







The National Community Solar Partnership Annual Update 2022

Solar Energy Technologies Office U.S. Department of Energy March 7, 2023

2023 National Community Solar Partnership Progress Report Overview

This slide deck presents the progress the U.S. Department of Energy's (DOE) National Community Solar Partnership has made on its 2025 targets since they were set in 2021.

The deck includes the following for the National Community Solar Partnership Program:

- Targets and priorities
- Overview of main initiatives
- Successes and progress to date across each initiative



What is Community Solar?

DOE defines community solar as any solar project or purchasing program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups.

Community solar...

- Allows households who cannot access rooftop solar to access the benefits of solar energy (which can be due to barriers such as rooftop suitability, cost, or tenancy).
- Creates subscriptions, benefits, and/or ownership opportunities that participants can access for a portion of electricity produced.
- Typically provides participants with an electric bill credit for electricity generated by their share of the system.
- Can provide meaningful benefits such as low-income access, electric bill savings, resilience, community wealth building, and workforce opportunities.



NCSP Progress: Meaningful Benefits

NCSP has identified the following five meaningful benefits that should be included in community solar projects and programs:



GREATER HOUSEHOLD SAVINGS

 Provide a reduction in electricity bills for residential subscribers to a project



LMI HOUSEHOLD ACCESS

 Include subscribers from low- to moderateincome (LMI) households



RESILIENCE AND GRID BENEFITS

 Include the capability to deliver power to households and/or critical facilities during a grid outage or strengthen grid operations



COMMUNITY OWNERSHIP

- Local community members, subscribers, or local community organizations own or have equity in the project
- Other wealthbuilding strategies



WORKFORCE DEVELOPMENT AND ENTREPRENEURSHIP

- Support prevailing wages and preapprenticeship and apprenticeship programming
- Ensure womenand minorityowned businesses have equitable opportunity

The NCSP Partner Team



























Cliburn and Associates



The National Community Solar Partnership



Our <u>technical assistance program</u>, led by the Lawrence Berkeley National Laboratory, ensures that our partners have access to resources and direct technical assistance from DOE, National Labs, and third-party subject-matter experts to support local challenges.

National Community Solar Partnership Target







Represents an increase from **3 GW to 20 GW** of community solar capacity



\$1 billion in savings reflects an average bill reduction of 20%

National Community Solar Partnership (NCSP)

Pathway to Success Priorities

TECHNICAL
EXPERTISE
AND CAPACITY
BUILDING



STATE ENGAGEMENT



ACCESS TO CAPITAL



EDUCATION AND OUTREACH



NCSP TARGET

5 million households and \$1 billion in savings by 2025

Resulting in...

- ★ An average 20% energy bill reduction
- ★ 700% increase in community solar capacity

Meaningful benefits:

Greater household savings; LMI household access; Resilience and grid benefits; Community ownership; Workforce development and entrepreneurship National Community Solar Partnership (NCSP)

Pathway to Success Initiatives



Sunny Awards for Equitable Community Solar

In 2022, there was a \$100,000 prize competition that recognizes community solar projects and programs that employ meaningful benefits of community solar. Grand prize winners awarded in January 2023. <u>Learn more</u>.

Low-Income Clean Energy Connector

In 2022, work began in collaboration with partner states on a tool to connect energy assistance recipients with community solar subscriptions with consumer protections and meaningful savings. <u>Learn more.</u>

Community Power Accelerator

Connecting developers, investors, philanthropists, and community-based organizations to create an ecosystem of partners to deploy equitable community solar. In January 2023, launched a \$10 million prize competition to support new, emerging, and expanding developers. <u>Learn more</u>.

States Collaborative

Collaborative of 32 states and territories engaging in peer-learning and technical assistance support to expand state community solar markets. <u>Learn more.</u>

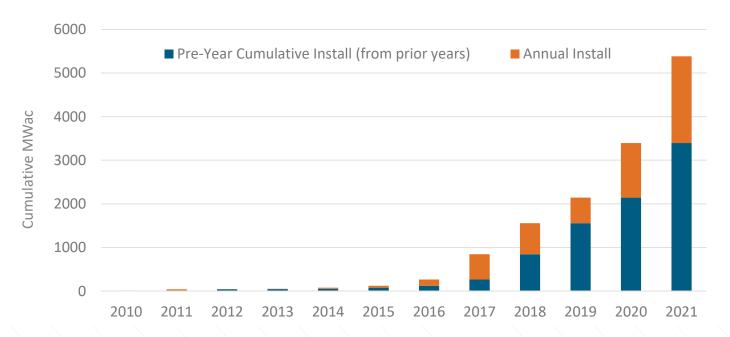
Direct Technical Assistance Program

Assistance provided through our partners to NCSP members to support policy and regulation research, project financing analysis, outreach and engagement strategies, program design, and technical issues. <u>Learn more</u>.

Community Solar Market: Baseline Capacity

Progress on installed capacity

Cumulative community solar capacity has grown by about 121% year over year since 2010

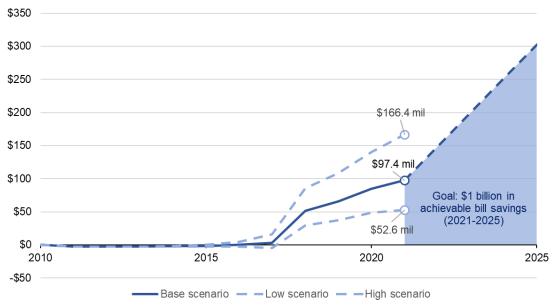


Data from the National Renewable Energy Laboratory Sharing the Sun: https://www.nrel.gov/docs/fy21osti/80246.pdf.

Community Solar Market: Bill Savings Baseline

- The National Renewable Energy Laboratory estimates \$97.4 million in bill savings from community solar in 2021.
- To achieve the National Community Solar Partnership target of \$1 billion in savings by 2025, community solar market needs to increase almost threefold compared to the 2021 baseline (from 5.7 GWac to 15 GWac).
- NCSP is on track to reach this savings target by 2025.

Estimated Annual Achievable Savings of Deployed Community Solar Capacity (\$mil per year)



Notes: Achievable bill savings is calculated by finding the net present value (NPV) of residential community solar subscription contracts based on the assumptions and methodology developed in NREL's *Sharing the Sun* project. NPV of subscipriptions are averaged for each utility, and where insufficient data is available, the state average NPV is used. Average NPV's are then converted to an annuity equivalent over 20 years (the constant revenue that would produce the same NPV). Annuity equivalents are then multiplied by project capacity (available to all rate classes). The three scenarios shown (base, low, high) assume an annual retail rate escalation factor of 2.5% (base), 1.5% (low), 3.5% (high); real discount rate of 8.4% (base), 6.4% (low), 4.4% (high); and an annual solar PV degredation rate of 0.5% (base), 0.75% (low), 0.30% (high).

Market Impact of NCSP Pathways of Success Initiatives

Potential gigawatt (GW) growth by activity

	Technical Expertise and Capacity Building	State Engagement	Access to Capital	Customer Engagement	Education and Outreach
Utility engagement	++				+
Accelerating timelines	++		++		+
Reduced costs	+		+	+	+
Opening new state markets		+++			+
Expanding existing state markets		+++			+++







NCSP leverages expertise from partner organizations to support technical assistance needs, with providers including:













NATIONAL COMMUNITY SOLAR PARTNERSHIP

















14



NCSP Partners can apply for technical assistance support in 5 areas:



POLICY, LEGISLATION, AND REGULATION RESEARCH



PROJECT FINANCING ANALYSIS



OUTREACH AND ENGAGEMENT STRATEGIES



PROGRAM DESIGN



TECHNICAL ISSUES

Organizations can receive support in a variety of formats including:

Consultation on program processes and policies and technical review of proposed plans and models.

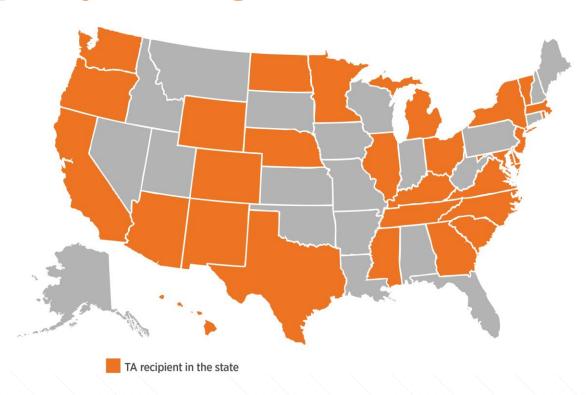
Technical and financial analysis and modeling of potential program costs, benefits and impacts.

Custom research such as market studies or third-party white papers.

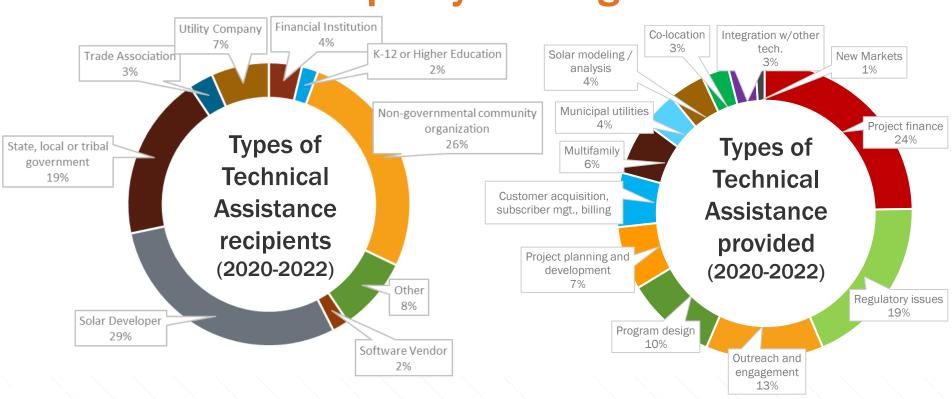
Custom publications such as toolkits, tip sheets, or case studies.



- NCSP has provided 135
 direct technical assistance
 engagements totaling over
 1,915 hours since its
 launch to recipients in 30
 states, the District of
 Columbia, Puerto Rico, and
 the U.S. Virgin Islands.
- The geographic reach of the Direct TA program has been broad.



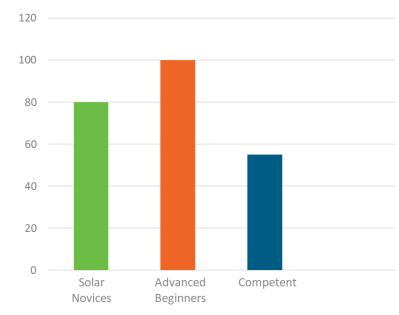






Of the 41 NCSP technical assistance recipients surveyed in 2022:

- 100% of respondents who identified as advanced beginners felt that their knowledge of community solar increased due to their NCSP technical assistance.
- The same was true for 80% of those who identified as community solar novices and 55% of those who identified as competent in community solar.



Survey respondents that reported an increase in knowledge after NCSP Technical Assistance



Technical Assistance Impact Stories



Grand Rapids Lake Michigan Filtration Plant solar project
Photo courtesy of Fox17 West Michigan
https://www.fox17online.com/news/local-news/grand-rapids/grand-rapids-officials-activate-solar-array-at-lake-michigan-filtration-plant

- Michigan Energy Options
 - Hosting community solar through water utilities
- PACE Fund New Mexico
 - Benefits of locally-owned community solar
- NCSP Municipal Utility Working Group
 - Program design for municipally-owned community solar

Read the Impact Stories and learn more:

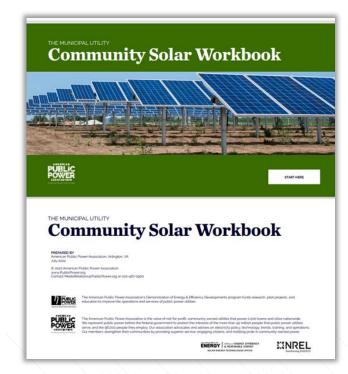
National Community Solar Partnership Technical
 Assistance Engagement Summaries | Department of Energy



Municipal Utility Collaborative

- Held nine collaborative sessions from April 2020 - December 2021
- Partners included: American Public Power Association, NREL
- Along with seven utilities from CA, CO, MO, OH, WA, WI
- Presented at 3 conference sessions, had 94 total attendees
- Upcoming: Continuing education course in May

Municipal Utility Workbook (August 2022)





Multifamily Affordable Housing Collaborative

- October 2020 May 2022
 - 12 sessions (4 technical webinars and 8 peer learning)
- Partners: Urban Ingenuity, Stewards of Affordable Housing for the Future (SAHF), NREL
- Thirteen participants from eleven states including NC, CO, NY, CT, OH, DC, NY, VA, MA, WA, TN
- Final resources:
 - Portfolio Screening Package (<u>Tool</u> & <u>Fact Sheet</u>)
 - Portfolio Modeling Tool & User Guide
 - Community Solar Project Models for MFAH Issue Brief
 - Community Solar and HUD Subsidized Housing Report
 - <u>Tips for Resident Engagement</u>









NCSP Progress: State Engagement States Collaborative

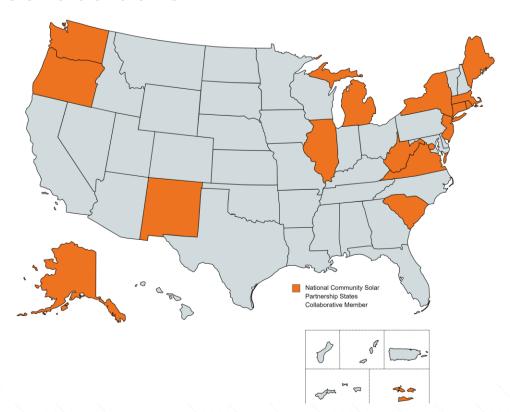
Launched in February 2022, the States Collaborative is open to all states and territories who want to engage in peer learning and technical assistance on community solar.

As of March 2023:

- 17 states and territories are official States Collaborative participants
- 32 states and territories participate in the States Collaborative

State participants span types of markets:

- 3 participating states do not yet have community solar enabling legislation
- Participants include some of the most developed markets





NCSP Progress: State Engagement States Collaborative



In the fall of 2022, NCSP supported **13** state
Action Plans to identify short and long-term
actions for achieving their targets and provide
tailored technical assistance

In 2022, NCSP hosted 10 peer-learning meetings:

- Meeting topics included community ownership models, data collecting and reporting, interconnection, developer engagement, workforce development, stakeholder engagement, cost-shifting, and state market data
- Each peer learning meeting had, on average,
 20 states represented

Formed two sub-groups to explore low-income and community ownership and resilience and microgrids, with support from the National Association of State Energy Officials (NASEO), the Clean Energy States Alliance (CESA), and the National Renewable Energy Laboratory (NREL).



NCSP Progress: State Engagement

States Collaborative

Of 22 States Collaborative participants surveyed in 2022...

66% of those who identified as community solar novices, 100% who identified as advanced beginners, and 60% of those who identified as competent felt that their knowledge of community solar increased due to their participation in the NCSP and States Collaborative

80% felt the monthly meetings were useful or very useful, 70% felt the low-income and community ownership subgroup was useful or very useful







NCSP Progress: Access to Capital

Community Power Accelerator



U.S. DEPARTMENT OF ENERGY







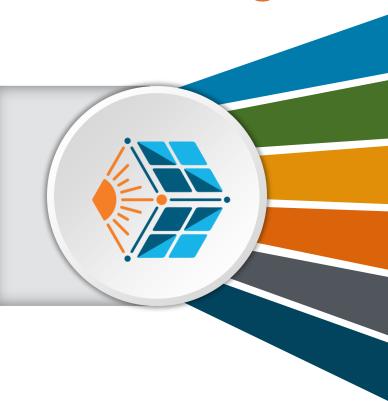


Goals:

- Standardize equitable access to community solar financing,
- Expand capacity and expertise for community-led, community-focused deployment, and
- Build a robust project pipeline with meaningful benefits



NCSP Progress: Accelerator Elements



Online Platform with Partner Commitments

Credit-Ready Checklist, Organization and Project Profiles

Community Power Learning Lab

Philanthropy-Ready Guide

Technical Assistance Programming

Prize Funding



NCSP Progress: Access to Capital Community Power Accelerator Impacts



As of February 2023...

- Over 30 partner commitments from investors, philanthropic organizations, and developers
- over \$5 billion from the private sector
- Community Power
 Accelerator Prize designed
 to support at least 25 MW
 with \$10 million in
 prize funding

Community Power Accelerator Inaugural Partners





THE KRESGE **FOUNDATION**



Wells Fargo Foundation

Enhanced Capital









































Foundation

Triple Bottom Line



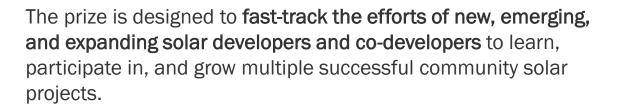






NCSP Progress: Access to Capital Community Power Accelerator Prize

The Community Power Accelerator Prize is a \$10 million, three-phase prize.



By the end of the prize, competitors will be ready to **engage with** the Community Power Accelerator online platform.

Learn more: energy.gov/communitysolar/community-power-acceleratortm
Apply for the Prize: herox.com/CommunityPowerAccelerator







NCSP Progress: Customer Engagement Low-Income Clean Energy Connector

- Developing and piloting a digital tool that will identify and make community solar
 with verified savings and consumer protections more accessible to households
 participating in government-run low-income support programs (i.e., the Low Income
 Home Energy Assistance Program)
- NCSP working in partnership with the U.S. Department of Health and Human Services (HHS) on the development of the connector
- NREL is developing the tool software in collaboration with project partners
- Thank you to the District of Columbia, Illinois, and New Mexico who are piloting the tool this year, and New Jersey, New York, and Colorado who are advising on the project!

Learn more: https://www.energy.gov/communitysolar/community-solar-subscription-tool



NCSP Progress: Customer Engagement Low-Income Clean Energy Connector

Main Project Partners











Additional Project Partners









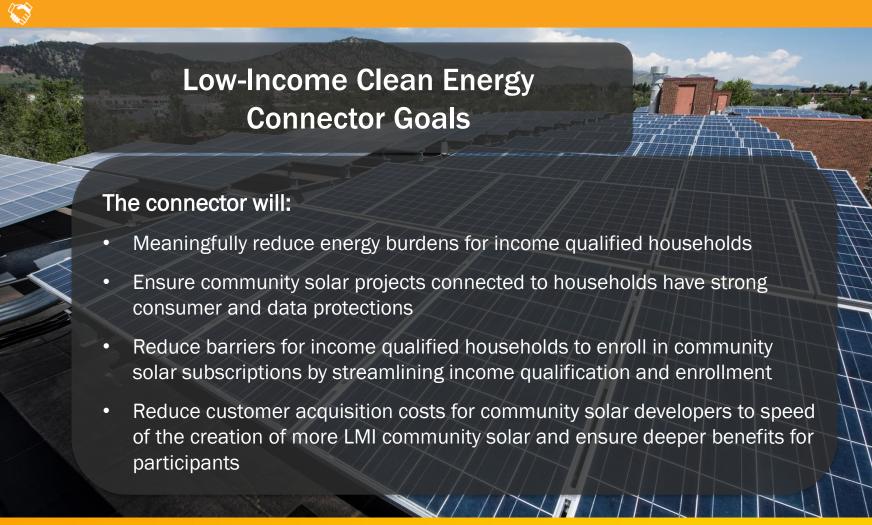














NCSP Progress: Customer Engagement Low-Income Clean Energy Connector Achievements

From July through August 2022, NCSP released a **Request for Information** and received responses from 45 organizations providing input on the project.

Summary of results are available on the NCSP website.

From October 2022 through February 2023, NCSP facilitated **6 pilot regions** workshops for stakeholders in DC, IL, and NM, which included over **200 local stakeholder attendees**; in addition, NCSP hosted **6 stakeholder engagement webinars with over 250 total participants** including community solar developers, community action agencies, utilities, and subscription managers.

In February 2023, NCSP announced the Low-Income Community Solar and Energy Assistance Fellowship through ORISE to support the pilot areas of Illinois, New Mexico, and the District of Columbia and the final implementation of the connector.

Through 2023, NCSP will work with partner regions to finalize the design of a Low-Income Clean Energy Connector and develop an education and outreach strategy for successful implementation.





NCSP Progress: Education and Outreach

Project Partners







NCSP Progress: Education and Outreach

Number of members and organizations on Mobilize (including all 50 states and territories), as of December 31, 2022:

- 1,328 total members
- 969 total organizations (838 agree to be listed publicly)
- 554 organizations support NCSP target (525 agree to be listed publicly)
- 50 states and the District of Columbia,
 Guam, U.S. Virgin Islands, and Puerto Rico

NCSP membership grew overall by about 64% between January 2021 and December 2022

Member Organizations by Type	
Community-based Organization	45
Consulting	121
Solar Developer	248
Education	28
Financial Institution	22
Government	116
Housing	21
Member Association or Trade Group	40
Nonprofit	152
Other	71
Other For-Profit	33
Software Vendor	20
Utility	38
Grand Total	955



NCSP Progress: Education and Outreach Engagement Growth

Engagement increased by 34% between March and December 2022





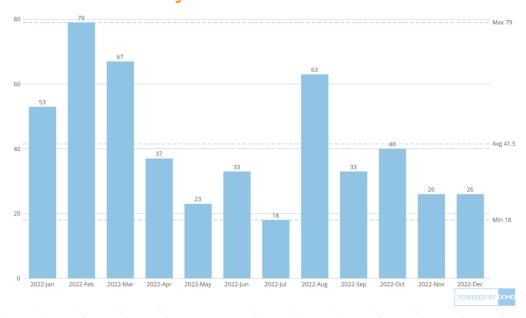
NCSP Progress: Education and Outreach Engagement Activities

Total Member Activity by Type on NCSP's online platform, as of December 2022

Engagement Type



New Community Connections 429 distinct chats



NCSP Progress: Education and Outreach

Engagement Activities

2022 Engagement Activities and Attendees

Engagement Activity	Number of Activities	Attendees
NCSP Annual Summit	1	632
Webinars	6	663
Conference Presentations	11	N/A
Collaborative & Subteam Meetings	18	205
Project Workshops (LI Clean Energy Connector Tool and Community Power Accelerator)	18	602



NCSP Progress: Education and Outreach Sunny Awards Grand Prize Winners

Sunny Awards **Grand Prizes** are projects and programs that demonstrated best practices and innovation in delivering benefits across multiple Meaningful Benefit categories.



5 Grand Prize submissions awarded



Provides \$4.3 Million in Savings



Serve 7,300 low- to moderate-income households

Learn more: energy.gov/communitysolar/sunny-awards-equitable-community-solar



NCSP Progress: Education and Outreach Sunny Awards for Equitable Community Solar

Sunny's Awards:

5 Grand Prize Winners, 17 Meaningful Benefits Winners



'Community Power' by Solar One, a Sunny Awards Grand Prize winner (Photo Credit: Solar One)



'Shungnak-Kobuk Community Solar Battery Independent Power Producer' by Northwest Arctic Borough, a Sunny Awards Grand Prize winner (Photo Credit: Northwest Arctic Borough)

National Community Solar Partnership 2023: Implementing the Pathway to Success

- Provide Technical Assistance to 200 additional organizations
- Build the States Collaborative to 25 official states and territory partners
 - Implement 13 state action plans
 - Add technical assistance for states, action plans, and peer-learning opportunities
- Expand the Community Power Accelerator
 - Welcome up to 25 winners from the Community Power Accelerator Prize
- Pilot the Low-Income Clean Energy Connector tool in three areas (DC, IL, and NM)
 - Scale to additional states later in the year
- Kick off the Sunny Awards Roadshow to celebrate 2022 prize winners with media partners
 - Including site visits and webinars to showcase meaningful benefits winners

National Community Solar Partnership Staying Engaged

- Join the Community Power Accelerator and apply to the Community Power Accelerator Prize by March 15, 2023
- Explore the new 2023 Sharing the Sun Data & Report from NREL (coming Summer 2023)
- Resources coming soon:
 - Expanding Solar Access: State Policy Landscape & Workbook
 - Reports on Consumer Protections and Consolidated Billing
 - Study on modeling least cost solutions for siting community solar + storage
 - And more!
- Attend RE+ in September 2023
- Join us for the 2024 NCSP Annual Summit (stay tuned for date and location!)

Photo sourced from SunShare's Paula Carr Memorial Community Solar Garden

Thank you to all our partners!























NATIONAL ENERGY ASSISTANCE DIRECTORS' ASSOCIATION







Join the National Community Solar Partnership!



Our membership is growing! Join the National Community Solar Partnership to access our technical assistance, networking, events, resources, and to also share your expertise with our community!

Please send questions and/or feedback on this impact report to community.solar@ee.doe.gov.



