U.S. Department of Energy | Office of State and Community Energy Programs

U.S. Department of Energy

State Energy Program

Bipartisan Infrastructure Law Technical Assistance Quarterly Report Q3, 2024

July–September 2024

State Energy Program Bipartisan Infrastructure Law Technical Assistance Quarterly Report Q3, 2024 (July–September 2024)

This document serves as the quarterly update for the U.S. Department of Energy (DOE) State Energy Program (SEP) Bipartisan Infrastructure Law (BIL) Technical Assistance (TA) strategy to provide support to state energy offices. Congress appropriated $500 million to SEP through Section 40109 of BIL. DOE is allocating this funding to the states, as outlined in BIL, in Fiscal Years (FY)22–26; however, the funding is available until expended. DOE has made $425 million available to the states as of August 26, 2022, using the FY21 SEP formula as directed by legislation.

DOE will use the remaining $75 million over 5+ years for the benefit of all the states and SEP as follows: $45 million for program direction, oversight, and management, which includes federal staffing to implement the financial assistance program over 5+ years; and $30 million for use in collaboration with states to design and deliver high-impact TA over 5+ years. Within the $30 million, up to $7 million will be used for State Energy Security Plan TA, up to $4 million for Revolving Loan Fund TA, and $19 million for direct TA to states and other projects.

Programs and teams across DOE SEP, Office of Cybersecurity, Energy Security, and Emergency Response (CESER), and national laboratories have developed and implemented the following programs to support state energy offices in meeting the requirements of BIL 40109 (Direct Technical Assistance), 40108 (State Energy Security Plans), and 40502 (Revolving Loan Fund). This report outlines outcomes from implementation of these programs in the third quarter of 2024, July to September 2024. Learn more about these and other planned TA projects in the SEP BIL TA Implementation Plan released in March 2024.

Direct Technical Assistance

SEP is offering direct one-on-one TA to state energy offices to support the implementation of BIL funding and general planning for energy efficiency, resilience, and clean energy efforts. This TA is funded by Section 40109 of BIL and is one component of SEP's BIL TA Implementation Plan.

Topic Areas of Support

- Strategic Energy Planning
- Transmission and Distribution Planning
- Project and Program Financing
- Modeling and Analytics

In 2024, Q3, DOE SEP released a second round of the direct TA opportunity for state energy offices leveraging BIL 40109 funding. Support is offered on an ongoing quarterly basis, providing 40 hours per year of TA to engaged state energy offices.

At the conclusion of the first round of TA support, SEP closed four of five projects. A project in the Mid-Atlantic region—representing Washington, D.C.; Delaware; Maryland; New Jersey; Pennsylvania; and West Virginia—is ongoing. In the second round of support, SEP kicked off four new projects with Arkansas, Illinois, Maine, and North Dakota. A total of 14 states have completed or are continuing work with subject matter experts on their projects.

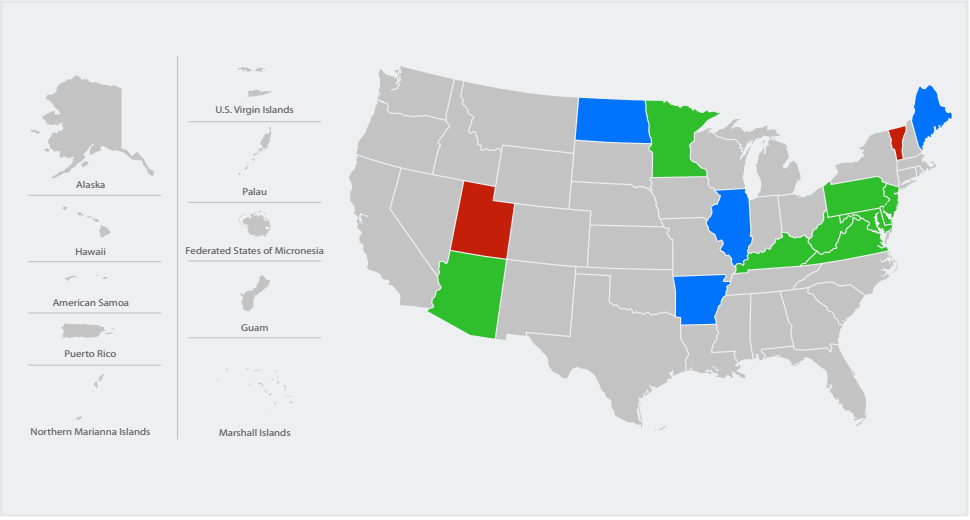

Figure 1. New projects started in Arkansas, Illinois, Maine, and North Dakota (blue). Four projects have now been completed in Arizona, Kentucky, Minnesota, and Virginia; the Mid-Atlantic cohort project, made up of partnering state energy offices representing Washington, D.C.; Delaware; Maryland; New Jersey; Pennsylvania; and West Virginia, is ongoing (green). Project reassigned to other departments are represented in red.

[1] https://www.energy.gov/scep/state-energy-program-technical-assistance

To ensure ongoing support for each of the state energy offices, the SEP team has also been collaborating with TA providers in the Grid Deployment Office (GDO), other pillars of the State and Community Energy Program (SCEP), and the Office of Energy Efficiency and Renewable Energy (EERE). Follow-on projects and offramps from each request have been identified and communicated to these other programs, and GDO has already provided supplementary support for the Mid-Atlantic cohort project. EERE has partnered to provide resources for the North Dakota TA request.

Completed Projects

Kentucky

Kentucky desired to use the National Renewable Energy Laboratory's (NREL's) long-term electricity planning tools to gain a better understanding of the power system infrastructure in Kentucky and plan for future scenarios. The team used the Regional Energy Deployment System (ReEDS) model to modify existing planning scenarios for energy generation and transmission to more accurately represent possible futures of the most interest to Kentucky. The team evaluated scenarios of the Kentucky electricity system both as an islanded system and considering highly coordinated interstate electricity exchange. The team delivered a report documenting model results, including scenario comparisons, which Kentucky will use to inform future energy planning.

Minnesota

Minnesota is establishing a method for project prioritization that accounts for social burden. The team worked with St. Cloud, Minnesota, as a pilot community to update prioritization metrics for critical infrastructure and presented this work and how it can be updated and scaled for other communities. Minnesota will use this work as a pilot to inform a similar statewide prioritization effort, which will assist communities in the identification and prioritization of critical infrastructure resilience projects to ensure disadvantaged communities receive equitable access to resources.

Virginia

Data centers in Virginia are incentivized to deploy, but their electrical needs are outpacing local supply resources and expected network expansion. The team gathered baseline data, examined existing plans for transmission, and evaluated potential intervention strategies considering the acute challenge of meeting this fast-growing demand (concentrated in Loudon County). Interventions focused on reconductoring and grid-enhancing technologies (GETs), such as dynamic line rating (DLR), advanced power flow controllers (APFCs), and transmission topology optimization (TTO). Results summarized their cost, value timeline, and technical impacts, which Virginia may use to further engage with the local utility (Dominion), educate stakeholders, and ensure an informed basis for future policy directives that would need to consider the timing and ordering of GETs and reconductoring relative to a full taxonomy of other potential interventions.

Ongoing Projects

Arizona (Round 1)

The team is developing a report to review and evaluate market valuation studies in the western United States applicable to Arizona, potential resulting reliability and capacity requirements, estimated cost reductions or increases to ratepayers, and areas for future study. This report will explain the results of this evaluation, and Arizona will use it to inform its decision on regional transmission organization (RTO) engagement.

Mid-Atlantic Cohort (Round 1)

Engagement with the RTO, PJM, has historically been challenging, and the cohort is interested in strategies to improve collaboration with PJM during planning to better reflect state priorities. The team is evaluating Federal Energy Regulatory Commission (FERC) Order 1920 to identify strategies to better engage with PJM during planning and develop individual state strategies for implementing those approaches; outcomes will be used to inform future engagement efforts.

Note: This project is conducted in collaboration with the DOE GDO and National Association of State Energy Officials (NASEO).

Arkansas

Arkansas is developing a grant to provide support for municipal utilities and cooperatives in transmission and distribution planning. NREL is gathering feedback to identify stakeholder knowledge and resource gaps for the grant program to inform program requirements. The team will summarize the findings and identify key focus areas and the technical knowledge requirements to address them. Arkansas will use this report to inform the procurement of a consultant for program implementation.

Illinois

Illinois is developing a grant program to address wastewater treatment plant reliability. The team will identify technologies that could support resilience; the impact, cost, and benefits of these technologies; and system planning bounds. The team will deliver a report in the structure of a notice of funding opportunity, which Illinois may use to inform program development and possible program accomplishments.

Maine

Maine is developing a program to support community-led critical infrastructure projects. The team will engage pilot communities to identify energy goals and provide potential generation and storage strategies to meet the identified goals. Maine will use this pilot data gathering and analysis to inform necessary data collection and community project prioritization to undertake similar work for future communities.

North Dakota

North Dakota is working to develop and disseminate educational resources on building codes to county and city officials. The team is identifying relevant codes based on complementary support provided by the Building Technologies Office, including energy efficiency, heat pumps, and commercial and residential building codes. North Dakota will use this work to inform educational outreach activities on code requirements. The team also provided resources for building code workforce development, career pathways, and curriculum tools for high school and college level teachers. North Dakota will use this information to help increase awareness about job possibilities and how to contribute to sustainability in the state.

Events Held

To stay connected with state energy offices, SEP initiated two complementary engagement opportunities: Monthly Office Hours and Quarterly Roundups. The goals for these engagement efforts are to create a consistent space to share SEP administrative reminders and updates, provide trainings on technical matters, and facilitate collaboration through regular feedback and idea exchange. TA events held include the following:

- Three Office Hours in Q3 with an average of 93 attendees per session:
  - Energy Efficiency and Conservation Block Grant: Sub-granting 180-day Deadline Overview on July 19
  - Low-Income Energy Affordability Data Tool Demo and Use Cases and Davis Bacon Act LCPtracker Update on August 16.
- Build America, Buy America Small Grants Waiver Update, Revolving Loan Fund Applications, Funding and Financing Resources, and NREL Tools for SEOs on September 20th Quarterly Roundup on SEP Programmatic and Financial Monitoring held on September 12.

Transformation Collaboratives

Transformation Collaboratives (TCs) represent a voluntary opportunity for states to participate in learning and best practice partnerships. SEP has partnered with Pacific Northwest National Laboratory (PNNL) for meeting and training content as well as bridging technical assistance to states through the TC lifespan. TC activities kicked off on May 20, 2024, and focus on three topics: Transmission and Distribution (T&D) Planning (8 states), Systemwide Planning for Grid Expansion (5 states), and Community Energy Planning (7 states; 17 state representatives attended. Each TC lead met with their individual cohorts in September 2024 and will be setting up subsequent monthly meetings with the participating states and their PNNL TC Lead. Specific activities include the following:

- Scoping, identifying goals, and mapping out deliverables and milestones necessary for the success of each TC
- Identifying peer exchange opportunities and cohorts
- Participating in peer exchanges to replicate successful approaches and share outcomes
- Advancing deployment timelines by addressing collective technical needs through tool trainings, technical analyses, and modeling
- Collaborating on implementation priorities via convenings run by a third-party provider and including best-in-class subject matter experts, which may include consultants, universities, NGOs, one or more DOE national laboratories, and other entities.

State Energy Security Plans

BIL introduced new requirements for the contents of State Energy Security Plans (SESPs; all must include six elements) and for submission of the plans to DOE to receive federal financial assistance. The full text of the provision is in Section 40108 of BIL. SEP BIL TA funds are supporting SESP TA led by CESER.

Office Hours

CESER hosts weekly office hours for states to exchange ideas, address challenges, and strengthen their plans and energy security programs one-on-one with CESER or among peers.

Total for July	14 meetings/18 states
Total for August	12 meetings/15 states
Total for September	18 meetings/15 states
Total for July–September	**44 meetings/22 unique states**

Cohorts

CESER launched and facilitated DOE Energy Security and Grid Resiliency Cohorts designed to build capacity and support states' energy security planning and implementation that was mandated in BIL Section 40108. Cohorts are delivered in conjunction with GDO, NASEO, and Pacific Northwest National Laboratory. The goal of these cohorts is peer-to-peer learning and knowledge sharing, including presentations from subject matter experts, and discussions of applying strategies, lessons learned, and TA to other programs.

Island, Territory, Alaska Cohort *(launched in October 2023)*	17 participants representing 6 states/territories
Risk Assessment Cohort *(launched in March 2024)*	74 participants representing 42 states/territories
Risk Mitigation Cohort *(launched in March 2024)*	71 participants representing 39 states/territories

Webinars

DOE, in coordination with NASEO, held one SESP webinar this quarter: FY24 SESP and Governor Letter Submission Process Webinar, August 13, 2024.

SESP Products

2024 SESP TA products:

1. Risk Assessment Guidebook for State Energy Security Plans
2. Governor's Certification Letter Guidance and Templates
3. State Energy Security Plan Guidance—2024
4. CESER Guidance on Developing a State Energy Profile
5. Risk Mitigation Approach Guidebook for State Energy Security Plans

Revolving Loan Fund

The Energy Efficiency Revolving Loan Fund (RLF) Capitalization Grant Program offers TA to support states with expanding or establishing RLF programs that meet federal requirements, optimally leverage private capital, and achieve state priorities.

Direct TA

SEP is offering direct one-on-one TA to state energy offices to support the design and implementation of revolving loan fund (RLF) programs under BIL 40502. Direct TA includes support for program design and implementation strategies, partnership development and procurement, and assistance for navigating federal requirements. This TA is funded by Section 40109 of BIL and is one component of SEP's BIL TA Implementation Plan.

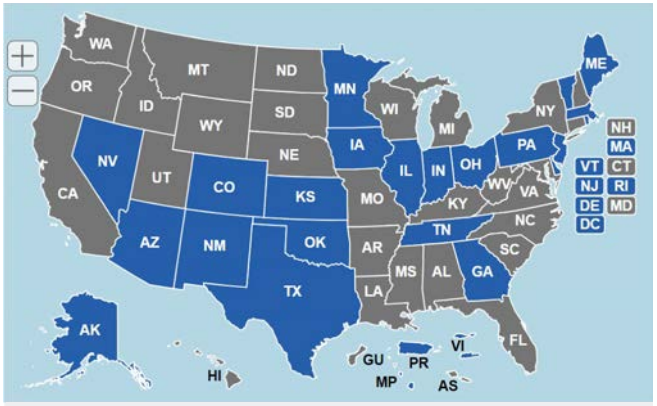

Figure 2. RLF awards received as of October 7, 2024 (in blue). See the full interactive map and additional information here: Energy Efficiency Revolving Loan Fund Capitalization Grant Awards | Department of Energy.

Support is offered on an ongoing basis—states may submit requests for RLF TA at any time. In 2024, Q3, SEP provided direct TA to 12 states, representing 21% of states eligible for the RLF program. The majority of TA requests were received via email through project officers and the RLF team, and three requests were submitted through the Revolving Loan Fund Program – Technical Assistance Request Form. In terms of the type of TA requested, 10 involved problem-solving with a subject matter expert, 10 involved analysis or quick response, and 5 involved document review.

The RLF program also records the topics of TA that are requested by states. This quarter, questions about RLF structure (design) were the most frequently received (13 requests); questions about federal requirements (10 requests), RLF requirements (8 requests), audits (7 requests), and third parties/partners (5 requests) were also common topics.

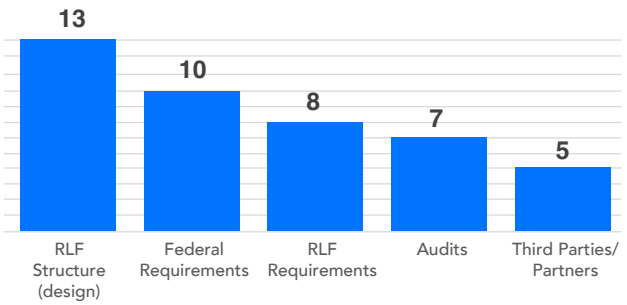

Figure 3. SEP provides direct TA in-house as well as through the Lawrence Berkeley National Lab (Berkeley Lab). Among direct TA requests in Q4, 2024, 59% of TA requests were provided for in-house technical assistance and 41% of TA requests involved work with Berkeley Lab. Following are select examples of direct RLF TA delivered to states this quarter.

Washington

Berkeley Lab worked with Washington to develop the state's program design and administration approach, including gathering feedback and boosting support from five lending associations. After soliciting feedback and building interest among potential lending partners, Berkeley Lab and Washington developed a program structure term sheet, which informed an example term sheet published on the RLF Resource Library and created a draft agreement for lenders. The laboratory also offered input on the SEO procurement approach for program lender selection. The direct TA process helped Washington quickly solidify a program design and approach for administration.

Kansas

Berkeley Lab reviewed Kansas's RLF structure and administrative model given the state's target market and available funding. The lab developed a draft program term sheet, which informed an example term sheet published on the RLF Resource Library, as well as a co-lending agreement. The direct TA helped Kansas establish a program design to meet its objectives and limitations and provided tangible work products to help with program design and implementation.

Illinois

Berkeley Lab worked with Illinois to assess the most effective program administration options and lending structures for the state's market and program goals. The lab is also helping Illinois clarify project eligibility and energy audit requirements and tools. The direct TA provided Illinois with subject matter expertise to adjust the state's planned course of implementation to avoid unnecessary procurement and administer the program internally.

TA Events Held

During Q4 of FY24, the RLF team delivered training in three State Energy Program Office Hours. In July, the RLF Program led a discussion about braiding and stacking use cases; in August there was demonstration of using the LEAD Tool to identify financing hotspots and target them with RLF dollars; and the RLF team presented on information regarding state RLF program design plans and funding and financing technical assistance in September.

New TA Products

This quarter, the RLF team updated the RLF Resource Library, which is designed for state energy offices deploying RLF programs under the BIL 40502 Energy Efficiency Revolving Loan Fund Capitalization Grant Program. This RLF Resource Library is a valuable resource for state agencies, local governments, and others designing and managing RLF programs. New resources added this quarter include the following:

- Davis Bacon Act contract flowdown language
- Driving Uptake for Energy Efficiency Programs
- Example Program Term Sheet
- Revolving Loan Fund Case Studies: Executive Summary and 6 Case Studies
  - Michigan Saves
  - Texas LoanSTAR Program
  - California's Advanced Rebates Program
  - Nebraska Dollar and Energy Saving Loans Program
  - New York State Energy Research and Development Authority Green Jobs – Green New York Program Residential Financing
  - Minnesota Commercial Property Assessed Clean Energy Financing

Additional Metrics and Financial Information

Funding obligated will be provided in future quarterly reports and in the annual report as well as additional metrics tied to deliverables and outcomes of TA provided.