Research and Development Technical Working Group (R&D-TWG)

Study Feedback Wrap-Up Meeting

Thursday, July 9, 2026; 12:00 p.m. to 1:30 p.m. ET

Discussion Summary

Welcome

- The facilitator from Eastern Research Group (ERG), a New York State Energy Research and Development Authority (NYSERDA) contractor, welcomed TWG members and asked if any members had follow-up questions from the previous meeting.

Centralized Support Mechanisms for Nuclear Innovation

- NYSERDA presented background information about several centralized support approaches that could potentially be used to most effectively implement advanced nuclear R&D in New York State, as well as potential services and benefits that such approaches might include, such as cost sharing, national lab collaboration, and leveraging adjacent technology.
    - A representative from Empire State Development spoke about the state's Centers of Excellence, which are based at universities and make their facilities and expertise more accessible by sharing research costs, pairing academic researchers and industry partners, and making supplies and equipment available. Each center runs differently, and some are joint ventures between two universities.
- TWG members participated in an activity in which they provided feedback on the specific services that a centralized support hub could offer. The activity focused on nuclear R&D study topics discussed during prior TWG meetings, including manufacturing and project delivery, site characterization, materials and components, and other topics. The TWG feedback included the following highlights:
    - For **manufacturing and project delivery**, a centralized support hub could:
        - Encourage partnerships between industry, academia, and New York State.
        - Fund university student shadowing and training and workforce development for institutions, community colleges, and nonprofit organizations.
        - Provide facility access to startups and invest in large or production-scale advanced manufacturing techniques.
        - Create high-performance computing facilities for testing and simulating materials and nuclear infrastructure for safety management.

        - Provide an artificial intelligence (AI) navigator to access information on research, funding opportunities, and credentialing.
        - Create a network that informs opportunities for collaboration, including collaboration with experts from adjacent fields.
        - Build a New York State database of nuclear experts by area of interest.
        - Offer educational sessions and resources for manufacturers who could potentially pivot to participate in the nuclear supply chain.
    - For **site characterization**, a centralized support hub could:
        - Offer training and workforce development funding for institutions, community colleges, and nonprofit organizations.
        - Facilitate and/or fund a statewide siting study.
        - Facilitate interactions with the owners and operators of existing nuclear sites in New York State.
        - Host community education sessions on the basics and benefits of nuclear energy.
        - Connect with Oak Ridge National Laboratory (ORNL) experts on leveraging OR-SAGE to best effect in New York State.
        - Provide funding to support small businesses engaged in site characterization.
        - Support development by providing multiphysics tools that could be accelerated with AI.
    - For **materials and components**, a centralized support hub could:
        - Provide cost sharing for federal funding opportunities and seed funding for startups and academics.
        - Provide cost sharing for ARPA-E calls and low-technology readiness level (TRL) ideas.
        - Develop centralized characterization facilities for radiological samples.
        - Develop capability lists to facilitate connecting with experts.
        - Provide funding to small businesses.
        - Consider supply chain development using information resources secured through the Ontario Nuclear Memorandum of Understanding.
        - Provide access to computing facilities, AI, and multiphysics simulations.
    - For **testing and validation**, a centralized support hub could:
        - Augment U.S. Department of Energy (DOE) funding for constructing advanced reactor R&D facilities.
        - Offer scholarships and fellowships for training undergraduate and graduate students in the use of advanced research and testing tools.
        - Identify and reach out to key R&D facilities to ensure capabilities and availability.
        - Provide access to high-performance computing facilities.
        - Foster entrepreneurship and technology transfer.

    - For **fuel development/acquisition**, a centralized support hub could:
        - Analyze the reactors to down-select top choices for New York State.
        - Provide funding for infrastructure development to build up critical capability on nuclear fuel research.
        - Develop a national case for the domestic supply of fuel and define opportunities that U.S. companies should focus on.
        - Fluidize chemical vapor deposition for TRISO fuel research.
        - Provide funding for metal fuel manufacturing and testing.
        - Summarize what is known and what can be adapted and identify the timeline for closing or adapting technologies.
    - For **fuel reprocessing,** a centralized support hub could:
        - Provide funding for developing advanced fuel cycle technologies.
        - Fund innovative methods for solvent processing and extractions, targeted towards New York State's down-selected reactor/fuel types.
        - Explain the technology options and the business case or national imperative for closing the fuel cycle.
        - Provide access to computational tools.
- Other TWG member feedback:
    - New York State should select reactors early on because the state cannot do research for every option.
        - A lot of R&D is dependent on specific reactor technologies as opposed to being more broadly applicable to the industry.
    - New York State could pool funds for research and take the lead.
- TWG members responded to several electronic polling questions as follows:
    - Electronic polling question #1: *What are some of the key benefits to having a centralized support hub rather than disparate efforts?*
        - Centralization can offer higher-quality support that is uniform for all users.
        - Centralization helps ensure that efforts across New York State support one another and helps eliminate duplication.
        - Staff affiliated with a centralized hub could learn more quickly by seeing all efforts across New York State.
        - Centralization helps accelerate development through the coordination of parallel efforts and the ability to focus on very specific questions.
        - A centralized hub could coordinate the various expertise across New York State. For example, the AI navigator is an entity that can make connections and share information.
        - A model that includes both centralized and distributed efforts could work well in New York State.
    - Electronic polling question #2: *What coordinated multistate or industry efforts are already ongoing and provide any of the services discussed?*
        - Nuclear Science User Facilities (NSUF) at INL

        - Electric Power Research Institute (EPRI).
        - The National Association of State Energy Officials (NASEO) Advanced Nuclear First Mover Initiative.
        - Energy Innovation Hub Consortium for Advanced Simulation of Light Water Reactors.
        - A university consortium run out of Idaho National Laboratory (INL).
    - Electronic polling question #3: *Are there benefits to expanding the centralized support hub to regional and national efforts?*
        - Acceleration of innovation.
        - Creating efficiencies for resource use.
    - Electronic polling question #4: *For what areas is there the most significant need for coordination through a centralized hub?*
        - Site characterization.
        - Data qualification.
        - Fuel disposal and reprocessing.
            - Reprocessing can be done today for current fuel types but making that more efficient will require more investment in research.
            - Fuel-related issues require collaboration and agreement across all stakeholders.
            - Most fuel-related issues need to be addressed at the national level, not just in New York State.

Summary of Findings Related to Key Research Areas

- NYSERDA presented a summary of the key R&D capabilities of universities and research institutions in New York State for supporting advanced nuclear. NYSERDA also summarized the highest-priority research topic areas across reactor types, based on the previous R&D discussions and key takeaways.

Action Items and Next Steps

Task	Assigned to	Target date
Publish Study Wrap-Up Meeting summary notes.	ERG	July 23, 2026

Participants

Member Organizations

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Columbia University
Cornell University
Gateway for Accelerated Innovation in Nuclear, Idaho National Laboratory
GE Vernova
Oak Ridge National Laboratory

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