

1. Q: Why was my pre-application “discouraged”?
A: Because it was assessed to “out of scope” of the FOA.
2. Q: If my pre-application was “discouraged” does this mean I may not submit an application?
A: Yes, “Only those applicants that receive notification from DOE encouraging a formal application may submit full applications.”
3. Q: Do I need to pick one element area of focus for my application (SciDAC, Variability and Change, or Long-timescale climate modeling)?
A: Yes, please choose the one element area that your application targets most strongly, and specify this in the cover page material.
4. Q: What are the most essential aspects of a “SciDAC” application?
A: Successful SciDAC applications:
 - i. must include development of the CESM
 - ii. will usually involve “...collaborations between climate and computational experts in order to foster innovative methods in climate modeling. A SciDAC project must therefore include both climate model development and some combination of the following: optimization of code performance for DOE Leadership Class Facilities, algorithm improvements, software engineering upgrades, or the use of advanced methods such as uncertainty quantification to test the codes and climate systems (validation and verification)
 - iii. must include plans for testing and validation with observations
5. Q: What are the most essential aspects of a “Variability and Change” application?
A: Successful Variability and Change applications:
 - i. Must be responsive to one of the following criteria (from the FOA):
 - Analysis that enhances understanding and predictability of modes of Natural Climate Variability (ranging from intraseasonal to multi- decadal): Activities that focus on the identification, evaluation, and understanding of these modes, (e.g., MJO, ENSO, PDO, and AMO, as well as interactions among these modes) and how these may change in a changing climate, as evidenced in coupled model simulations, are encouraged.
 - Detection and Attribution studies in different components of the climate system, including the oceans, atmosphere, terrestrial system and the cryosphere: A focus on variables other than surface temperature and a focus on regional spatial scales that are important for climate change impacts are encouraged.
 - Simulation of Climate Extremes under a Changing Climate: Applications that focus on understanding and simulating processes that influence the statistics of extreme events (e.g., modulation of statistics of floods and/or droughts due to the phase of natural modes of variability or a focus on multivariate extreme events) are solicited. The aim of this research is to better quantify the frequency, duration, and intensity of extreme events

under climate change and elucidate the role of climate variability in modulating extremes.

- Uncertainty quantification methods to guide model development, gauge model improvement, and establish confidence in model projections. Quantification of uncertainties that help in the assessment of climate change projections is solicited as part of this FOA. The following topics are particularly encouraged: robust techniques for discarding or including certain model simulations, and theoretical understanding leading to increased reliability of climate change projections.
 - Development of systematic model evaluation metrics in support of at least one of the following: Metrics to evaluate variability and change, multi-model test-bed tool construction, or for CESM testing (linking to the SciDAC element above). As climate models become increasingly complex, it is important to develop metrics to objectively evaluate the performance of climate models as whole and also evaluate the individual components (such as oceanic, terrestrial, land-and-sea ice, and atmospheric). Applications that develop a suite of metrics for individual components or a suite of components that can be used in Ultrascale Visualization - Climate Data Analysis Tools (UVCDAT: <http://uv-cdat.llnl.gov/>) are encouraged.
- ii. Applications using regional models must include comparison with the CESM. **See the paragraph discussing**, “Within this solicitation, the emphasis for RGCM support is on understanding climate, climate variability, and change.... Studies using regional models must include a comparison to CESM.”
 - iii. Applicants responding to the “model evaluation metrics” component should emphasize the unique value that the diagnostic value that **metrics provide in evaluating climate models**. Development of data sets will not be considered responsive to this topic.
 - iv. Projects are encouraged to use the latest set of **Coupled Model Intercomparison Project (CMIP5) simulations or other sensitivity studies involving state-of-the science coupled climate and Earth system models and/or regional climate models. Studies using regional models must include a comparison to CESM.**”
6. Q: What are the most critical aspects of a “Long-timescale” application?
A: Successful Long-timescale applications will usually involve “paleoclimate simulation to develop, test and improve model representation of climate systems” and will include both a plan to test and to improve the simulation.
 7. Q: Is it permitted to be PI on more than one application?
A: It is permitted, but given the large number of expected applications, we urge PI’s to develop and submit no more than one application.
 8. Q: Are changes in personnel and budget from the pre-application to the application permitted?

A: Yes, minor changes are possible, as long as the focus of the pre-application remains. Be sure to list all expected (reviewer) conflicts for all budgeted personnel in the application.

9. Q: For multi-institutional applications, must each institution submit an application, or are subawards permitted?

A: Either way is possible. See p18 for instructions on collaborative submissions. See p26 for subaward budget information. Note that Laboratory collaborators, if funded, are funded directly from DOE (see also Q15).

10. Q: For multi-institutional applications, is a budget table essential and where should it appear?

A: Yes, “In simple tabular form, provide a high-level summary of the proposed annual budget for the project for each collaborating institution, including the lead institution. Budget information should be presented as both annual funding and the cumulative funding over the total award period.” This should appear as a supplement to the cover page, with other collaboration information (see pages 18-19).

11. Q: If a collaborative university institution would receive funding through a subaward, does it need to submit a proposal?

A: No.

12. Q: Should we repeat the list of conflicted collaborators in the application?

A: Yes

13. Q: How important is collaboration with DOE Laboratory scientists for application success?

A: The most competitive proposals, particularly for “SciDAC” and “Variability and change” will “include collaboration with DOE-Laboratory scientists (as evidenced by letter of collaboration).” These collaborators may or may not receive funding (up to 20% total from all Lab collaborators).

14. Q: Are letters of collaboration required for all collaborators, funded and unfunded, Laboratory and non-Laboratory?

A: A letter of collaboration is encouraged for all unfunded collaborators (p16), particularly for Laboratory collaborators.

15. Q: For Laboratory collaborators, should the Laboratories submit through Grants.gov as well as the Searchable FWP?

A: As with other collaborators, DOE Laboratories and Federal Agency collaborators should submit a proposal through Grants.gov, including identical title, proposal, but distinct budget information. An FWP submission will be requested by DOE from DOE National Laboratories only if the application is selected for funding.

16. Q: The FOA calls for a supplement to the cover page summarizing the project structure for collaborating institutions (p19); the FOA also calls for a project management plan (p6). Are these the same thing?
A: No, the project management plan (p6) should provide additional detail on how the project will be organized and managed. This should be included as part of the proposal narrative. “Collaborating teams must identify a management structure that enables an effective collaboration between the scientists involved in the proposed work. The management structure must be sufficiently flexible to adapt quickly to changing technical challenges and scientific needs. Applicants leading collaborating teams responding to this FOA will provide a one-page management plan to identify the roles and responsibilities of the key leadership personnel involved in the research.”
17. Q: Is a data sharing policy essential?
A: Yes
18. Q: Is it required to summarize previous research?
A: Yes, if the applicants have received funding during the past 5 years from either ESM or RGCM “The results should be included as an appendix to the application titled “Progress from DOE funded research” and should not exceed four pages. This section should be located in the Appendix and will not count towards the 20 page limit of the Project Narrative. The unique scientific contribution of prior work and the list of publications that acknowledged the DOE-funding received should be highlighted as part of this section. The 5-year period of funding under consideration includes no-cost extensions.
19. Q: Which program manager should I contact with questions?
A: For questions on a SciDAC application, contact Dorothy Koch (Dorothy.Koch@science.doe.gov). For Variability and Change application questions, contact Renu Joseph (Renu.Joseph@science.doe.gov). For Long-term climate modeling, either program manager would work, although those involving significant model development should address Dr. Koch, and those involving mainly model analysis should contact Dr. Joseph.
20. Q: Does the technical page limit (20 pages) include figures, captions, and references?
A: Figures and captions but not references (p 19 of the FOA).
21. Q: What is the smallest size font and line spacing I can use?
A: 11 point font; no restrictions on line spacing (p 19 of the FOA)
22. Q: I saw this on your web site <http://science.energy.gov/grants/policy-and-guidance/full-funding/>. Would this affect me?
A: Yes, the Office of Science at DOE will be fully funding awards that are less than \$1M. The implication is that: “The Office of Science anticipates that applications for new and renewal grants and cooperative agreements will be awarded at reduced success rates over the next three to five years. After this transition period, success rates should return to historic norms.”

23. Q: What criteria will be used to review our proposals?
A: Please check section V A (5 a) of the FOA on pages 32 and 33.
24. Q: For multi-institution submission a supplement to the cover letter is requested. The information required for the supplement cannot fit in one page; what is the limit of pages for this supplement?
A: Please use the minimum space required to convey the requested information.
25. Q: What is the process for requesting computer time to execute experiments with the CCSM4/CESM1?
A: Successful PI's are eligible to apply for computer time on NERSC. See <http://www.nersc.gov/users/accounts/allocations/overview/>
26. Q: Is there any specific format for the data policy section? Can the critical data be stored on DoE public accessible sites?
A: There is no special format. Follow instructions on pages 5 and 6 of the "Data Sharing Policy" section. If there are unique simulations being conducted that will be useful to the community, we will try and provide a more prominent home for it on the Earth System Grid Federation (ESGF).
27. Q: I don't have any established DOE collaborators, and given the short notice it may be difficult to find one, and so I wanted to have your thoughts on how damaging this would be to our proposal.
A: We encourage collaboration with DOE labs. However, your proposal will not be considered uncompetitive if you do not have collaborators.
28. Q: Where may I learn more about the DOE Laboratory projects with which my project could potentially engage?
A: <http://www.climatemodeling.science.energy.gov/news/joint-funding-opportunity-announced-esm-and-rgcm>
29. Q: Can Federal Agencies receive funding through a subaward from a University?
A: No, Federal Agencies must be funded from DOE through an interagency funds transfer.