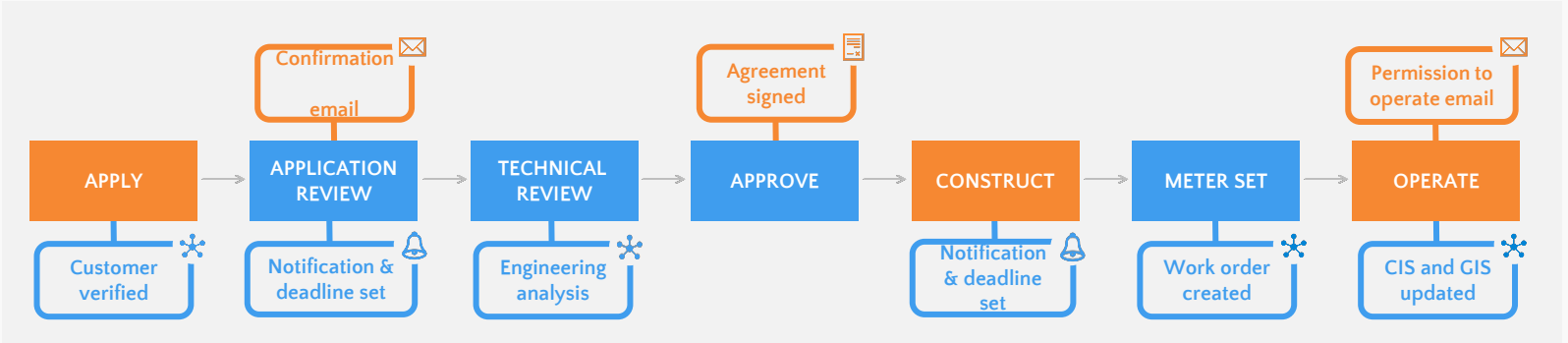
Interconnection Workflow – Common Steps

Basic integrations: Achieve current best practice streamlining

What are the basic integrations?

APPLICANT

INTERNAL USERS



Proven Results with a Proven Solution – PowerClerk

80%

faster turnaround times

Operate efficiently* with automation

Source: REC, JEA, ORU, APS case studies

* shorter queues & lower costs

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Taking it to the Next Level

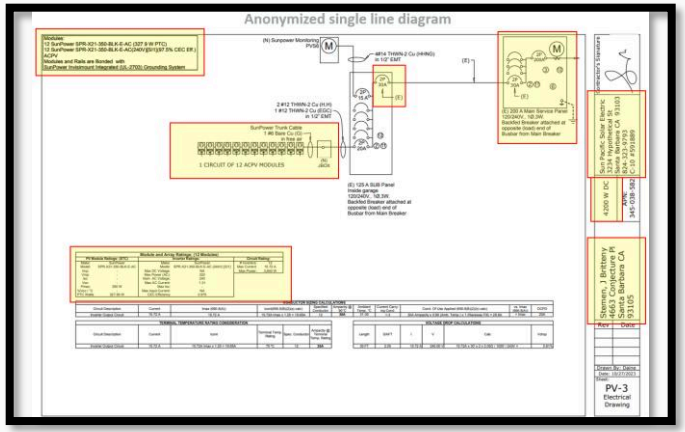
Additional Streamlining Opportunities

1. **Embrace emerging AI capabilities**

   Many DER tools and systems are now using AI to augment the work

Example:
PowerClerk AI Attachment Analysis

Limited Preview



Using AI to augment human work speeds processes and reduces per application labor costs

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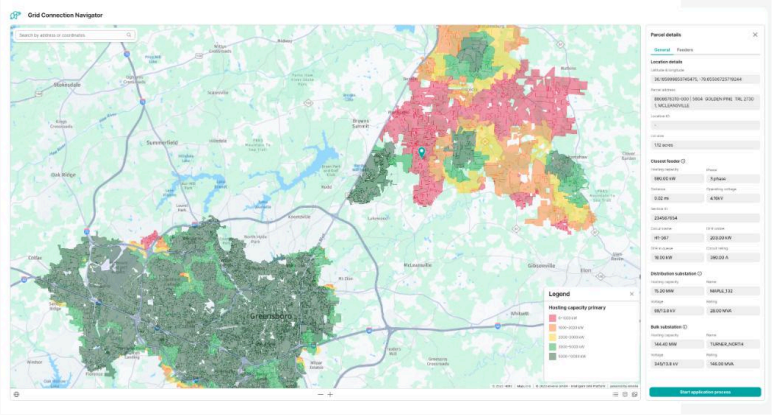
Taking it to the Next Level
Additional Streamlining Opportunities

1. Embrace emerging AI capabilities
2. **Implement Pre-application Capacity Checks**

   Before DER application is submitted, query grid capacity in real-time (e.g., available feeder or transformer capacity at the applicant's location).

Example:
envelio hosting capacity map



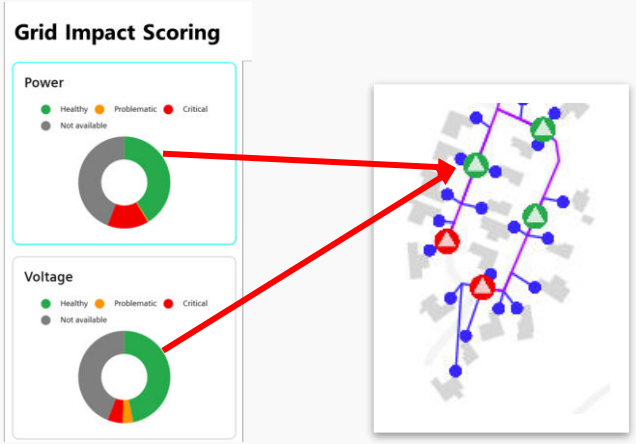
Pre-app screening helps applicants identify constraints upfront and reduce speculative submissions

Taking it to the Next Level
Additional Streamlining Opportunities

1. Embrace emerging AI capabilities
2. Implement Pre-application Capacity Checks
3. **Automate Technical Screenings & provide "Auto-approvals"**

   Automate exchange of DER asset data and running of screening calculations; get results without manual data re-entry

Example:
Siemens GridX DER Insights



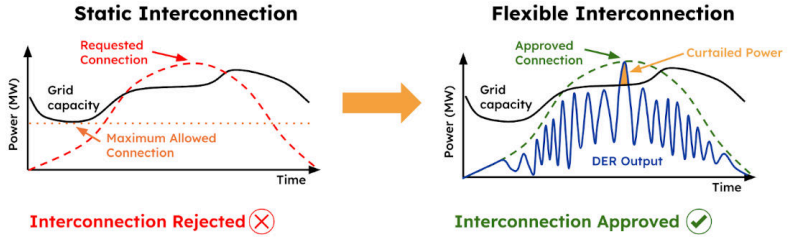
If initial technical screening shows sufficient capacity, the project can be auto-approved, cutting down delays.

Taking it to the Next Level
Additional Streamlining Opportunities

1. Embrace emerging AI capabilities
2. Implement Pre-application Capacity Checks
3. Automate Technical Screenings & provide "Auto-approvals"
4. **Automate "Flexibility" Analysis and Agreement**

   If initial screen ID's issues, PowerClerk can request that automated flexibility analysis is run. Mitigations might be enrollments in a curtailment program or agree to lower operating envelope.

Example:
Static vs. Flexible Interconnection



Distributed Solar example: Flexible interconnection allows solar generation to be actively managed to remain within allowable limits, based on nearby constraints and loading conditions. Here the solar output (in blue) is curtailed only when it exceeds grid capacity (in black). Adapted from EPRI chart.

Agreeing to Flexibility constraints turns a potential "no" into a conditional "yes," leveraging flexibility programs to resolve constraints.

Taking it to the Next Level
Additional Streamlining Opportunities

1. Embrace emerging AI capabilities
2. Implement Pre-application Capacity Checks
3. Automate Technical Screenings & provide "Auto-approvals"
4. Automate "Flexibility" Analysis and Agreement
5. **Automate DER Asset Enrollment**

   Approved DER data flows directly into DER systems eliminating duplicate entry and reducing human error.

Example:

MITSUBISHI ELECTRIC
MITSUBISHI ELECTRIC POWER PRODUCTS, INC.

STRATA GRID

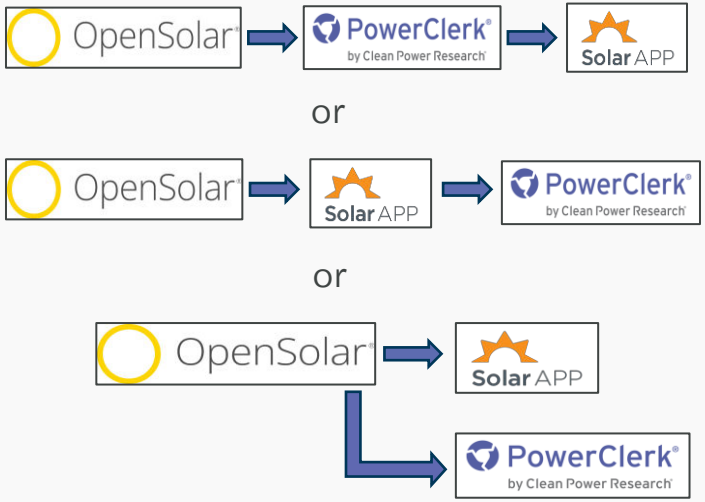
New DER assets come online more quickly in the DR, DERM or VPP system; giving grid operators immediate visibility and control.
"In-queue" assets can also be previewed

Taking it to the Next Level
Additional Streamlining Opportunities

1. Embrace emerging AI capabilities
2. Implement Pre-application Capacity Checks
3. Automate Technical Screenings & provide "Auto-approvals"
4. Automate "Flexibility" Analysis and Agreement
5. Automate DER Asset Enrollment
6. **Automate Application Submission and possibly Permitting**

   Integration options with OpenSolar and SolarApp+

Options:



Multiple approaches possible; talk to us to learn more

Results: Greater Benefits for All

Accelerated DER Interconnection, Permitting and Onboarding – Automation eliminates bottlenecks and speeds up DER interconnections – turning multi-week processes into near real-time approvals for qualified projects.

Increased Customer Communication and Engagement – Built-in communication tools keep DER owners and installers informed, while also enabling seamless enrollment into programs like DR or VPPs.

More Flexible & Resilient Grid – A more flexible grid that can handle growth without costly and time-consuming upgrades. Utilities can safely "say yes" to additional load and DERs, while maintaining reliability. Plus, customer rate increases to pay for grid upgrades can be minimized.

Seamless Data & Visibility – Integrated systems ensure a single source of truth for clean DER data. Grid operators gain up-to-date visibility of new assets from day one, improving operational decision-making.

Increased cashflow and revenue opportunities – Installers get to PTO and permits sooner, accelerating payments from customers. Utilities accommodating more load have higher energy sales revenue.

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Connect with SolarAPP+, OpenSolar and Clean Power Research

Learn how to bring SolarAPP+ to your jurisdictions

SolarAPP+

Attend the OS 3.0 Launch

OpenSolar

Learn more about streamlining your interconnection processes

Clean Power Research

Learn more about streamlining your interconnection processes

Contact me:

Joe Beer
jbeer@cleanpower.com

VP Product & Customer Success

Come to my AI talk:

Streamlining your DER Interconnections with AI
Weds, 9/10 10:30
Venetian Expo Hall
SEPA Booth, v1, Level 2,

Read my Blog:

cleanpower.com/blog/

Better together: How PowerClerk partner integrations enable utilities to "say yes to more load"

Visit our booth, V7537:


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Thank you