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Dear Department Heads,

We are writing to let you know in advance of a new climate-related research activity that may be of interest to your faculty.

The *Climate Grand Challenges* program is intended to focus the best efforts of our diverse and multidisciplinary community and our partners on pursuing and implementing solutions to some of the most difficult and highest-impact research problems related to climate change mitigation and adaptation, and to do so on an accelerated basis. It is one of several next steps for MIT as the 5-year Climate Action Plan reaches its conclusion this year, and it is designed to complement and enhance the work of the existing units at MIT which are pursuing climate science and solutions as a core part of their mission.

The targets of *Climate Grand Challenges* will be: (1) problems whose solutions have the potential to achieve major progress in either mitigation or adaptation globally within a few decades; and (2) strategically important scientific problems whose solutions will enable quantification of climate risks and the ability to weigh these risks against the costs of mitigation and adaptation. *Climate Grand Challenges* will focus on those problems where progress depends on the advancement and application of frontier knowledge in the physical, life, and social sciences and/or the implementation of cutting-edge technologies.

The ultimate goal is to develop the teams and the resources needed for about five large-scale, multi-year ‘grand challenge’ projects that have the potential to move the needle on the world’s response to the climate emergency and that draw on MIT’s particular strengths and comparative advantages in forefront research and innovation.

In the first part of this program, we are inviting all MIT PIs to contribute to the development of possible grand challenge projects. The process will proceed in two phases: (ii) submission, refinement, and evaluation of Letters of Interest (two pages); and (ii) invited submission of full White Papers, each articulating a grand challenge research problem and a plan for solving it.

We expect the official MIT call to be announced during the week of July 20th. The initial letters of interest will be due mid-August with the White Paper invitations announced in early November. Please feel free to give the faculty in your Department a heads up that this is coming their way soon.

We recognize of course that this is not the best moment to launch a new program. But before the pandemic there was no greater priority for the MIT community than to work towards solutions to the climate challenge, and that challenge will still be with us after the virus is in check. We cannot afford to put our efforts to address it on hold.

We hope that some of your faculty will find interest in this call.

Best wishes,

— Richard Lester and Maria Zuber

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