

HYP_Link

US Government Proposed FY 2022 Budget Targets Increased Funding to Support Domestic Quantum Information Science

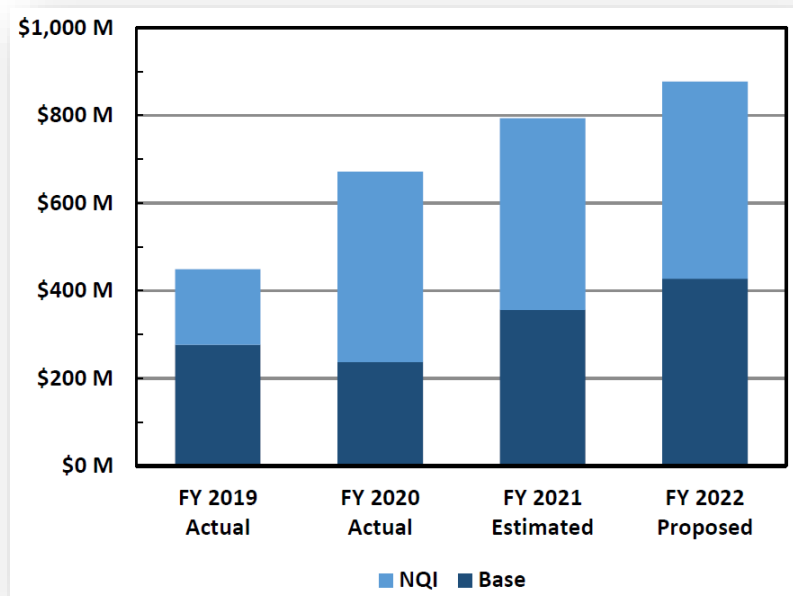
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RECENT DEVELOPMENT

The US Office of Science and Technology Policy recently released its second annual National Quantum Initiative (NQI) [report](#), a supplement to the President's FY22 Budget Request that outlines the major US government quantum information science (QIS) research activities and related funding levels out to FY 2022. As seen in Figure 1, the proposed FY2022 budget, which is targeted for about \$880 million, calls for an increase of nearly 11% from the previous year. Roughly half of the funding is to come from the NQI and the other half from base agency-specific QIS R&D budgets. The figure represents the sum of Federal budgets for U.S. QIS R&D efforts in over a dozen agencies including NIST, NSF, DOE, NASA, DOD, and DHS, and it also aggregates several QIS subtopics such as computing, networking, sensing, fundamental science, and end quantum-related use cases.

FIGURE 1

US Quantum Information Science Budgets FY 2019-2022



Source: US Office of Science and Technology Policy, 2021

ANALYST COMMENT

Despite continued technology advances in a wide range of quantum information sciences including quantum sensors, quantum computing, and quantum networking, the field remains one that relies heavily on external funding from either private or public sources. This most recent announcement by the US government demonstrates its clear and continued support for science-based QIS research as well as for important related US policy imperatives such as building a strong QIS workforce, engaging with the US quantum industrial base to help foster a vibrant ecosystem for innovation and product development, and maintaining a comprehensive QIS approach to realize US economic and national security benefits.

Success of these efforts will depend on the ability of the individual US government agencies to use both the NQI and base budgets to meet their specific agency mission requirements while ensuring that US government broader policy goals are implemented efficiently and are well organized across the participating agencies. Likewise, these efforts will be most beneficial only if US government efforts are in line with the technical and commercial vision of the US QIS commercial sector. On-going cooperative activities already built into many of the agency plans and budgets will go a long way in ensuring that happens.

Programs such as the NQI have become the sine qua non of national-level policy support to the nascent QIS sector, with almost every technologically advanced nation having stood up an NQI counterpart in the recent past. Continued strong and well-focused US government policy support will be necessary for at least the next few years to ensure that the US QIS sector can continue to play a leadership role in QIS technology development and the range of critical uses cases they enable.

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