

CONTRACT REQUEST FORM (CRF)



A) New Agreement 700-18-005 (To be completed by CGL Office)

700 Siting Transmission Environmental Protection	Joseph Merrill	16	916-651-9005
--	----------------	----	--------------

California Public Utilities Commission	-
--	---

CPUC - CEC Interagency Agreement #2

1 / 9 / 2019	6 / 30 / 2022	\$ 1,000,000
--------------	---------------	--------------

- Operational agreement (see CAM Manual for list) to be approved by Executive Director
- ARFVTP agreements \$75K and under delegated to Executive Director.

Proposed Business Meeting Date	1 / 9 / 2019	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Al Alvarado	Time Needed:	5 minutes

Please select one list serve. Select

Agenda Item Subject and Description

CALIFORNIA PUBLIC UTILITIES COMMISSION AGREEMENT. Proposed resolution approving Agreement RMB700-18-005 between the California Energy Commission and the California Public Utilities Commission (CPUC) to reimburse the Energy Commission up to \$1 million to provide the CPUC with Energy Commission staff expertise for technical consulting services to support electricity and natural gas system modeling and analysis, and related activities.

1. Is Agreement considered a "Project" under CEQA?
 - Yes (skip to question 2)
 - No (complete the following (PRC 21065 and 14 CCR 15378)): Explain why Agreement is not considered a "Project": Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because Agreement will not cause a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because Agreement involves staff services for technical studies and the outcome will be reports and transfer of knowledge..
 2. If Agreement is considered a "Project" under CEQA:
 - a) Agreement **IS** exempt. (Attach draft NOE)
 - Statutory Exemption. List PRC and/or CCR section number: _____
 - Categorical Exemption. List CCR section number: _____
 - Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section: _____
 - b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
- Check all that apply
- | | |
|---|---|
| <input type="checkbox"/> Initial Study | <input type="checkbox"/> Environmental Impact Report |
| <input type="checkbox"/> Negative Declaration | <input type="checkbox"/> Statement of Overriding Considerations |
| <input type="checkbox"/> Mitigated Negative Declaration | |

Legal Company Name:	Budget	SB	MB	DVBE
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legal Company Name:

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION



J) Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
Funding Source	FY 2018-19	901	\$130,000
Funding Source	FY 2019-20	901	\$290,000
Funding Source	FY 2020-21	901	\$290,000
Funding Source	FY 2021-22	901	\$290,000
Funding Source			\$
R&D Program Area:	Select Program Area	TOTAL: \$1,000,000	
Explanation for "Other" selection		Energy Commission is the payee and will receive reimbursement from CPUC.	
Reimbursement Contract #:		Federal Agreement #:	

K) Contractor's Administrator/ Officer				Contractor's Project Manager			
Name:	Joseph Merrill			Name:	Al Alvarado		
Address:	1516 9 th St.			Address:	1516 9 th St.		
City, State, Zip:	Sacramento, CA, 95814			City, State, Zip:	Sacramento, CA, 95814		
Phone:	916-651-9005	Fax:	- -	Phone:	916-654-4749	Fax:	- -
E-Mail:	joseph.merrill@energy.ca.gov			E-Mail:	al.alvarado@energy.ca.gov		

L) Selection Process Used (For amendments, address amendment exemption or NCB, do not identify solicitation type of original agreement.)	
<input type="checkbox"/> Solicitation	Select Type Solicitation #: - - # of Bids: Low Bid? <input type="checkbox"/> No <input type="checkbox"/> Yes
<input type="checkbox"/> Non Competitive Bid	(Attach CEC 96)
<input checked="" type="checkbox"/> Exempt	Interagency

M) Contractor Entity Type
<input type="checkbox"/> Private Company (including non-profits)
<input checked="" type="checkbox"/> CA State Agency (including UC and CSU)
<input type="checkbox"/> Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

N) Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
If yes, check appropriate box:	<input type="checkbox"/> SB <input type="checkbox"/> MB <input type="checkbox"/> DVBE

O) Civil Service Considerations
<input checked="" type="checkbox"/> Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)
<input type="checkbox"/> Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)
<input type="checkbox"/> The Services Contracted:
<input type="checkbox"/> are not available within civil service
<input type="checkbox"/> cannot be performed satisfactorily by civil service employees
<input type="checkbox"/> are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.
<input type="checkbox"/> The Services are of such an:
<input type="checkbox"/> urgent
<input type="checkbox"/> temporary, or
<input type="checkbox"/> occasional nature
that the delay to implement under civil service would frustrate their very purpose.
Justification:

P) Payment Method
<input checked="" type="checkbox"/> A. Reimbursement in arrears based on:
<input checked="" type="checkbox"/> Itemized Monthly <input type="checkbox"/> Itemized Quarterly <input type="checkbox"/> Flat Rate <input type="checkbox"/> One-time
<input type="checkbox"/> B. Advanced Payment
<input type="checkbox"/> C. Other, explain:

Q) Retention	
1. Is Agreement subject to retention?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
If Yes, Will retention be released prior to Agreement termination?	<input type="checkbox"/> No <input type="checkbox"/> Yes



R) Justification of Rates

The Energy Commission will be reimbursed for the actual cost of Energy Commission staff time working on technical support to CPUC.

S) Disabled Veteran Business Enterprise Program (DVBE)

1. Exempt (Interagency/Other Government Entity)
2. Meets DVBE Requirements DVBE Amount:\$ 0 DVBE %: _____
 Contractor is Certified DVBE
 Contractor is Subcontracting with a DVBE: Name of DVBE Company
3. Contractor selected through CMAS or MSA with no DVBE participation.
4. Requesting DVBE Exemption (attach CEC 95)

T) Miscellaneous Agreement Information

1. Will there be Work Authorizations? No Yes
2. Is the Contractor providing confidential information? No Yes
3. Is the contractor going to purchase equipment? No Yes
4. Check frequency of progress reports
 Monthly Quarterly Other... _____
5. Will a final report be required? No Yes
6. Is the Agreement, with amendments, longer than a year? If yes, why? No Yes
 Interagency Agreement for CEC to provide technical support to CPUC as needed.

U) The following items should be attached to this CRF (as applicable)

- | | | |
|---|---|--|
| 1. Exhibit A, Scope of Work | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 3. CEC 96, NCB Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 4. CEC 95, DVBE Exemption Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEQA Documentation | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 6. Resumes | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 7. CEC 105, Questionnaire for Identifying Conflicts | | <input checked="" type="checkbox"/> Attached |

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

CPUC – CEC INTERAGENCY AGREEMENT #2
SCOPE OF WORK
EXHIBIT A

This agreement (“Agreement”), with a total amount of \$1,000,000, provides California Energy Commission (“CEC”) staff expertise to the California Public Utilities Commission (“CPUC”) for technical consulting services required for resource planning studies, energy infrastructure project evaluations subject to regulatory jurisdiction of the CPUC and support for Federal Energy Regulatory Commission (FERC) proceedings and mandated stakeholder processes. Technical services will include electric power flow and natural gas system simulation modeling studies, production cost modeling, substation short circuit analyses, assessment of need, alternatives and costs of transmission projects, evaluations of regional and local area reliability implications, including North American Electric Reliability Corporation (NERC) reliability standards related to physical and cyber security, land use and environmental review of proposed infrastructure projects to determine permitting feasibility, system operational and market information sharing and analysis, distributed energy resources planning, expert witness support, and application of Geographic Information System (GIS) tools for mapping requirements; these services are expected to be conducted pursuant to all governing laws and regulations, including the Public Utilities Code, the Federal Power Act, and the CPUC’s Rules of Practices and Procedures.

RETAINER AGREEMENT

This is a no-fee retainer Agreement. The CEC will be held on retainer and no work shall be undertaken unless agreed to by both parties through a Work Authorization. The CPUC Project Manager (“PM”), who may vary from project to project, shall prepare and issue the written Work Authorizations, prepare a scope of work (in consultation with the CEC staff) and shall set a budget and schedule for the work to be performed. This Interagency Agreement Scope of Work (“Scope of Work” or “SOW”) includes a non-exclusive description of general tasks that the CEC may be asked to perform; project-specific activities will be detailed in each Work Authorization.

TASK SUMMARY

This Scope of Work includes a broad approach to the Energy Commission’s environmental, energy infrastructure and electric system review. The following tasks may be included in the Project Specific Work Authorization(s):

- Task 1: Transmission network studies
- Task 2: Electricity system analysis
- Task 3: Land use and landscape scale environmental evaluations
- Task 4: Provide Geographic Information System (GIS) services
- Task 5: Cartography services
- Task 6: Natural gas supply and infrastructure evaluations
- Task 7: Levelized cost of generation evaluations

- Task 8: Sharing information databases
- Task 9: Distributed Energy Resources Planning
- Task 10: Expert Witness Services

Task 1: Transmission Network Studies

Provide transmission network studies (power flow modeling simulations) to evaluate reliability implications of proposed transmission infrastructure projects and alternatives. Work Authorizations for this task may include, but are not limited to, the following activities:

- Perform contingency and reliability related studies of the electricity transmission system.
- Verify applicant power flow modeling analyses including identification of critical contingencies and potential mitigation solutions for transmission reliability issues.
- Perform production cost modeling to assess electric production costs and reliability consequences.
- Perform substation short circuit analyses.
- Assess project, transmission system needs, alternatives, and costs of electric transmission projects whether approved in the California Independent System Operator (CAISO) Transmission Planning Process (TPP), authorized by the CPUC, or self-approved by the utilities.
- Assess physical and cyber security of transmission facilities according to NERC reliability standards.
- Examine alternative system conditions.
- Perform studies on one or more parts of the output from production cost modeling analyses to assess how changes to the generation dispatch and load profile could impact reliability of the electricity transmission system.

Task 2: Electric System Analysis

Provide electricity system analysis (production cost modeling simulations) to evaluate existing and planned power plant operations, western regional market transactions and potential energy flows over transmission network. Work Authorizations for this task may include, but are not limited to, the following activities:

- Develop data for use as input to power flow modeling analyses (i.e., “round-trip” analysis). Develop generation dispatch scenarios using production cost model as input for power flow modeling scenarios.
- Vary production cost model dataset assumptions and perform analyses to identify potential reliability risks.
- Assess project need, alternatives, and costs.

Task 3: Land Use and Landscape Scale Environmental Evaluations

Provide land use and landscape scale environmental evaluations (Infrastructure Planning Application simulations) of different geographic areas to evaluate a wide range of potential constraints and conflicts when assessing the most appropriate areas for development and

conservation, including, but not limited to, environmental sensitivity, conservation and other land uses, tribal cultural resources, and stakeholder concerns. Work Authorizations for this task may include, but are not limited to, the following activities:

- Develop criteria for incorporating environmental information into utility resource planning and update environmental assumptions affecting statewide resource potential.
- Assess development constraints and conflicts for generation portfolios and associated infrastructure and develop alternative portfolios that minimize constraints and conflicts.
- Create planning metrics to reflect probable mitigation costs by geography and resource types.
- Apply analytical mapping methods to assess and illustrate the geographic relationships of resources and infrastructure to potential constraints and conflicts.

Task 4: Geographic Information System (GIS) Services

Provide GIS services for mapping requirements (GeoHub Enterprise System) and overlay of key locational metrics (population, disadvantaged communities, fire risks, efficiency investments, emission dispersion, etc.) that are relevant to infrastructure development decisions, such as new renewable energy generators or proposed transmission infrastructure. Work Authorizations for this task may include, but are not limited to, the following activities:

- GIS Implementation: Develop GIS governance, standards, and procedures at organization and project levels, project planning.
- Data development and management: data creation, maintenance, update procedures, QA/QC procedures, permissions management, storage, database administration, metadata development, data library development and maintenance, and backups.
- GIS analysis and modeling: spatial and attribute queries, data overlays and comparisons, modeling, summary table, report development, machine learning implementation.
- GIS knowledge transfer: training sessions, GIS subject matter expert assistance, GIS project breakdowns.
- Consulting for Information System Development services for building GIS databases and an associated reporting system.

Task 5: Cartography Services

Provide cartography services for project and system schematic drawings, charts and graphics for reports, and photographic displays. Work Authorizations for this task may include, but are not limited to, the following activities:

- Develop paper or digital media static maps and charts.
- Develop web mapping applications accessible through the internet browser software.
- Develop dashboards suited to targeted user groups that summarize data.
- Develop an open data hub for sharing data publicly.

Task 6: Natural Gas Supply and Infrastructure Evaluations

Provide natural gas supply and infrastructure evaluations (natural gas market econometric model and natural gas hydraulic flow model), including a forecast of the expected prices for natural gas and infrastructure used to deliver natural gas from production basins to California consumers, including pipelines and storage. Work Authorizations for this task may include, but are not limited to, the following activities:

- Perform hydraulic modeling for contingency and reliability related studies of the California natural gas system.
- Perform specialized studies to inform proceedings or processes.
- Assess infrastructure project need, alternatives, and costs.
- Develop data for use as input to modeling analyses to assess infrastructure adequacy.
- Develop data for use as input to power flow models to assess how changes in natural gas system affect reliability of the electricity system.

Task 7: Levelized Cost of Generation

Provide levelized cost of generation evaluations (Cost of Generation Model) to identify key cost drivers that affect financing, construction, operations and associated probabilities to calculate potential range of comparable costs between different generation technologies. Work Authorizations for this task may include, but are not limited to, the following activities:

- Evaluate different generation cost drivers and associated probabilities to determine range of levelized costs for different technologies.
- Evaluate the revenue requirements for new generation projects when operating at different capacity factors.
- Analyze the environmental mitigation costs associated with different generation technologies that may be developed in different geographic zones in the West.

Task 8: Sharing Information Databases

Share information databases established from regulatory reporting requirements, studies from programs grants and ongoing energy planning studies. Work Authorizations for this task may include, but are not limited to, the following activities:

- Establish common identifiers for energy infrastructure facilities to link different data reporting sources to establish a master database.
- Reconcile differences between reported energy facility and system operations, fuel use and emissions.
- Data sharing related to electricity generation projects and electricity transmission projects in the State of California when such information is already available within CEC databases and can be shared with CPUC.

Task 9: Distributed Energy Resources Studies and Assessments

Work Authorizations for this task may include, but are not limited to, the following activities:

- Provide assessments regarding the integration of Distributed Energy Resources (DERs) onto the grid (e.g., energy storage systems, electric vehicles, rooftop solar, etc.) and impacts on the transmission and distribution electric systems.
- Evaluate the effectiveness of specific DER project examples and/or optimal portfolios of DERs.
- Provide assessments of emerging DER technologies.
- Provide studies regarding the effectiveness of DERs at reducing green-house gas (GHG) emissions.
- Provide studies of barriers to the deployment of DERs, including, but not limited to, safety standards and grid reliability issues.
- Provide studies of investments needed to modernize the grid and necessary policy to support the optimal level of DERs on the grid.

Task 10: Expert Witness Services

Work Authorizations for this task may include, but are not limited to, the following activities:

- Draft detailed testimony and serve as an expert witness regarding any of the topics identified in this Interagency Agreement scope of work.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CALIFORNIA PUBLIC UTILITIES COMMISSION

RESOLVED, that the State Energy Resources Conservation and Development Commission (Energy Commission) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the Energy Commission approves Agreement RMB700-18-005 between the California Energy Commission and the California Public Utilities Commission (CPUC) to reimburse the Energy Commission up to \$1 million to provide the CPUC with Energy Commission staff expertise for technical consulting services to support electricity and natural gas system modeling and analysis, and related activities; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on January 9, 2019.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat