



California Energy Commission Research & Development

Natural Gas Sector Climate Resilience

Request for Comments on a Draft Solicitation

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Why Are We Seeking Your Input?

- In November we anticipate releasing a Grant Funding Opportunity (GFO) that would support up to \$1.36 M of research to foster natural gas sector resilience. *Natural gas sector resilience* will be part of a GFO including other topics. Please review our upcoming list-serv notices carefully so as not to miss this.
- May 22, 2019 Workshop: <https://ww2.energy.ca.gov/research/notices/#05222019>
Gathered input from IOUs, ratepayers, the research community, and other stakeholders to help focus on areas where research can have the most impact.
- Asking for input to ensure research is contributing to needs and complementary to ongoing efforts.



Webinar set-up

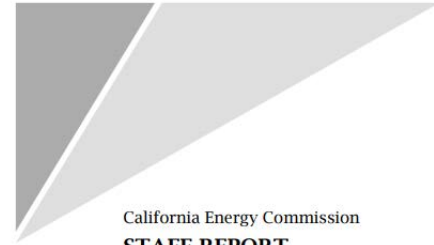
- Introduce the draft Grant Funding Opportunity (GFO) solicitation.
- Solicit oral and written comments from interested parties on the planned grant solicitation.
 - Unnecessary duplication of others' research?
 - Suggestions for refinement or improvement of research topic to have a greater impact?



Natural Gas Research & Development Program

The Energy Commission's Natural Gas Research and Development Program FY 2018-19 funding plan includes research regarding **"Fostering Natural Gas Sector Resilience"** (pp. 43-44) to:

- Address issues germane to California's natural gas sector and not otherwise addressed.
- Benefit natural gas ratepayers by providing foundation for improved adaptation planning and practice.



California Energy Commission
STAFF REPORT

Natural Gas Research and Development Program

Proposed Program Plan and Funding Request for
Fiscal Year 2018-19

California Energy Commission
Edmund G. Brown Jr., Governor



March 2018 | CEC-500-2018-006

<https://www.energy.ca.gov/2018publications/CEC-500-2018-006/CEC-500-2018-006.pdf>



Goal of GFO

- Expand understanding of historical climate data at fine resolution...
 - to develop better informed models of future projected climate; and
 - with a focus on parameters relevant to California's investor owned natural gas utilities (IOUs).

- Contribute to improved methodologies for assessing risks to the natural gas system...
 - in collaboration with IOUs; and
 - for benefit of ratepayers.

Research will (1):

- Enable identification and attribution of trends driven by climate change
- Consider changes in risk of weather-related events
 - Drivers of subsidence, landslides, wildfire, etc.
- Consider changing risk of compounding extreme weather events
 - E.g. flash floods related to atmospheric river precipitation

Research will (2):

- Provide methodological foundation for recreating climate and hydrological data for California
 - Improving statewide historical dataset
 - Temporally and spatially
 - Tuned to parameters prioritized by natural gas sector IOUs
- Provide input to improving California's high-resolution climate projections
 - Leveraging international research (such as CMIP6)
 - Providing basis to meet IOUs' needs



Projects must fulfill one or more key objectives:

1. Development of historical climate data describing California's climate
2. Development of improved methodologies for assessing risks of compounding events
3. Development of improved methodologies for understanding the underlying dynamics that govern climate-related impacts



Objective #1:

Development of historical climate data describing California's climate that is:

- At high spatial resolution (e.g. 2 kilometer)
- At high temporal resolution (e.g. hourly)
- "Tuned" to parameters prioritized and needed by natural gas sector IOUs

Successful proposal must address one or more of three specific objectives.

Objective #2:

Development of improved methodologies for assessing risks of compounding events, which help understanding of changes in that risk

- e.g., the sequence of events that led to the debris flow in Montecito, January 2018

Successful proposal must address one or more of three specific objectives.



Objective #3:

Development of improved methodologies for understanding the underlying dynamics that govern climate-related impacts to the natural gas system.

These will support:

- Asset-level vulnerability assessments
- Cost-benefit assessment of resilience investments

Successful proposal must address one or more of three specific objectives.

Preference for Projects:

- That produce ready-to-use results for:
 - Stress-testing resilience of the natural gas system
 - Testing preparedness of the natural gas sector to withstand major weather-related shocks in the short- and longer-term
- That contribute to disentangling long-term trends associated with global climate change from trends attributed to other factors



Next Steps

Step	Anticipated Date
Comment period ends	October 7, 2019
GFO released	Early November 2019
Applications due	December 2019
Notice of proposed award	January 2020
Agreement to Business Meeting	April 2020
Agreement Start date	Mid Q2 2020
Agreement End date	Early Q1 2024



Discussion Questions

- Do any of the topics unnecessarily duplicate research being done by others?
- Can the proposed research topic be refined or otherwise improved to have a greater impact? If so, what specific suggestions would you make?



Thank You!

Please submit your comments by October 7, 2019

- Submit electronically through the Energy Commission's "Research Idea Exchange" docket: <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01>
- Or by email to the Docket Unit at: docket@energy.ca.gov
- Or by paper copy to the Docket Unit: California Energy Commission || Docket Unit, MS-4 || Re: Docket No. 19-ERDD-01 || 1516 Ninth Street || Sacramento, CA 95814-5512

Visit <https://ww2.energy.ca.gov/research/notices/#09302019> to view the webinar notice, presentation, and WebEx Recording (*forthcoming*).