

Supplying State Legislatures With Scientific Expertise

A national network of state-based science and technology policy fellows can strengthen the exchange of information between scientists and policymakers.

State legislators have a tough job. Over 7,500 elected officials in statehouses across the United States and its territories make thousands of decisions every year related to scientific and technological issues, on subjects including artificial intelligence, public health, transportation and energy systems, wildfire risk and prevention, and many more. Few state legislators—only about 4%—have received training as scientists, health care professionals, or engineers. But they are nevertheless routinely called upon to make policy decisions affecting their constituents that hinge on their ability to interpret arcane technical facts and scientific knowledge.

Years ago, physicist Harvey Brooks articulated the dual aspects of science and policy as “policy about science” and “science in policy.” Both matter for the United States at both the federal and state levels—but states operate under vastly different conditions. Turnover within state legislatures is high; typically more than one-fifth of state legislators are new after even-year elections. Offices can be slim-staffed, and some states’ legislative sessions last only a matter of weeks.

In his interactions with voters, Speaker of the West Virginia House of Delegates Roger Hanshaw observed a common assumption that the state legislature was staffed with experts in a manner similar to Congress. He noted, “When I explain that we don’t have scientific and technical experts on radioactive material, on virology, on vaccine efficacy, on every possible range of topic, there is often surprise because our federal counterparts do have access to that level of information.” In fact, West Virginia’s legislature employs fewer than 350 permanent and legislative session staff to serve 100 delegates and 34 senators.

To bridge the gap, West Virginia, along with six other states, has adopted an approach to meeting legislators’ needs for expert scientific and technical information: connecting elected officials with science and technology policy fellows. The fellows are highly credentialed scientists, doctors, and engineers with training on communicating scientific information to policymakers. Their expertise can be called on by legislators, senate and assembly committees, and legislative research offices. (Some programs also offer state executive branch placements, which expand fellowship cohort sizes and operating revenue.) Fellows typically serve for one year in this public service role.

Over the past 15 years, with support from the Gordon and Betty Moore Foundation and others, legislatures as different as those in California, Connecticut, Idaho, Missouri, New Jersey, New York, and West Virginia have embraced science policy fellows as a way to provide access to scientific expertise. Each fellowship is uniquely structured to meet the needs, preferences, and procedures of its state legislature. For example, fellows may synthesize technical information, analyze bills, organize hearings, or draft publicly available memos to help decisionmakers better understand the available scientific evidence. Memos written for the Missouri and West Virginia legislatures take the form of science and technology notes—briefs on topics requested by state senators and representatives. Whether working directly with legislators, on committees alongside other staff and aides, or in legislative services offices that are accessible to entire chambers, science fellows add valuable capacity to existing legislative staffs and research offices—and often become trusted members of legislative teams. In all cases, legislators gain immediate access to science advisors

BY THE NUMBERS

The MOST Policy Initiative in Missouri

- Launched in 2019.
- Supported 13 fellows to serve legislators' needs.
- Fulfilled over 200 research requests (science notes) from state lawmakers from 2020 to 2022, touching over 150 bills in 2022 alone.
- Supported 43% of General Assembly members (of these, 62% were Republican and 38% Democrat).

Legislator testimonial: "Thank you very much for sharing these notes. They are well written, informative, easily understandable, and precisely what I was looking for."

The Eagleton Institute of Politics at Rutgers University Science and Politics Fellowship in New Jersey

- Launched in 2019.
- Placed 11 fellows in legislative offices.
- Supported analysis by fellows on eight broad scientific and technical issues including energy, environment, public health, and prisons.
- Reported that 50% of alums were hired full-time by their host offices.
- Secured additional financial support from the New Jersey legislature.

Legislative staff testimonial: "Eagleton Science Policy Fellows are an indispensable resource for our office. They come in and hit the ground running, advising on complex scientific policy issues, drafting legislation, and staffing legislative committees. After several years participating in the program, I don't know what we'd do without the fellows!"

who can help them prepare for policy discussions and craft or navigate pending legislation.

The fellowship program design also accommodates differences in legislative session schedules. Among the 50 states, only 10 have full-time legislatures. The remainder of the states and territories convene for only a portion of the year. But even when legislatures are out of session, having on-demand access to trusted science and technology policy fellows adds value because interim committees, study committees, and special committees continue convening to conduct research to inform the next legislative session.

Fellowships not only supply new talent to legislatures, but with each passing year, these programs increase the pool of scientifically trained policy professionals working in and around state capitols. Over half of the alumni from existing programs have been hired by the legislature or state agencies

upon conclusion of the fellowship, and nearly 90% of alums pursue a career that includes science policy.

As the benefits of fellowship programs compound over time within states, we see an opportunity to increase impact nationwide. As more states have adopted and customized the policy fellowship model, we recognized the benefit of program organizers and the fellows themselves learning directly from each other. In addition to its support for individual state programs, the Gordon and Betty Moore Foundation underwrites a peer-learning network of policy fellowship managers and enthusiasts to explore possibilities of crafting and expanding fellowship programs in additional states and territories. This effort is conducted by the National Conference of State Legislatures, which manages the network through its Center for Results-Driven Governing.

The Center for Results-Driven Governing awarded planning grants of \$100,000 to nonpartisan, nonprofit organizations in an array of states—Arizona, Colorado, Pennsylvania, Washington, and West Virginia in 2023, and Massachusetts, Michigan, Rhode Island, and Wisconsin in 2024—to provide resources for exploring the creation of fellowship programs in their capitals. These planning awards enable organizations to examine how scientific counsel is currently sought within a state; to ask decisionmakers what gaps they see in their access to scientific expertise; and to build coalitions of science-minded institutions across each state to demonstrate that these programs are of interest and value statewide. Planning awards are also used for strategy development and initial fundraising, though programs must raise additional resources to launch multi-year pilot efforts. The goal for most early-stage programs is to build toward hosting at least eight fellows per year. This cohort size can cover a broader range of scientific and technical topics to help meet demand, which in all states outstrips available supply.

A national network of fellowships in full- and part-time state and territory legislatures would provide a vital opportunity for policymakers and scientists to exchange information and questions. Together with state houses, the National Conference of State Legislatures, and fellowship program managers, we are working to build and sustain such a network.

The support that the Gordon and Betty Moore Foundation and other nonprofits have provided has enabled these programs to demonstrate their value. But to build a full national network of programs across all states and territories, additional support is needed. Critical policy decisions are made at the state level every day, and by bringing scientists and policymakers together in every state and territory, philanthropy can play a significant role in promoting access to trusted scientific information for policymakers across the United States.

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