7555-01-P

NATIONAL SCIENCE FOUNDATION

Agency Information Collection Activities: Comment Request; Grantee Reporting Requirements for NSF Regional Innovation Engines (NSF Engines) Program

AGENCY: National Science Foundation.

ACTION: Notice.

SUMMARY: The National Science Foundation (NSF) is announcing plans to establish this collection. In accordance with the requirements of the Paperwork Reduction Act of 1995, we are providing an opportunity for public comment on this action. After obtaining and considering public comment, NSF will prepare the submission requesting Office of Management and Budget (OMB) clearance of this collection for no longer than 3 years.

DATES: Written comments on this notice must be received by [**INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**], to be assured consideration. Comments received after that date will be considered to the extent practicable. Send comments to the address below.

FOR FURTHER INFORMATION CONTACT: Suzanne H. Plimpton, Reports Clearance Officer, National Science Foundation, 2415 Eisenhower Avenue, Suite E6400, Alexandria, Virginia 22314; telephone (703) 292–7556; or send e-mail to splimpto@nsf.gov. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including federal holidays).

COMMENTS: Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Foundation, including whether the information will have practical utility; (b) the accuracy of the Foundation's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways

to minimize the burden of the collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology.

SUPPLEMENTARY INFORMATION:

TITLE of COLLECTION: Grantee Reporting Requirements for the NSF Regional Innovation Engines (NSF Engines) Program.

OMB Number: 3145-NEW.

Expiration Date of Approval: Not Applicable.

Type of Request: Intent to seek approval to establish an information collection.

Proposed Project:

The CHIPS and Science Act of 2022 codified the National Science Foundation's cross-cutting Directorate for Technology, Innovation and Partnerships (TIP), NSF's first new directorate in more than 30 years, and charged it with the critical mission of advancing U.S. competitiveness through investments that accelerate the development of key technologies and address pressing national, societal, and geostrategic challenges.

The NSF Engines program was authorized in the CHIPS and Science Act of 2022 (Section 10388) to (1) advance multidisciplinary, collaborative, use-inspired and translational research, technology development, in key technology focus areas; (2) address regional, national, societal, or geostrategic challenges; (3) leverage the expertise of multidisciplinary and multi-sector partners, including partners from private industry, nonprofit organizations, and civil society organizations; and (4) support the development of scientific, innovation, entrepreneurial, and STEM educational capacity within the region of the Regional Innovation Engine to grow and sustain regional

innovation. The NSF Engines program serves as a flagship funding program of the TIP directorate, with the goal of expanding and accelerating scientific and technological innovation within the United States by catalyzing regional innovation ecosystems throughout every region of our nation.

In January 2024, NSF established 10 inaugural NSF Engine awards across 18 states, uniquely placing science and technology leadership as the central driver for regional economic competitiveness. By way of example, the NSF Engines: Colorado - Wyoming Climate Resilience Engine, led by Rocky Mountain Innovation Initiative Inc., aims to advance the region's research and commercialization efforts focused on sensing, monitoring and predictive analytic technologies for climate resiliency spanning methane emissions, soil carbon capture, earth sensing, water scarcity, wildfires and extreme weather. The focus on climate resiliency derives from several climate emergencies that have hit the area from unprecedented wildfires to devastating droughts and heatwaves, and will leverage the region’s robust startup ecosystem and research capacity. This Engine includes a large ecosystem of core partners that are essential to its success: large corporations; universities (including four- and two-year academic institutions, Tribal Colleges, and Hispanic-Serving Institutions); economic and workforce development organizations; non-profits; and investment firms. This diverse coalition of partners will be central to R&D, translation of technology to commercialization, and workforce development efforts.

Each Engine is focused on addressing specific aspects of a major national, societal and/or geostrategic challenge that are of significant interest in the NSF Engine’s defined ‘‘region of service.’’ The NSF Engines program envisions a future in which all sectors of the American population can participate in, and benefit from, advancements in scientific research and development equitably to advance U.S. global

competitiveness and leadership. The program's mission is to establish sustainable regional innovation ecosystems that address pressing regional, national, societal, or geostrategic challenges by advancing use-inspired and translational research and development in key technology focus areas. The programmatic level goals of NSF Engines are to:

Goal 1: Establish self-sustaining innovation ecosystems;

Goal 2: Establish nationally recognized regional ecosystems for key industries;

Goal 3: Broaden participation in inclusive innovation ecosystems;

Goal 4: Advance technologies relevant to national competitiveness;

Goal 5: Catalyze regions with nascent innovation ecosystems;

Goal 6: Increase economic growth;

Goal 7: Increase job creation.

To achieve these goals, each Engine will carry out an integrated and comprehensive set of activities spanning use-inspired research, translation-to practice, entrepreneurship, and workforce development to nurture and accelerate regional industries. In addition, each Engine is expected to embody a culture of innovation and have a demonstrated, intense, and meaningful focus on improving diversity throughout its regional science and technology ecosystem.

This request is to seek approval from OMB in establishing a new data collection pertaining to grantee reporting requirements for the NSF Engines program. The reporting requirements consist of: (1) Quarterly Reports; (2) a 5-year Strategic and Implementation Plan; and (3) Annual Evaluation Reports.

The *Quarterly Reports* will be required quarterly (every three months) with initial report due at month three (3); and the others at subsequent intervals of six (6) and nine (9). The report at month twelve (12) will cover the activities and outcomes for the entire year including the last quarter. The reporting will follow the same cadence until the end date of the project or the life of the award. NSF will use the collective Engine inputs from the reports in addition to the results of NSF's formal review of the required plans to determine eligibility for receiving the subsequent increment of NSF Engines funding. The *Quarterly Reports* contains 11 items, and grantees are required to include a brief description of the status with highlights of changes since the previous report and/or deviations from original plans outlined in the proposal. If there are no activities or outcomes to report for a certain item, the report shall note so for that item.

* i. **Governance and Management.** The staffing, activities, and effort associated with Governance and Management, e.g., hiring, restructuring.

* ii. **Progress on the Engine's Five-year Strategic and Implementation Plan's component plans.** Activities undertaken toward developing and/or modifying the required component plans should be described, in addition to implementation and notable outcomes for each.

* iii. **Budget Expenditures.** Summary of budget expenditures for the specified quarterly reporting period(s). The report should include the above information at the six-month and one-year mark, each covering the two preceding quarters. This should include any rebudgeting in excess of 15% of the original plan or $100,000, whichever is greater, by the awardee or sub-awardee organized by programmatic core functions, i.e., use-inspired R&D, workforce development, translation innovations to practice and subcategorized by NSF budget category (NSF form 1030). The cumulative amount

should be compared against the planned budget for each reporting period. Variances from plans, positive or negative, and mitigation steps if needed, should be discussed.

* iv. **Research Security.** Research security efforts of the lead organization and sub-awardee organizations pertinent to the activities on the Engine award, if any.

* v. **Cybersecurity Incidents.** Description of all reportable cybersecurity incidents pertinent to the activities on the Engine award.

* vi. **Infrastructure construction, operations and maintenance (O&M), and sustainability plan.** Includes all costs and activities related to building construction, design and engineering services, and on-site costs, e.g., prep costs including cleanup, legal services, etc. This also covers the development of shared research facilities, i.e., any facility that will not be used exclusively for Engine activities. The O&M and sustainability plan for infrastructure should be included in the third quarterly report, and changes reported routinely in subsequent ones.

* vii. **R&D, Translation and Workforce Development Projects.** This section should provide a status update of all Engine-funded projects and initiatives, reported against the initial project milestones and/or objectives as outlined in approved strategic and implementation plans, including any Project Funding Competition Plans. Include notable outcomes from these activities. This section should cover the selection and termination of projects during the reporting period.

* viii. **Risk Assessment and Monitoring.** Within sixty (60) days of the award start date, a comprehensive formal risk assessment should be performed of the Engine using widely accepted standards with detail captured in a risk register, specifically any key risks identified and how those risks plan to be addressed, e.g., mitigate, transfer,

eliminate, accept. Status reporting of the identified risks shall be included in the quarterly reports to NSF.

* ix. **Core partners.** This section should document the changes to the set of core partners and any changes in the nature of the core partners' activities and commitments to the Engine.

* x. **Commitments and Resources.** This section should describe changes in commitments and resources made available to Engine activities by non-NSF sources. Include new commitments of cash and in-kind resources by such sources during this period, and the quantitative impact of these commitments to the three Engine core functions (use-inspired R&D, Translation, and Workforce Development).

* xi. **Progress of Meeting Award-Specific Terms and Conditions.** Each Engine award has a list of terms and conditions that are specific to the given award. In this section, Engines will describe progress on these items since the last reporting period.

The *Five (5)-year Strategic and Implementation Plan* shall be comprised of component plans (7) listed below. Each shall be tailored to the Engine's mission, operating structure, and region of service and cover the specified topical areas. Component plans must be submitted for NSF approval. The Component Plans should only be submitted once they are in a final form and ready for approval. After a plan has been submitted, NSF may review and provide feedback on the plan document, typically within sixty (60) days of submission. The awardee may be requested by NSF to revise and resubmit the plan, incorporating such feedback. NSF reserves the right to potentially continue this iterative process until 16-months post award start date, at which point the last submitted component plan will be deemed as the final version of the

document that NSF shall consider for approval in line with the program goals. A more detailed set of expectations for each deliverable will be provided by the Program Officer post award.

- i. Engine Vision and Mission Statements (month 4)
- ii. Governance and Management
    - Governance and Management Plan (month 4)
    - Partnership Agreement (month 4)
    - Workforce Development Agreement (month 16)
    - IP Management Plan (month 4)
    - Financial and Resource Sustainability Plan (month 16)
- iii. Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analyses for R&D and Translation, Workforce Development, and Inclusive Engagement (month 4)
- iv. Strategic Plans
    - For R&D and Translation (month 9)
    - For Workforce Development (month 16)
    - For Inclusive Engagement (month 12)
- v. Implementation Plans
    - For R&D and Translation (month 12)
    - For Workforce Development (month 16)
    - For Inclusive Engagement (month 12)
- vi. Evaluation Plan (month 9)
- vii. IP Agreements (month 10)
- viii. Benchmarks; Baselines; Specific, Measurable, Achievable, Relevant, and Timely (SMART) Objectives and Targets

- For R&D and Translation (month 12)
- For Workforce Development (month 16)
- For Inclusive Engagement (month 16)

Engines awardees will publicly disseminate the following within 1 month of approval by NSF: a public version of their SWOT analyses; strategic plans; and implementation plans.

The first *annual evaluation report* is expected at month 18 from the award start date, and then annually thereafter for the life of the award. The report is prepared and submitted to NSF by an external evaluation team required of each Engine award. The report discusses progress relative to the milestones, baselines, benchmarks, objectives, and targets as listed in the corresponding 5-year strategic and implementation plan. The evaluation reports provide an objective and independent assessment of how each Engine is performing relative to their goals and milestones, and are not subject to approval by Engine awardees.

Information gathered will be used for the dual and interrelated purposes of disseminating information about the NSF Engines program and using this information to make programmatic improvements, efficiencies, and enhanced program monitoring for NSF Engines. Feedback collected under this clearance provides useful information for the continued evolution of the NSF Engines program. The collective reporting requirements will help TIP monitor the progress of individual Engines, identify trends over time, assess overall program performance.

Burden on the Public:

For each Engine award, we anticipate the following number of responses and response burden by reporting requirement:

Reporting requirement	**Number of responses (per year)**	**Frequency of data collection**	**Approximate lower bound response burden (hours)**	**Approximate upper bound response burden (hours)**
Quarterly progress report	4	Quarterly	40	80
Five-year strategic and implementation plan	1	Once a year	Year 1: 1,040	Year 1: 10,400
			Year 2: 80	Year 2: 160
			Year 3: 80	Year 3: 160
Annual evaluation report	1	Once a year	200	1,040

We estimated that, on average, each of the **twenty components** of the Five-year Strategic and Implementation Plan could take up to 520 hours to complete, hence the upper bound estimate of 10,400 hours per Engine. We also anticipate that each component of the Plan will be developed and completed by multiple and various team members within an Engine.

In addition, the upper bound estimate for the annual evaluation report reflects not only the effort for writing the report but also account for data cleaning, data analysis, and data visualization. We anticipate that the burden for subsequent years to be lower as workflow and cadence will be established after the first year.

A total of 10 Engine teams were awarded. For the first year, the total amount of burden estimated is between 1,280 and 11,520 hours per Engine. For subsequent years, 320 and 1,280 hours.

Dated: March 19, 2024.

Suzanne H. Plimpton,

Reports Clearance Officer,

National Science Foundation.

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