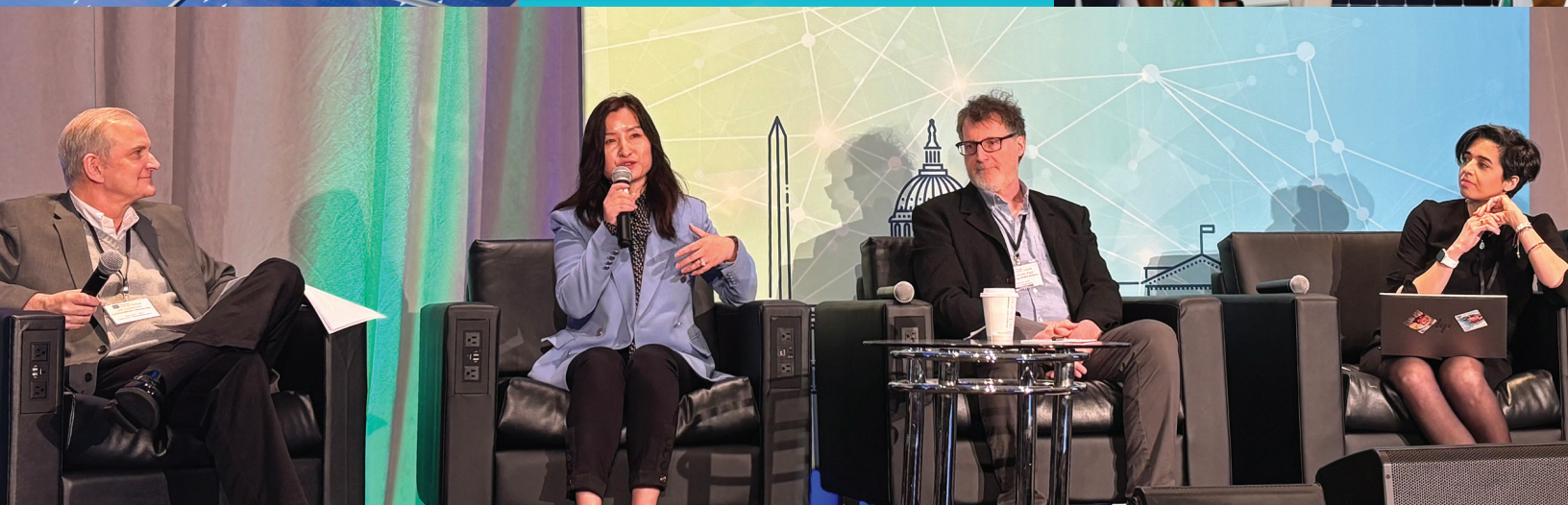
Clean Energy Group

2024 IMPACT REPORT

AFFORDABLE, RELIABLE, CLEAN ENERGY FOR ALL



Dear friends and supporters,

In 2024, Clean Energy Group made significant strides in advancing equitable access to solar and energy storage, shaping inclusive clean energy policies, and fostering impactful partnerships. Our progress is driven by a shared vision: a clean energy future where everyone benefits.

Reflecting on the past year, I am proud of what we have accomplished alongside our dedicated partners and funders. With more than two decades of experience in research, public education, and coalition building, Clean Energy Group has built a strong foundation for lasting impact. Looking ahead to 2025 and beyond, I am confident that our collective efforts will continue to meet the challenges ahead. At a time when federal opposition threatens the momentum of the clean energy transition and energy justice movements, our collaborative work at the state and local levels is more critical than ever.

This annual impact report highlights Clean Energy Group's key initiatives and achievements in 2024. It also recognizes the invaluable contributions of our partners—including community-based organizations, state agencies, and national laboratories—whose collaboration strengthens our mission.

Clean Energy Group staff tour the battery storage unit at the Kenzi Apartments in Roxbury, MA in December 2024. Clean Energy Group's Technical Assistance Fund supported a resilient solar+storage system at this low-income senior housing building.
Photo: Clean Energy Group.

Visit to the A.B. Ford Community Center in Detroit, Michigan in June 2024. A solar+storage microgrid at this facility was supported in part by Clean Energy Group's Technical Assistance Fund.
Photo: Clean Energy Group.

To our supporters and partners, we extend our deepest gratitude. Your commitment enables us to drive innovative technical, economic, and policy solutions that ensure all communities can equitably participate in and benefit from the clean energy transition. The Clean Energy Group staff and I look forward to continuing this vital work together in the year ahead.

Seth Mullendore
President and Executive Director
CleanEnergyGroup

COVER PHOTOS
Top, left to right: iStock/baranozdemir; iStockphoto/FeodoraChiosea; Ron Thomas Images. Bottom: Clean Energy Group

Founded in 1998, Clean Energy Group provides innovative technical, economic, and policy solutions to accelerate the equitable deployment of clean energy technologies. By serving as a trusted partner for communities, advocates, and policymakers working at the forefront of the energy transition, we bridge critical gaps in the clean energy space through expert technical assistance, responsive guidance, and independent analysis.

In 2024, with support from our funders and in collaboration with partners, we were successful in:

- **Bringing the benefits of resilient power to marginalized communities.**
  Clean Energy Group reached a milestone of awarding $2 million to 380 community-serving facilities through our Technical Assistance Fund, which provides early-stage support to organizations exploring solar and battery storage for energy resilience and cost savings. To date, 100 of these projects have been completed.
- **Accelerating the retirement of peaker power plants.**
  In partnership with community advocates, we helped to block a new gas-powered peaker in New Jersey, establish a state-organized peak demand working group in Massachusetts, and enact energy storage deployment requirements targeting peaker replacement in New York City.
- **Advancing equitable policies and programs.**
  We worked directly with policymakers and regulators in 15 states, providing technical support, expert testimony, guidance, and recommendations for developing inclusive and accessible clean energy programs.
- **Raising energy justice awareness.**
  To build awareness of the injustices of the fossil fuel energy system and the opportunities to unlock greater energy equity through clean energy, we published dozens of informational resources, reaching tens of thousands of advocates, policymakers, and community members,

To learn more about our work, projects, and initiatives, visit www.cleanegroup.org.

Questions about this report or Clean Energy Group? Comments, questions, and donation inquiries can be directed to info@cleanegroup.org or 802-223-2554.

Clean Energy Group's initiatives are focused on four key areas of work.

Climate Reslience and Community Health

Facilitating the deployment of clean energy solutions for healthy air, safe and reliable backup power, and financial well-being.

Distributed Energy Access and Equity

Enabling greater access to clean energy in low-income communities and communities of color.

Energy Storage and Flexible Demand

Energy storage and demand flexibility are key to enabling an electric grid powered by renewable energy.

Fossil Fuel Replacement

Accelerating the retirement of fossil fuels and the development of clean alternatives.

CLIMATE RESILIENCE AND COMMUNITY HEALTH

Facilitating the deployment of clean energy solutions for healthy air, safe and reliable backup power, and financial well-being.

Photo: ehrlif/Bigstock

The Problem

In 2024, there were 27 severe weather and climate change-related disasters in the US with losses that exceeded $1 billion each. Extreme weather events are becoming increasingly common and severe, and low-income households and marginalized communities are hit first and worst.

Millions of Americans rely on electricity-powered home medical equipment, including life-support equipment and technologies for independent living, such as electric wheelchairs, ventilators, and internet access for telehealth.

Prolonged power outages can be more deadly than the natural disasters that cause them. Without electricity, heating and cooling systems are down, refrigeration for food and medication is unavailable, and communication with emergency responders is disrupted.

Only 1 in 7 households have access to reliable backup power, and 38 percent of households in the US experience a high energy burden.

2024 Progress

Provided technical assistance funding and guidance to support solar+storage solutions at 45 community-serving facilities, including affordable housing, community centers, institutions of faith, and health care institutions, to keep essential services running during extreme weather and power outages, with the potential to provide services to over 25,000 community members. Nearly 60 percent of funding supported BIPOC-led organizations.

Celebrated the completion of four community-led resilient solar+ storage projects. Clean Energy Group assisted each of these projects with early-stage support and technical assistance funding: the Kenzi, an affordable senior housing apartment building in Roxbury, Massachusetts; the Gleason Family YMCA in Wareham, Massachusetts; the California Indian Museum and Cultural Center in Santa Rosa, California; and the Petersburg Resiliency Hub in Virginia.

Published research on the public health need for resilient power technologies in Connecticut affordable housing, in partnership with Operation Fuel, the Yale School of Medicine and School of Public Health, Connecticut Insurance Department, and Connecticut Green Bank.

FEATURED PARTNER

Footprint Project

Footprint Project is a nonprofit that helps emergency responders deploy clean technologies following natural disasters to power immediate lifesaving efforts and support long-term recovery. As an engineering partner for Clean Energy Group's Technical Assistance Fund, Footprint helps community-serving organizations assess whether solar+storage is economically and technologically feasible for their facilities. Clean Energy Group and Footprint have collaborated on multiple projects, including a unique mobile solar+storage trailer designed to serve emergency response efforts in Vieques, Puerto Rico.

In 2024, Footprint Project deployed mobile solar+storage units in Florida and North Carolina in the wake of Hurricane Helene. These efforts, along with Footprint's response work in Maui, Puerto Rico, and across the Southeast, are profiled in a Clean Energy Group webinar, Solar and Battery Storage to Support Community Preparedness and Disaster Response.

footprintproject.org™

Vieques Emergency Management Trailer in Vieques, Puerto Rico.
Photo: Footprint Project

Community Resiliency Hub in Petersburg, VA.
Photo: Queen Shabazz, UPAL.

FEATURED INSTALLATION

Petersburg Resiliency Hub

Petersburg, VA

In 2020, a Technical Assistance Fund grant from Clean Energy Group supported the development of a solar+storage feasibility assessment for the Petersburg Resiliency Hub. The funding and one-on-one technical support enabled the Hub to move forward with its goal to serve as a community resource during power outages. The Hub became fully operational in April 2024, with a solar+storage system supplying 100% of the facility's electrical needs. In a crisis, the Resiliency Hub's battery can power the entire building for several hours or support critical loads for up to three days. "People will be able to come to the Resiliency Hub and have light, have food, have shelter," says Hub director Queen Zakia Shabazz. "They can power up their electronics or their wheelchairs and other medical devices."

2025 Priorities

Equip rural community health centers in the Southeast with resilient solar+storage systems to keep essential public health services running in the event of a power outage, in partnership with the National Association of Community Health Centers, Capital Link, and Collective Energy Company.

Expand one-on-one solar+storage support and technical assistance to partner with additional municipalities, community-based organizations, Tribal Nations, first responders, and affordable housing providers to help them achieve their resilience goals.

Release the nation's first climate resilient energy code designed to enable affordable housing residents to safely shelter in place during severe weather and power outages.

DISTRIBUTED ENERGY ACCESS AND EQUITY

Enabling greater access to clean energy in low-income communities and communities of color.

Photo: Dennis Schroeder/NREL

The Problem

Low-income communities and communities of color experience the highest levels of environmental pollution. These communities are most likely to live in direct proximity to heavily polluting energy infrastructure, such as peaker power plants.

Low-income households spend the highest percentage of their income on energy expenses, yet they are typically the last to experience the economic and air quality benefits of clean energy technologies.

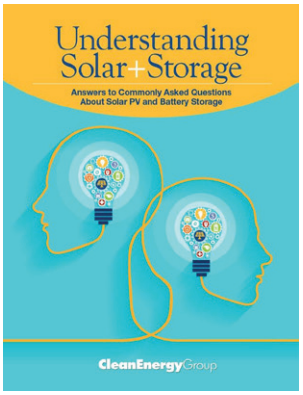
Clean energy policies, programs, and financial systems are not widely accessible, leading to an inequitable distribution of clean energy incentives and resources.

2024 Progress

Supported the equitable expansion of clean energy in Massachusetts, New Jersey, New York, and North Carolina through submitting public comments on renewable energy, energy storage, and energy programs in collaboration with community-based organizations and by engaging with energy regulatory agencies.

Published essential guidance on how to access federal Investment Tax Credits for clean energy projects, which became directly available to nonprofits for the first time via the Inflation Reduction Act's Direct Pay provision. These resources were accessed over 20,000 times in 2024.

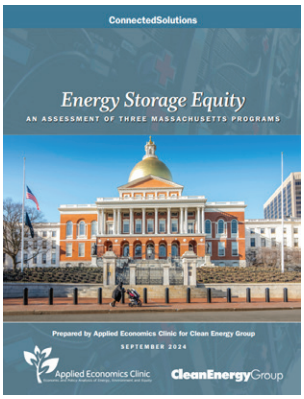
Provided research and advocacy supporting New York's inclusion of a 35 percent minimum carveout for battery storage development in disadvantaged communities in the state's new 6-gigawatt energy storage roadmap.



FEATURED PUBLICATION

Understanding Solar+Storage: Answers to Commonly Asked Questions About Solar PV and Battery Storage

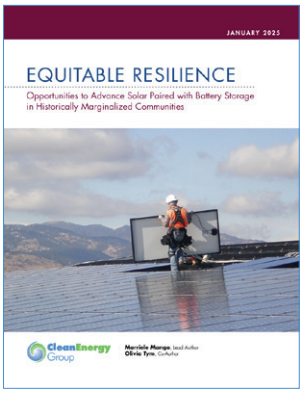
This guide, available in both English and Spanish, serves as a starting point for individuals and organizations beginning to explore solar+storage options for their homes, businesses, or community facilities. The revised 2024 version of this guide includes updated economic, policy, and technical information.



FEATURED PUBLICATION

Energy Storage Equity: An Assessment of Three Massachusetts Programs

Massachusetts' energy storage-incentivizing programs, while groundbreaking in many ways, have not yet lived up to the Commonwealth's clean energy equity commitments. This Clean Energy Group report includes recommendations to better align Massachusetts' energy storage programs with its equity goals by drawing on lessons learned and best practices from similar programs in other states. Clean Energy Group hosted a webinar with report authors and representatives from the Massachusetts Department of Energy Resources to discuss the key findings from the report.



FEATURED PROJECT

Resilience, Storage, and Grid Benefits Community of Practice

The U.S. Department of Energy's Solar Energy Technologies Office launched the Equitable Solar Communities of Practice program in November 2023 to support the expansion of equitable benefits in solar adoption. Clean Energy Group was selected to lead the Resilience, Storage and Grid Benefits Community of Practice, which focused on supporting household and community-level resilience, grid strengthening and grid-level resilience, and improved health outcomes through reduced or shortened power outages. Core team members supporting the effort included Appalachian Voices, Massachusetts Clean Energy Center, Northwest Arctic Borough, Revision Energy, Smart Electric Power Alliance, and Together Louisiana. In 2024, Clean Energy Group hosted an online convening to discuss best practices, opportunities, and obstacles in advancing resilient power in historically marginalized communities. Findings were compiled in a report, *Equitable Resilience: Opportunities to Advance Solar Paired with Battery Storage in Historically Marginalized Communities.*

2025 Priorities

Collaborate with state and municipal agencies to assess and advance solar and energy storage programs and policies that prioritize equity and public benefits.

Partner with community-serving organizations to identify and navigate the federal, state, and local incentive and funding resources available for solar and battery storage development in the communities they serve.

Build awareness of the meaningful benefits, technological capabilities, and practical economics of solar and energy storage through a broad range of informational materials, including case studies, analyses, and fact sheets.

Assess opportunities to generate economic and resilience benefits for high energy-burdened communities through community solar and community solar paired with battery storage.

Advance an electrification with equity model that combines distributed solar and energy storage with electrification and controllable loads to equitably address the growth in energy demand.

ENERGY STORAGE AND FLEXIBLE DEMAND

Energy storage and demand flexibility are key to enabling an electric grid powered by renewable energy.

Photo: Dennis Schroeder/NREL

The Problem

Energy storage and flexible demand enable utilities to shift electricity demand away from periods of high energy consumption or low generation. This reduces strain on the electric grid, enhances the efficiency of the power system, improves grid reliability, lowers costs for utilities and consumers, and reduces reliance on fossil fuels, enabling a smoother and more cost-effective transition to a clean energy future.

Policy and regulatory barriers have slowed the growth of demand response and virtual power plants, despite a critical need for innovative distributed energy management programs. This jeopardizes the ability of states to meet decarbonization goals and risks billions of dollars in unnecessary grid investments.

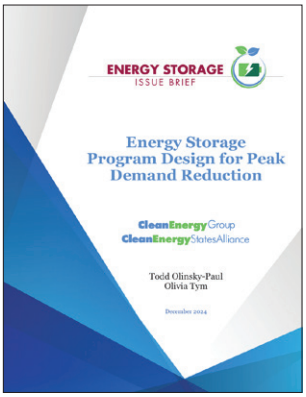
Only 12 states have established energy storage goals and, of those states that have, most are far from meeting their installation targets.

2024 Progress

Provided technical support, expert testimony, guidance, and recommendations to state agencies and advocates in Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, South Carolina, Pennsylvania, Vermont, Virginia, and Washington, DC to establish incentive programs for distributed energy storage with an emphasis on ensuring equitable access for low-income and underserved communities.

Highlighted ways to address New York City's growing electricity demand and accelerate peaker plant retirement through robust demand management solutions that harness the flexibility of customer devices, in collaboration with the PEAK Coalition (Clean Energy Group, New York Lawyers for the Public Interest, NYC Environmental Justice Alliance, THE POINT CDC, and UPROSE).

Provided guidance to state policymakers through energy storage issue briefs on how to set energy storage incentive rates and design energy storage programs to reduce peak demand.



FEATURED REPORT

Energy Storage Program Design for Peak Demand Reduction

This issue brief, released by Clean Energy Group and the Clean Energy States Alliance, outlines best practices and lessons learned for state policymakers and regulators engaged in developing energy storage peak demand reduction programs. The brief explores key elements of program design, such as incentive mechanisms and dispatch methods, as well as considerations for incentivizing load reduction versus power export, and peak demand reduction versus emission reduction.

FEATURED REPORT

Demanding a Better Grid: How Demand Management Can Accelerate the Phase-Out of New York City's Peaker Power Plants

This report highlights ways to address New York City's growing electricity demand and accelerate peaker plant retirement through robust demand management solutions that harness the flexibility of customer devices, such as smart thermostats, heat pumps, EV chargers, solar, and battery storage, to reduce stress on the grid. The report was published by the PEAK Coalition, whose work has successfully prevented the repowering of more than a gigawatt of peaker capacity in New York City.

FEATURED WEBINAR SERIES

Energy Storage in Massachusetts

Clean Energy Group and the Clean Energy States Alliance hosted a four-part webinar series at the request of Massachusetts state agencies. The webinars covered an introduction to energy storage and Massachusetts' battery storage programs and policies; the benefits and applications of energy storage; safety and environmental considerations; and municipal considerations. Guest speakers represented the Massachusetts Clean Energy Center, the Executive Office of Energy and Environmental Affairs, the Massachusetts Municipal Wholesale Electric Company, Wakefield Municipal Light Department, Cogentrix Energy, North American Fire Training Directors, NAATBatt, Massachusetts Department of Environmental Protections, Metropolitan Area Planning Council, and the Massachusetts Office of Environmental Justice & Equity.

2025 Priorities

Assess and advance virtual power plant best practices across the country, with a focus on equity benefits.

Survey interconnection reform models from across the US and promote best practices for energy storage interconnection to the grid.

Publish educational resources and analyses to inform partners about the role of medium- and long-duration energy storage in advancing the clean energy transition.

FOSSIL FUEL REPLACEMENT

Accelerating the retirement of fossil fuels and the development of clean alternatives.

Photo: kodda/iStockphoto

The Problem

There are more than 1,000 oil and gas peaker power plants operating in the US, concentrated near population centers, impacting the health of 32 million Americans living within three miles of a peaker plant.

Fossil power plants are disproportionately located in low-income communities and communities of color, leading to massive nationwide disparities in community health and well-being.

False solutions, like burning hydrogen and implementing carbon capture and storage, further entrench fossil fuel control of the power system and threaten to delay or completely derail the equitable transition to clean energy.

2024 Progress

New York State now requires that at least 30 percent of the capacity from new, state-supported, large-scale energy storage projects must be located in New York City to facilitate the retirement of fossil peaker plants. This action was prompted in part by a January 2024 PEAK Coalition report detailing that 75 percent of the city's peaker capacity could remain online and operating beyond 2025, when stricter emissions limits are intended to take full effect.

Massachusetts established a new state working group focused on decarbonizing peak demand with the goal of replacing the state's polluting peaker plants with clean alternatives, thanks in part to advocacy and awareness building by the Massachusetts Clean Peak Coalition (Berkshire Environmental Action Team, Clean Energy Group, Massachusetts Climate Action Network, and Slingshot).

Partnered with Empower NJ and other local advocates to successfully block a 140-megawatt gas power plant from being built in a New Jersey environmental justice community.

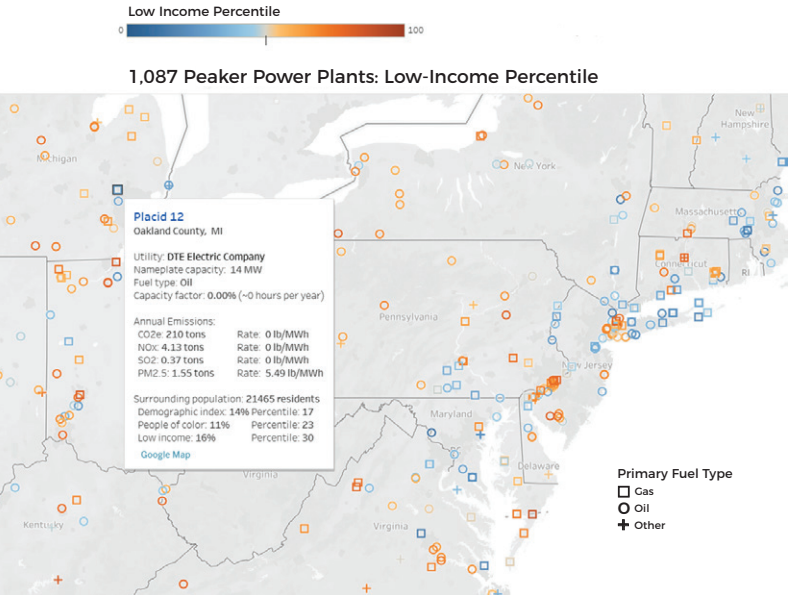
Raised awareness of the harms and global warming impacts of hydrogen production, transportation, and use through the development of educational materials and comments submitted to federal agencies, opposing hydrogen combustion in power plants and advocating for strict requirements governing hydrogen production tax credits.

Supported community-based organizations in California, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Texas, and Virginia in fighting fossil power plants in environmental justice communities and pushing back against harmful gas industry-led hydrogen proposals.

FEATURED RESOURCE

Peaker Power Plant Mapping Tool

Clean Energy Group maintains an interactive online map allowing users to access basic operating and emissions information for all 1,087 fossil-fuel peaker power plants in the US, along with demographic information about populations living near each power plant. Peaker plant demographic information can be viewed in three ways: Low Income Percentile, People of Color Percentile, and Demographic Index Percentile (average of Low Income and People of Color). The data indicates significant racial and economic disparities in the communities that are most burdened by peaker plant emissions.



Project Director Abbe Ramanan explaining the potential harms from hydrogen combustion. Photo: Clean Energy Group

FEATURED INITIATIVE

Hydrogen Information and Public Education

This initiative is dedicated to raising awareness of the health and environmental impacts of hydrogen production and use. Clean Energy Group maintains a repository of research on hydrogen production and use, and a collection of tools to critically evaluate and track hazardous hydrogen proposals. These materials are intended to equip local advocates, regulators, and policymakers with evidence-based information to understand hydrogen's impact on their communities. In 2024, Clean Energy Group published fact sheets outlining blue and green hydrogen's impacts on water supplies; issued a statement on the Treasury Departments hydrogen tax credit guidance; and hosted a webinar discussion on the DOE's $7 billion Hydrogen Hubs initiative with speakers from Pipeline Safety Trust and Institute for Energy Economics and Financial Analysis.

2025 Priorities

Produce and disseminate evidence-based, accessible materials on the environmental, public health, and economic impacts of hydrogen and peaker power plants.

Collaborate with environmental justice partners across the country to oppose existing and new peaker power plants and advocate for clean, zero-emissions alternatives.

Partner with environmental justice groups in Massachusetts to prepare a clean energy transition strategy for the state's fleet of peaker power plants.

Provide ongoing technical support for community-based organizations, environmental justice advocates, and state and local policymakers to enable an informed and critical evaluation of hydrogen proposals.

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