

August 15, 2024

NEx Request for Proposals Notice

NEx encourages you to submit proposals focused on the topic described below:

NEx RFP Id: SG25.06

Proposal Title: Develop Design Guidelines for Non-Metallic Tendons and Ropes in Pre-Stressing and Post-Tensioning Systems

Background

The use of non-metallic (NM) materials, such as fiber-reinforced polymers (FRPs), for reinforcement in concrete structures has gained significant interest due to their superior mechanical properties, resistance to corrosion, and potential to enhance the service life of concrete infrastructure. While significant advancements have been made in this area, including the NCHRP 12-97 project and the 2004 ACI 440.4R-04 report, there remains a critical need for an up-to-date, comprehensive set of guidelines specifically addressing the use of NM tendons and ropes in pre-stressing and post-tensioning applications. It is recognized that the ACI 440-I subcommittee is currently revising its report with plans to convert it into a design guide. However, given the rapid evolution in the use and understanding of these materials, there remains a need for complementary work that can accelerate the creation of design guidelines and examples, ensuring that the latest findings are quickly integrated into practice.

Proposal Request

There is a noticeable gap in standardized design guidelines for non-metallic tendons and ropes used in pre-stressing and post-tensioning systems. This lack of standardization limits the broader application of these materials and prevents engineers from fully utilizing their benefits.

NEx is seeking proposals to develop detailed design guidelines, including design examples, that address this gap and are responsive to the evolving needs of the industry. These guidelines will be positioned to complement ongoing efforts by ACI 440 and can be reviewed for potential adoption by the committee. The aim is to find a qualified entity capable of delivering timely, actionable guidance that aligns with both current and future industry demands for NM tendons and ropes in pre-stressing and post-tensioning systems.

NEx Mission Statement

Collaborate globally to expand and accelerate the use of nonmetallics in the built environment to drive innovation, research, education, awareness, adoption, and deployment.

NEx is committed to achieving its mission through Research and Development, Standards and Guidelines, Professional Development, and Advocacy and Awareness.

Funding Policy

NEx will impose a limit of 15% on indirect costs (overhead) by project organizations for any project it funds. The organization must waive the remainder of the indirect costs.

Award Amount

NEx does not impose any limit on the overall funding request; however, the anticipated budget for this project is to be around \$30,000 to \$50,000. Proposals with higher budget estimate will be accepted with information on budget spending relevant to the value added to the project scope. Co-funding and co-sponsoring proposals with other organizations are welcomed.

Proposal Evaluation

NEx project proposals will be evaluated by the NEx Steering Committee. A winning proposal will be forwarded to the NEx Board of Directors with recommendations for funding.

Proposal evaluation criteria will include technical content, methodology, PI's relevant experience, potential impact/ industry adoption, budget and time, proposed deliverables, and outcome. Typically, NEx funded project duration ranges from 6 to 24 months.

Awarded Proposals

The awarded proposal is expected to commence within the first quarter of 2025

- NEx will enter into a contract with the awarded entity. As part of the contract, it is mandated that the overhead or indirect return be set at no more than 15% of the direct cost of the project funding requested from NEx. Any overhead over the maximum allowed 15% that is waived by the awarded entity shall be considered as cost sharing and shall be indicated on the budget table as waived overhead, separate from other co-funding. Non-compliant proposals in this regard shall be returned without review.
- The schedule of payments contingent upon milestone deliverables will be contained in the contract and will include, at a minimum, a final report deliverable to NEx. Quarterly progress reports will be identified in the final contract.
- If principal investigators (PI) from two organizations are collaborating on the project, the award must be to a single organization, which will then subcontract with the second organization.
- NEx will only consider funding projects that involves the use of proprietary products if the goal of the project is to advance knowledge in a particular area of study and not solely on a proprietary product.
- In case of any co-funding arrangement with other organization(s), commitment letter(s) from co-funding organization(s) is required before funds are dispersed from NEx.
- The results of NEx-funded project will be owned by NEx, and possibly by other co-founding organization(s). PI should notify NEx before publishing any results.

Where and How to Submit Proposals

Submitted proposals will be evaluated by the NEx Steering Committee and subject matter experts. Anyone who evaluates a proposal is required to agree and abide by NEx policies on confidentiality and conflict of interest.

Please email the proposal and supporting information to info@nonmetallic.org, by end of the day, **October 7, 2024**. The email subject line and file name shall include project ID (see top of page 1) and the name of the proposing organization (For example: "RD24.xx University of xyz").

If you have any questions regarding the proposal requirements or process, please contact NEx Technical Director, Aparna Deshmukh (aparna.deshmukh@nonmetallic.org).

Proposals submitted to NEx shall be provided in **one unprotected PDF** using [NEx provided template](#).