

NREL's Procurement Analysis Tool

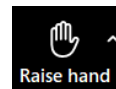
September 29, 2025

Webinar Logistics

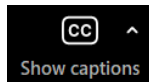
Attendees are in listen-only mode by default.

The **Chat function** is also enabled. You may submit questions and comments via the Chat.

During the Q&A portion, use the **Raise hand** button to join the queue for asking live questions. When it is your turn, your microphone will be enabled.



Automated **captions** are available



Speakers' bios will be made available in the chat

This webinar is being recorded. We will email you a webinar recording within 48 hours. This webinar will be posted on CESA's website at www.cesa.org/webinars



Celebrating 20 Years of State Leadership



The Clean Energy States Alliance (CESA) is a national, nonprofit coalition of public agencies and organizations working together to advance clean energy.

CESA members—mostly state agencies—include many of the most innovative, successful, and influential public funders of clean energy initiatives in the country.

CleanEnergy States Alliance

www.cesa.org



MAINE GOVERNOR'S
Energy Office



Maryland
Energy
Administration



NYSERDA



INCLUSIVE
PROSPERITY CAPITAL



Triple Bottom Line
Foundation



NORTH CAROLINA
Environmental Quality



COLORADO
Energy Office



OREGON
DEPARTMENT OF
ENERGY



NORTH CAROLINA
DEPARTMENT of
COMMERCE



WISCONSIN
ECONOMIC DEVELOPMENT



nbi new buildings
institute



Federal Initiatives

Provides opportunities for CESA member organizations and all US states to:

- Learn about federal energy developments
- Exchange information to advance energy deployment in their state

www.cesa.org/projects/federal-initiatives



CleanEnergy
States Alliance

Webinar Speakers

NREL's Procurement Analysis Tool



Sushmita Jena

**Researcher III – Complex
Decision Analysis**
*National Renewable
Energy Laboratory*



Jeffrey Cook

**Group Manager II –
Policy Analysis**
*National Renewable
Energy Laboratory*



Warren Leon

Executive Director
*Clean Energy
States Alliance*
(Moderator)



Thank You

Warren Leon

Executive Director

Clean Energy States Alliance



wleon@cleanegroup.org



www.cesa.org





info@cleanegroup.org



www.cesa.org



Upcoming Webinars

Front-of-Meter vs. Behind-the-Meter
Batteries: An Economic Comparison for
Massachusetts (October 8)

MassCEC's Vehicle-to-Everything
Demonstration Program (November 12)

Read more and register at
www.cesa.org/webinars



Procurement Analysis Tool (PAT) Informational Webinar for Clean Energy States Alliance


Sushmita Jena and Jeff Cook

Sep 29, 2025

PAT: A Free Platform for Off-Site Energy Analysis

PAT HOMEPAGE

Procurement Analysis Tool

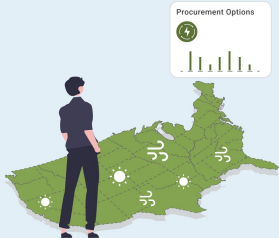


Procurement Analysis Tool Use Cases Contact us Sign In

Your first step toward utility-scale energy procurement

Whether you're new to energy or a seasoned expert, NREL's Procurement Analysis Tool (PAT) can help you find the right options to meet your energy goals. PAT simplifies utility-scale energy procurement with insights tailored to your needs that are backed by NREL's best-in-class data and analysis tools.

[Get started](#) [How PAT works](#)



www.pat.nrel.gov

KEY QUESTIONS ADDRESSED BY PAT



What energy procurement options exist by location?



How do energy procurement options align with certain end user objectives?



How does the value of different energy technologies vary by location?



How do different resources and procurement options vary on costs/impacts?

PAT: Key Inputs and Outputs

SCENARIO SETUP

User enters the scenario title, energy goals (%), and any additional notes.

LOAD AGGREGATION GROUPS

User aggregates electricity load by region, type of facility, and/or load size. User inputs specific facility information, such as annual load (MWh), address, and the utility/load-serving entity.

REFINEMENT BASED ON USER PREFERENCES

User answers 7 questions about their procurement preferences and knowledge of the process.

Contracting Experience

Price Certainty

Location Preference

Cost, Emissions, Grid Value, or a Combination

Financial Risk Tolerance

REC Ownership



Balancing Authority

PAT

Scenarios > Edit scenario

Basic info Locations Filters Procurement Resource regions Results
















Orlando's procurement options 4 procurement options are available based on your answers

Procurement option	Description	Notes
 Utility green pricing	Utility green pricing allows utility customers to procure renewable power on a month-to-month basis typically through an add-on fee on their electricity bill.	<p>Available programs</p> <ul style="list-style-type: none">Florida - Clean Energy Connection: Program Cost - The program has a \$8.35/kWh per month fixed-rate subscription fee over 35 years as summarized in the Clean Energy Connection Rider (Rate Schedule CEC-1). The CEC Rider also contains a \$0.04/kWh energy credit for the first 5 years based on the customer's subscription capacity that escalates by 1.5% annually starting in year 4 over the 30-year program. View more details
 Unbundled renewable energy certificate	Any non-residential customer can buy "unbundled" renewable energy credits (RECs) from utility-scale renewable energy projects that offer their RECs for purchase in the marketplace. This category refers only to sales of unbundled RECs directly to retail customers. It excludes sales of unbundled RECs through other green power products (e.g., utility green pricing).	<p>Available programs</p> <ul style="list-style-type: none">Florida - The REC price (Sep 2024) is 2.61 ¢ per kWh

Orlando's available resource regions

[Download table \(csv\)](#)

Sort by: Cost savings Emission reduction Grid value Combined

Rank	Type	Annual generation	Potential capacity	Capacity factor	Battery capacity	State	Cost savings	Emissions reduction	
<input checked="" type="checkbox"/>	1	 solar	2,774,750 MWh	1,776 MW	18%	none	KY	 4.5	 5.5
<input checked="" type="checkbox"/>	2	 solar	520,832 MWh	371 MW	16%	none	OH	 4.5	 5.5
<input checked="" type="checkbox"/>	3	 solar	297,280 MWh	212 MW	16%	none	WV	 4.5	 5.5
<input checked="" type="checkbox"/>	4	 solar	2,774,750 MWh	1,776 MW	18%	25 MW	KY	 3.5	 5.5
<input checked="" type="checkbox"/>	5	 solar	2,774,750 MWh	1,776 MW	18%	75 MW	KY	 3.5	 5.5

PROCUREMENT OPTIONS

PAT shows procurement options such as green tariffs, competitive suppliers, green pricing, unbundled Renewable Energy Certificates (RECs), community solar, and/or Power Purchase Agreements (PPAs) based on the combination of user preferences and available offerings from the load-serving entity.

RESOURCE REGIONS

Select resource regions are optimized based on wholesale power markets, cost, grid value, emissions reduction, or a combined score.

Under the Hood: How PAT Optimizes

Annual Technology Baseline (ATB)

Consistent set of technology design and cost data

Energy Supply Curves

Clustered to identify best resource locations for each ReEDS balancing region

Cambium

Modeled cost, hourly emission, and operational data for a range of possible futures of the U.S. electricity sector through 2050

PAT

Leverages System Advisor Model (SAM) for system performance and battery dispatch considering cost reduction and emissions if participating in the wholesale markets as a merchant plant.

Output

Comparative Data based on marginal cost, grid value, and emissions for fixed system sizes calculated over a 25-year system lifetime.

PAT Can Analyze Multiple Customer Use Cases

User Group:

 **Commercial & Industrial Buyers**

 **Local Governments & Agencies**

 **Colleges, Universities & Campuses**

 **Utilities & Energy Providers**

 **Regulators & Commissions**

How PAT Helps:

Evaluate off-site procurement options across multiple facilities nationwide.

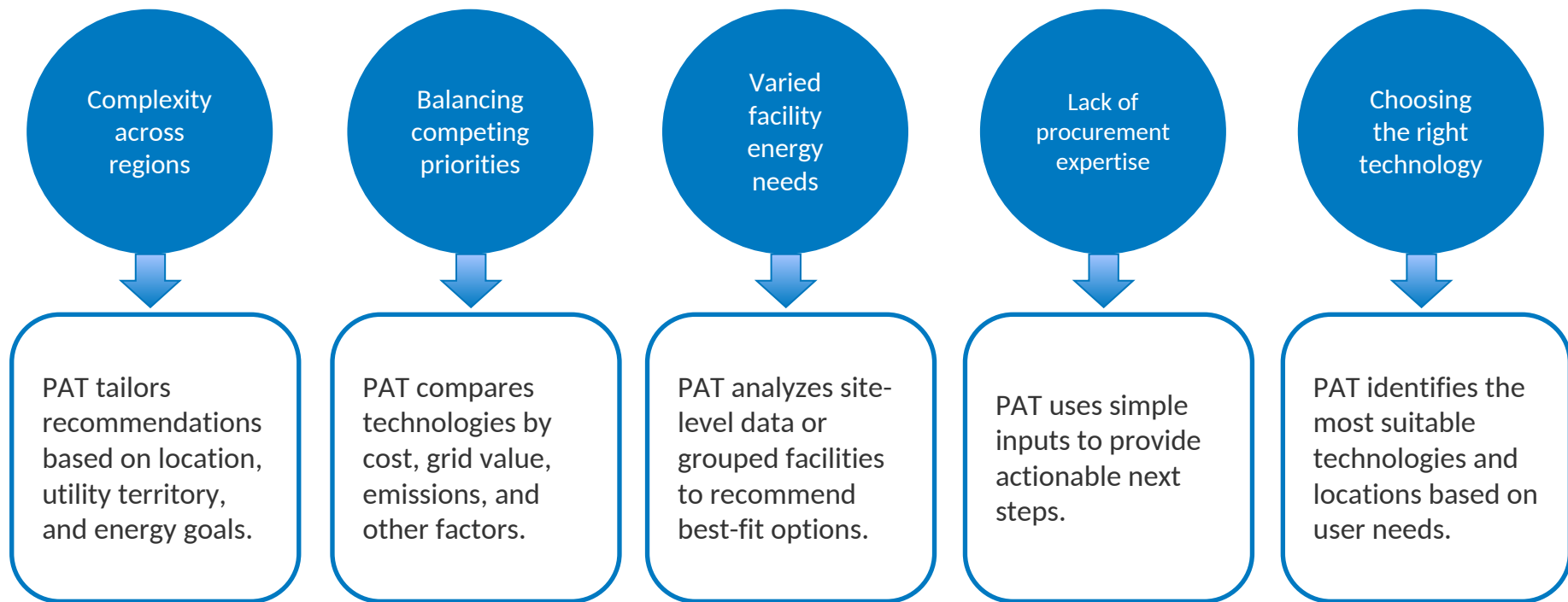
Assess options for powering city operations or jurisdiction-wide demand.

Plan energy procurement for labs, classrooms, housing, and campus services.

Analyze customer demand and assess feasibility for procurement programs (e.g., green tariffs).

Plan for voluntary utility-scale programs and shifting customer energy strategies.

Key Procurement Challenges And Solutions



Live Demo



www.pat.nrel.gov

PAT Analysis Is the First Step in Your Energy Procurement Journey

What To Do Next:

PAT provides foundational analysis to support your energy procurement journey. If you are interested in pursuing energy further, you might consider the following next steps.

1

Analyze Procurement Options

Review the available procurement options identified for your groups. Compare attributes like pricing, contract terms, and procurement processes to make informed decisions.

2

Engage Key Stakeholders

Collaborate with internal teams, regulators, and utilities to assess feasibility. If needed, initiate discussions with consultants to support your decision-making.

3

Negotiate and Develop

Partner with utilities and project developers to finalize contract terms and implementation plans. Define stakeholder roles and responsibilities for new projects.

4

Request and Evaluate Proposals

Issue Requests for Information (RFI) or Proposals (RFP) as needed. Carefully review submissions, considering associated risks and alignment with your goals.

5

Finalize Procurement and Track Benefits

Sign contracts and begin implementation. Monitor key metrics like energy production, avoided emissions, cost savings, and price variability to ensure success.

What PAT does not do:

- PAT is not intended to present the user with a specific set of existing generation assets.
- PAT does not perform detailed financial analyses on potential resource regions.

Key Takeaways from PAT

- Supports **customized scenario analysis** using user-entered facility and consumption data.

- Helps users **evaluate energy resources** and **compare procurement pathways** (e.g., PPA, tariffs).

- Enables decisions that balance **cost, grid value, emissions, any buyer preferences**

- Serves a wide range of users: **software, cloud operators/IT, cities, campuses, companies, utilities, and regulators.**



Web based self-service energy procurement assistant



Aids voluntary energy procurement by commercial and industrial buyers



Analyzes utility scale energy options



Serves as a **screening and planning tool** for buyers



240+ early adopters nationally across counties and cities

User Support and Contact

FAQs

Here, you'll find information on topics such as setting user preferences, understanding procurement options, data updates, and more. Still have questions? Feel free to contact us at pat.support@nrel.gov.

General

- | | |
|--|---|
| ❓ Can users import facility information in bulk and organize it into different/groups? | ▼ |
| ❓ Will this tool connect to the ENERGY STAR Portfolio Manager to load energy/location data for buildings in a portfolio? | ▼ |
| ❓ Will this tool be integrated with any other NREL tools? | ▼ |
| ❓ Does PAT allow for analysis in Alaska, Hawaii, or multi-national analysis? | ▼ |

- ❑ For questions, check out the FAQ section on the tool's site.
- ❑ For user support, and feedback, contact us at: PAT.Support@nrel.gov



www.pat.nrel.gov

Q&A

www.nrel.gov

Need help? Email us at pat.support@nrel.gov.

This work was authored by the National Renewable Energy Laboratory for the U.S. Department of Energy (DOE), operated under Contract No. DE-AC36-08GO28308. Funding provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Strategic Analysis Office. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government. The U.S. Government retains and the publisher, by accepting the article for publication, acknowledges that the U.S. Government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this work, or allow others to do so, for U.S. Government purposes.

