

Hawaii Department of Health

RELEASE DATE: July 16, 2021

REQUEST FOR PROPOSALS

No. RFP-21-001-CAB

SEALED OFFERS
FOR

Greenhouse Gas Emissions Inventory and Associated Work for Years 2005, 2018-2022

State of Hawaii
Department of Health
Clean Air Branch

will be received up to
4:00 P.M. HST on
SEPTEMBER 2, 2021

in the
CLEAN AIR BRANCH
2827 WAIMANO HOME ROAD, #130
PEARL CITY, HAWAII 96782.

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List of Terms and Acronyms

Act 234	Act 234, 2007 Hawaii Session Laws
BAFO	Best and Final Offer
Bid	Any offer submitted in competitive sealed bidding or in the second phase of multi-step bidding
CAB	Hawaii Department of Health Clean Air Branch
CH ₄	Methane
CFR	Code of Federal Regulations
CPO	Chief Procurement Officer
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
Contract	The combination of the solicitation, including the instructions to Offerors, the specifications or scope of work, the special provisions, and the general terms and conditions; the offer and any best and final offers; and any amendments to the solicitation or to the contract; and any terms implied by law.
Contractor	An individual, partnership, firm, corporation, joint venture or other entity undertaking the execution of work under the terms of the contract with the STATE and acting directly or through his, their or its agents, employees or sub-contractors
Director	The Director of Health of the State of Hawaii or authorized agent, officer, or inspector
EEPS	Energy Efficiency Portfolio Standard
EPA	Environmental Protection Agency
GC	General Conditions, issued by the Department of the Attorney General
GET	General Excise Tax
GP	General Provisions
GWP	Global Warming Potential
GHG	Greenhouse Gas
GHG Rules	Subchapter 11 and other associated amendments to HAR Title 11, Chapter 11-60.1 to regulate GHG emissions
HANDS	Hawaii Awards and Notices Data System
HAR	Hawaii Administrative Rules
HAR Affected Facility	Permitted covered source, except for municipal waste combustion operations with potential to emit GHG emissions (biogenic plus non-biogenic) equal to or above 100,000 short tons per year CO ₂ e. Municipal solid waste landfills required by 40 CFR
HCEI	Hawaii Clean Energy Initiative
HFCs	Hydrofluorocarbons
HRS	Hawaii Revised Statutes
HST	Hawaii Standard Time
ICAO	International Civil Aviation Association
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
MMT	Million Metric Ton
N ₂ O	Nitrous Oxide
ODS	Ozone Depleting Substance
Offeror	Any individual, partnership, firm, corporation, joint venture or other legal entity, submitting directly or through a duly authorized representative or agent, an offer for the work services contemplated in response to a solicitation
PFCs	Perfluorocarbons
Proposal	Any offer submitted in response to any solicitation, except for a bid
QA	Quality Assurance
QC	Quality Control
RE	Renewable Energy
RFP	Request for Proposal
RPS	Renewable Portfolio Standard
SIT	EPA's State Inventory Tool

List of Terms and Acronyms

Solicitation	An invitation for bids used in the competitive sealed bidding process, a request for quotes used in the competitive sealed proposal process for the purpose of obtaining quotes, bids or proposals to perform a STATE contract
SPO	Hawaii State Procurement Office
State	State of Hawaii, including its departments, agencies, and political subdivisions
SF ₆	Sulfur Hexafluoride
TSD	Technical Support Document
UNFCCC	United Nations Framework Convention of Climate Change
Work	The furnishing by the CONTRACTOR of all labor, services, materials, equipment, and other incidentals necessary for the satisfactory performance of the contract

SECTION ONE

INTRODUCTION, KEY DATES, PROCUREMENT OFFICER AND CONTACT INFORMATION, QUESTIONS AND ANSWERS

1.1 INTRODUCTION

The Hawaii State Procurement Office (SPO) is requesting proposals for generating statewide greenhouse gas (GHG) emission inventories for 2005 and 2018 to 2022 and other associated work. The primary work tasks will involve the following: 1) update prior 1990, 2007, 2010, 2015, 2016, and 2017 GHG emission inventories; 2) compile and update 2005, 2018, 2019, 2020, 2021, and 2022 GHG emission inventories; 3) compile and project the applicable 2020 to 2045 GHG emission inventories; and 4) evaluate the Environmental Protection Agency (EPA) State Inventory Tool (SIT) and Projection Tool for developing Hawaii's GHG emission inventories and provide associated training on the tools.

1.2 RFP SCHEDULE AND SIGNIFICANT DATES

The schedule represents the State's best estimate of the schedule that will be followed. It is being provided as guidance for the Request for Proposal (RFP) process. The dates provided on the Hawaii Awards & Notices Data System (HANDS) are official. All times indicated are Hawaii Standard Time. If a component of this schedule is delayed, the rest of the schedule will likely be shifted by the same number of days. The Notice of Award and Contract Start Date may move up if preceding steps are deemed unnecessary. The actual contract start date would be the date the selected CONTRACTOR receives a formal Notice to Proceed from the STATE.

Release of Request for Proposals	July 16, 2021
Due date to Submit Questions	July 29, 2021
State's Response to Questions	August 5, 2021
Proposals Due Date/Time	September 2, 2021 at 4:00 p.m.
Pre-Offer Conference (if necessary)	September 14, 2021 at 9:00 a.m.
Best and Final Offer (if necessary)	September 21, 2021
Notice of Award	September 23, 2021
Estimated Contract Start Date	December 15, 2021

1.3 PROCUREMENT OFFICER AND CONTACT INFORMATION

The Procurement Officer is responsible for overseeing the RFP process. The Procurement Officer for the Hawaii Department of Health Clean Air Branch (CAB) is:

Mr. Barry Ching
Hawaii State Department of Health
Clean Air Branch
2827 Waimano Home Road, #130
Pearl City, Hawaii 96782
Phone: (808) 586-4200
Email: barry.ching@doh.hawaii.gov

All communication and mail for this RFP shall be addressed to the Procurement Officer, except in specific instances noted in this RFP. After this RFP is awarded, CAB will provide the awardee with contact information of the Contract Administrator, who will oversee the awarded contractor's performance, manage deliverables, and process payments.

1.4 QUESTIONS AND ANSWERS PRIOR TO OPENING OF PROPOSALS

All questions on this RFP process must be submitted by email to the CAB Procurement Officer (barry.ching@doh.hawaii.gov) by the close of business on **Thursday, July 29, 2021** (telephone calls will not be acknowledged). In order to facilitate a meaningful response, questions should reference the page and section number to which the questions relate. Responses to properly submitted questions shall be posted on the HANDS website (<https://hands.ehawaii.gov/hands/>) by the close of business on Thursday, **August 5, 2021**. Inquiries received after the deadline will not be reviewed. CAB will not be responsible for delays or non-receipt of responses.

1.5 ESTIMATED PROJECT BUDGET

The proposed budget for this project is estimated at nine hundred thousand dollars (\$900,000.00). If your proposal exceeds this amount, this may be reflected in the evaluation scoring. Price is a factor in the evaluation process.

1.6 CANCELLATION

The RFP may be cancelled and any or all proposals rejected in whole or in part, without liability to the State, when it is determined to be in the best interest of the State.

SECTION TWO

BACKGROUND AND SCOPE OF WORK

2.1 BACKGROUND

CAB is soliciting services to: a) research, develop, and validate data sources and methods of analysis to improve the accuracy of GHG emission inventories, projections, and uncertainty estimates; b) compile new GHG emission inventories for calendar years 2005, 2018, 2019, 2020, 2021, and 2022; c) compile and project GHG emission inventories for 2020-2045; d) update prior and new statewide GHG emission inventories for calendar years 1990, 2005, 2007, 2010, 2015 – 2021 and the annual projections for calendar years 2020 – 2045; e) develop county (Hawaii, Honolulu, Kauai, and Maui) level estimates for the statewide GHG emission inventories and projections; and f) characterize the EPA State Inventory Tool and Projection Tool and provide associated training for future use by CAB to compile statewide GHG inventories independently. The contract period for the GHG emissions inventory work is anticipated to be three (3) years.

Statewide GHG inventories and associated work will be used to verify Hawaii's progress in reducing GHGs and determine if further GHG reductions are required pursuant to Hawaii Administrative Rules (HAR). Detailed statewide and county GHG emission inventories of sources and sinks (e.g., from Energy Industries, Commercial and Industrial Sources, Ground Transportation, Substitution of Ozone Depleting Substances (ODSs), Agricultural Soil Carbon, Urban Trees, Forest Carbon, etc.) serve as a basis for decision making and will provide direction in future GHG reduction efforts.

On June 30, 2014, amendments to HAR Title 11, Chapter 11-60.1 were finalized¹ to include Subchapter 11, Greenhouse Gas Emissions that follows the core directives from Act 234, 2007 Hawaii Session Laws (Act 234) by proposing the following: a) adopting the statewide GHG emission limit of 1990 levels, or lower, by 2020; b) establishing the principle of seeking reductions that are the maximum practically and technically feasible and cost-effective; and c) requiring the reporting and verification of statewide GHG emissions to ensure compliance. The purpose of Subchapter 11 is specified in HAR §11-60.1-201.

Regulated GHGs in HAR Subchapter 11 are carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). The mass amount of emission of each of the six (6) GHGs is multiplied by the gas's associated global warming potential (GWP) to determine the carbon dioxide equivalent (CO₂e) emissions. The CO₂e emissions are compared against emission thresholds established in the rules for regulating GHGs. Act 234 explicitly excludes GHG emissions from aviation for achieving the GHG reductions. For purposes of HAR requirements to verify statewide GHG emissions, international and EPA guidance exclude GHGs from the combustion of international bunker fuel (e.g., international aviation GHG emissions and international marine GHG emissions) and emissions of ODSs addressed in the Montreal Protocol. Subchapter 11 of the HAR includes the following implementation components:

1. Set a statewide GHG emissions limit at the estimated actual 1990 GHG emissions. The estimate excludes aviation and international bunker fuel emissions and includes carbon sinks. The limit of 1990 emissions levels is based on statewide GHG emission estimates using the most current GWPs.
2. Require the statewide GHG emissions limit be achieved by 2020 and maintained thereafter. Statewide GHG emission inventories are used to verify compliance with the statewide GHG emission limit.
3. Specify a GHG emission cap for stationary sources to help ensure compliance with the limit on and after 2020. The rules specify a minimum facility-wide GHG emission cap of 16% below the facility's total baseline level for large existing stationary sources (HAR affected facilities/sources) with potential CO₂e emissions (biogenic plus nonbiogenic) equal to or above 100,000 short tons per year. Biogenic CO₂ emissions are excluded for compliance with the cap.
4. Require GHG emission reduction plans from affected facilities to establish the facility-wide GHG emissions cap. The following twenty (20) permitted covered sources have provided GHG emission reduction plans as required by the rules:

Plant	HAR Affected Facilities/Sources ^{a,b,c}	Permit No.
1	AES Hawaii, LLC Cogeneration Plant	0087-02-C
2	Hamakua Energy, LLC Cogeneration Plant	0243-01-C
3	Hawaiian Electric Campbell Industrial Park Generating Station	0548-01-C
4	Hawaiian Electric Honolulu Power Plant	0238-10-C
5	Hawaiian Electric Kahe Power Plant	0240-01-C
6	Hawaiian Electric Waiau Power Plant	0239-01-C
7	Hu Honua Bioenergy, LLC Power Plant	0724-01-C
8	Hawaii Electric Light Kanoelehua-Hill Power Plant	0234-01-C
9	Hawaii Electric Light Keahole Power Plant	0007-01-C
10	Hawaii Electric Light Puna Power Plant	0235-01-C
11	IES Downstream, LLC IES Kapolei Bulk Storage Terminal	0863-01-C
12	IES Downstream, LLC IES Process Units	0863-02-C
13	Kalaeloa Partners, L.P. Cogeneration Plant	0214-01-C
14	Kauai Island Utility Cooperative Kapaia Power Station	0452-01-C
15	Kauai Island Utility Cooperative Port Allen Power Plant	0097-01-C
16	Maui Electric Kahului Power Plant	0232-01-C
17	Maui Electric Maalaea Power Plant	0067-01-C
18	Maui Electric Palaa Power Plant	0031-04-C
19	Par Hawaii Refining, LLC Par East Refinery	0212-01-C
20	Par Hawaii Refining, LLC Par West Refinery	0088-01-C

- a. Hawaiian Electric Company, Inc. (Hawaiian Electric); Hawaii Electric Light Company, Inc. (Hawaii Electric Light); and Maui Electric Company, Ltd. (Maui Electric).
- b. Power Supply Improvement Plan², Grid Modernization Strategy³, and Integrated Grid Planning.⁴
- c. GHG emission reduction plans are available from CAB upon request.

5. Require the use of year 2010 as the baseline year to establish the GHG emission cap unless another year or average of other years between 2006 and 2010 is demonstrated to be more representative of normal operations.
6. Require a GHG control assessment if the proposed GHG emission cap is less than sixteen percent (16%) below the established baseline GHG emissions level.

7. Allow partnering as a measure to comply with the GHG reduction requirements, where affected sources may combine their facility-wide GHG emissions caps in meeting the combined GHG emissions cap.
8. Specify enforceable permit conditions that limit GHG emissions after establishing the GHG cap for HAR affected facilities in the GHG emissions reduction plan.
9. Require the CAB to prepare public annual progress reports listing GHG emission levels for each HAR affected facility and the statewide progress relative to the statewide GHG emissions limit. Annual progress reports are referred to as annual GHG emissions reports in Section 2.2, SCOPE OF WORK.

In addition to the GHG reduction strategies provided by the GHG Rules, other Hawaii State agencies have initiated several programs for reducing statewide GHGs and mitigating climate change, including the following: Hawaii Clean Energy Initiative (HCEI)⁵, Renewable Portfolio Standard (RPS)⁶, Energy Efficiency Portfolio Standard (EEPS)⁷, and the Hawaii Climate Change Mitigation & Adaption Initiative⁸ and associated efforts (e.g., Act 32, 2017 Hawaii Session Laws (Act 32)⁹, Act 15, 2018 Hawaii Sessions Laws (Act 15)¹⁰, Act 16, 2018 Hawaii Sessions Laws (Act 16)¹¹, Hawaii Climate Change Mitigation and Adaptation Commission¹², Greenhouse Gas Sequestration Task Force¹³, Zero Emissions Clean Economy Target¹⁴, and Carbon Offset Program¹⁵. Links to additional related topics are provided on the CAB Hawaii Greenhouse Gas Program link.¹⁶

For the previous contract work awarded on April 12, 2017, statewide GHG emissions inventories for 2015, 2016, and 2017 have been completed; statewide GHG projections have been prepared for 2020, 2025, and 2030; and existing statewide GHG emission inventories have been updated for calendar years 1990, 2007, 2010, 2015, and 2016. The 2015 GHG inventory report with projections and emission inventory updates for prior years was completed in January 2019.¹⁷ The 2016 GHG inventory report was completed in December 2019.¹⁸ The 2017 GHG inventory report was completed in April 2021.¹⁹ The reports compiled emissions from the following four (4) Intergovernmental Panel on Climate Change (IPCC) sectors: (1) Energy; (2) Industrial Processes and Product Use (IPPU); (3) Agriculture Forestry, and other Land Use (AFOLU); and (4) Waste. The Executive Summary of the 2017 annual GHG emissions report noted:

Based on the analysis presented in the 2017 annual GHG emissions report, net GHG emissions in 2020 (excluding aviation) are projected to be lower than net GHG emissions in 1990. While the report finds that Hawaii is currently on track to meet the 2020 target, this finding will be reassessed in this contract's forthcoming reports.

This 2015 GHG inventory effort did not generate GHG uncertainty estimates because much of the energy data was only available in an aggregated form due to constraints with Chapter 486J, Hawaii Revised Statutes (HRS) for accessing activity data. This required alternative work to disaggregate energy data by fuel type (e.g., diesel fuel, residual fuel, and jet fuel) and source category/sector (e.g., Energy Industries, Commercial and Industrial Sources, Ground Transportation, Domestic Aviation, International Aviation, Domestic Marine, International Marine, etc.). The 2016 GHG inventory effort generated GHG uncertainty estimates, and primarily used energy data from the U.S. Energy Information Administration (EIA)²⁰. Changes to Chapter 486J, HRS in 2019 has enabled CAB and its contractors to have access to energy data in order to assess accuracy and reduce the levels of uncertainty in the annual GHG emissions reports (annual progress reports) provided by CAB.²¹

County government stakeholders also expressed a desire to expand the awarded contract to include GHG emission inventories at the county level to support county efforts of the Paris Agreement to “combat climate change and adapt to its effects.”²² The ultimate goal of the Paris Agreement is to keep the planet from warming 1.5 degrees Celsius above preindustrial levels. While county level estimates of GHG emissions and projections were not included in the first 2015 statewide GHG inventory report, a contract modification was made to incorporate county level emissions into subsequent reports for 2016 and 2017. The post-modification awarded effort will leverage available county GHG inventory data and reports to support data validation and uncertainty estimates. The development of county level GHG inventories and associated leveraging efforts are included in this solicitation.

Government stakeholders expressed a desire to expand the awarded contract to include a calendar year 2005 statewide GHG emission inventory to support state efforts to align with the Paris Agreement. For meeting the Paris Agreement, the Obama administration set the goal to reduce GHGs from 26% to 28% below the United States’ 2005 baseline GHG emission level by 2025. Including the 2005 statewide GHG emissions inventory will provide an opportunity for additional data validation.

Government stakeholders have also noted the importance of considering the issue of carbon leakage^{23, 24} (e.g., “Carbon leakage refers to the situation that may occur if, for reasons of costs related to climate policies, production may move offshore to other countries with lower emission standards). The identification and reporting of GHG emissions information relevant to carbon leakage is included in this solicitation.

While the scope of the initial effort was originally intended to be mostly consistent with EPA’s national GHG emission inventory, where the uncertainty on overall emission estimates is believed to be relatively small, the uncertainty analysis was not in the detail needed for evaluating Hawaii’s fossil fuel combustion sources, where the CAB believes uncertainties in the GHGs estimated are relatively large. Since GHG emission estimates to track progress in achieving the State’s GHG reduction goals depend on the quantity of aviation and international marine emissions that are subtracted from the overall Energy Sector emissions, and emissions in the Energy Sector account for a majority of the statewide GHG emissions, developing uncertainty estimates for these source categories and sectors were planned along with that for other source categories and sectors.

Development of the 2015 and 2016 annual GHG emissions reports identified discrepancies between different fuel consumption datasets which indicated the need for additional data research, analysis, and validation. A contract modification was made to investigate, prioritize, and address key areas for improvement identified in the 2016 annual GHG emissions report for incorporation into 2017 annual GHG emissions report.

The CAB also found that stakeholder interest has expanded beyond the GHG reduction goals of Act 234. Hawaii’s Climate Change Mitigation and Adaption Commission (Climate Commission) noted in a November 28, 2018 news release that it supports mechanisms to reduce overall vehicle miles traveled as well as converting all remaining vehicle based ground transportation to renewable, zero-emission fuels and technologies.²⁵ The GHG emission estimates from ground transportation and aircraft, based on vehicle miles travelled and vehicle types, would also provide supplemental information to aid in the validation of GHG emission and uncertainty estimates. The CAB needs the data research, analysis, and validation effort to be expanded to ensure

the accuracy of the GHG emission estimates. Therefore, an expanded data research, analysis, and validation effort is included in this solicitation.

While GHG uncertainty estimates are being provided in the 2016 and 2017 GHG inventory reports, the scope of the awarded effort was not sufficient to detail uncertainties from key source categories and sectors (e.g., Energy Industries, Commercial and Industrial Sources, Ground Transportation, Domestic Aviation, International Aviation, Domestic Marine, International Marine, etc.). Work to provide uncertainty estimates in the GHG emissions from key source categories and sectors are included in this solicitation.

The CAB seeks report improvements, including additional validation and uncertainty estimation efforts, to be identified, prioritized, and implemented in the new effort to compile statewide GHG emission inventories. The CAB anticipates the additional work to focus on key source categories and sectors (e.g., Energy Industries, Commercial and Industrial Sources, Ground Transportation, Domestic Aviation, International Aviation, Domestic Marine, and International Marine), key fossil fuels (e.g., coal, diesel fuel, residual fuel, jet fuel, and gasoline excluding ethanol), and key carbon sinks (e.g., forest carbon and urban trees). Identification, prioritization, and implementation of key areas for improvement are included in this solicitation.

While Act 234 explicitly excludes GHG emissions from airplanes for achieving the GHG reductions, and IPCC guidelines exclude GHG emissions associated with international transport, Act 15 (as implemented in HRS §225P-5) does not exclude these sources of GHG emissions. Multiple representations of GHG emissions are needed to address the accountings specified in Act 234, Act 32, Act 15, and Act 16. While Act 15 does not explicitly mention the climate change impacts of ODS emissions or black carbon, inclusion of these emissions appears consistent with the text of HRS §225P-5 (zero emissions clean economy target). The CAB seeks the estimation and reporting of GHG emissions, other key climate forcing emissions and emission categories for which data may be available (e.g., ODS emissions, black carbon, carbon leakage), and sink categories and goals which address current and evolving state needs. Supporting the range of state compliance needs, including multiple and evolving representations of total emissions and sinks, is included in this solicitation.

Contract Objectives

The objective of this project is to obtain professional and technical support to assist the STATE to:

- Fully achieve the objectives and scope of work in this solicitation that was prepared for implementing the intent and mandates of HAR, Title 11, Chapter 11-60.1, Act 234, and GHG emission inventory development work that also supports Act 32, Act 15, and Act 16.
- Provide the information needed to support state and county (Hawaii, Honolulu, Kauai, and Maui) efforts to reduce statewide GHG emissions and align with the principles and goals adopted in the Paris Agreement.
- Support evolving state and county GHG emissions inventory needs consistent with the scope of work in this RFP.

In accordance with Act 234, Hawaii's GHG Rules require statewide GHG emissions to be at or below 1990 levels by 2020 and maintained thereafter. This statewide GHG emissions limit excludes aviation and international bunker fuel emissions, and includes carbon sinks. This contract provides for technical and professional services to the CAB for the following:

- (1) To complete updated historical inventories of Hawaii statewide and county GHG emissions and carbon sinks by source categories and sectors consistent with EPA and IPCC guidance. Historical inventories are those for 1990, 2007, 2010, 2015, 2016, and 2017 emission years and for the 2005, 2018, 2019, 2020, and 2021 emission years as these inventories become available during this second round of contract work. The emissions inventory work will include research, development, and validation of data sources and methods of analysis to improve the accuracy of the statewide GHG emission inventories and uncertainty estimates. Emissions inventory work will also update GHGs from HAR affected facilities for the 2015, 2016, 2017, 2018, 2019, 2020, and 2021 emission years as available through the contract period. Methods for updating and compiling the GHG emissions shall be consistent with, or superior to, up-to-date guidance from EPA and IPCC. Preliminary, interim, and final updates are to be completed according to the following schedule:
 - a. A kickoff meeting for the contracted effort with associated documentation of methodology, data sources, expected challenges, and planned approaches shall be completed by the negotiated date of Deliverable 1.
 - b. Preliminary inventory of updated historical statewide GHGs and GHGs from HAR affected facilities (facilities subject to HAR §11-60.1-204(a)) shall be completed and delivered by the negotiated date of Deliverable 2.
 - c. Interim inventory of updated historical statewide GHGs and GHGs from HAR affected facilities shall be completed and delivered by the negotiated date of Deliverable 3.
 - d. Final inventory of updated historical statewide GHGs and GHGs from HAR affected facilities shall be completed and delivered by the negotiated date of Deliverable 4.
- (2) To compile annual statewide and county level inventories of GHGs and carbon sinks by source categories and sectors consistent with EPA and IPCC guidance for calendar years 2005, 2018, 2019, 2020, 2021, and 2022. The emission inventory work will include research, development, and validation of data sources and methods of analysis to improve the accuracy of GHG emission inventories and uncertainty estimates. Methods for compiling the inventories shall be consistent with, or superior to, up-to-date guidance from EPA and IPCC. The GHG emissions from HAR affected facilities shall also be compiled for the 2018, 2019, 2020, 2021, and 2022 emission years. This emission inventory work will include an assessment of statewide progress relative to the statewide GHG emission limit. Preliminary, interim, and final updates for these statewide GHG emission inventories are to be completed according to the following schedule:
 - a. Preliminary inventory of 2005, 2018, and 2019 actual statewide GHGs and associated GHGs from HAR affected facilities shall be completed and delivered by the negotiated dates of Deliverable 5.

- b. Interim inventories of 2020 and 2021 actual statewide GHGs and associated GHGs from HAR affected facilities shall be completed and delivered by negotiated dates of Deliverable 6.
 - c. Final inventories of 2022 actual statewide GHGs and associated GHGs from HAR affected facilities shall be completed and delivered by negotiated dates of Deliverable 7.
- (3) To complete projections of annual statewide and county inventories of GHGs, carbon sinks for 2020 - 2045 emission years, list emissions for HAR affected facilities, and determine progress relative to the statewide emissions limit pursuant HAR 11-60.1-204(k). The emission inventory work will include research, development, and validation of data sources and methods of analysis to improve the accuracy of GHG emission inventories and uncertainty estimates. Methods for compiling the inventories shall be consistent with, or superior to, up-to-date guidance from EPA and IPCC. The work shall also incorporate the results of statewide inventories and assess statewide progress relative to the statewide GHG emissions limit. The annual 2020 - 2045 statewide GHG emission projections and assessments of progress relative to the statewide emissions limit are to be completed according to the following schedule:
 - a. Preliminary inventory of 2020-2045 projected statewide and county GHGs shall be completed and delivered by the negotiated date of Deliverable 8.
 - b. Interim inventory of 2022-2045 projected statewide and county GHGs shall be completed and delivered by the negotiated date of Deliverable 9.
 - c. Final inventory of 2023-2045 projected statewide and county GHGs shall be completed and delivered by the negotiated date of Deliverable 10.
 - d. Preliminary assessment of statewide progress relative to the statewide GHG emissions limit shall be completed and delivered by the negotiated date of Deliverable 11.
 - e. Interim assessment of statewide progress relative to the statewide GHG emissions limit shall be completed and delivered by the negotiated date of Deliverable 12.
 - f. Final assessment of statewide progress relative to the statewide GHG emissions limit shall be completed and delivered by the negotiated date of Deliverable 13.
- (4) To evaluate the capability and accuracy of EPA's State Inventory Tool (SIT) and Projection Tool for developing Hawaii GHG emission inventories and projections. For this task, the CONTRACTOR shall evaluate 2018, 2019, 2020, 2021, and 2022 actual statewide GHG estimates as these become available and projected statewide GHG estimates for 2020 - 2045. The evaluation shall compare statewide GHG inventories using the SIT to those compiled with up-to-date IPCC and EPA guidance. The contractor shall provide associated training to CAB personnel on use of the SIT and Projection Tool to compile and project GHG emissions. The CONTRACTOR shall document issues and potential improvements to assist the CAB in advocating to EPA for general and Hawaii specific SIT and Projection Tool improvements. As appropriate, the CONTRATOR shall assist in augmenting EPA guidance documents to enable future independent development of statewide GHG inventories and projections. Evaluation and training for the SIT and Projection Tool shall be completed according to the following schedule:

- a. Evaluation and training for the preliminary inventory of actual and projected statewide GHGs shall be completed and delivered by the negotiated date of Deliverable 14.
 - b. Evaluation and training for the interim inventory of actual and projected statewide GHGs shall be completed and delivered by the negotiated date of Deliverable 15.
 - c. Evaluation and training for the final inventory of actual and projected statewide GHGs shall be completed and delivered by the negotiated date of Deliverable 16.
- (5) To complete annual GHG emission reports which document GHG emission levels for each HAR affected facility, the counties, and the statewide progress relative to the statewide GHG emissions limit. The reports shall include detailed electronic spreadsheets to document the data used, validation efforts, quality assurance/quality control (QA/QC) procedures, and uncertainty estimates. This documentation is intended to support independent validation of report results and conclusions. These reports shall also document the capability and accuracy of EPA's SIT and Projection Tool. The contractor shall provide revisions to draft documents as requested by CAB. The annual GHG emission reports are to be completed according to the following schedule:
- a. The Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 shall be completed and delivered by the negotiated dates of Deliverables 17 (Draft) and 18 (Final).
 - b. The Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 shall be completed and delivered by the negotiated dates of Deliverables 19 (Draft) and 20 (Final).
 - c. The Hawaii Greenhouse Gas Emissions Report for 2022 shall be completed and delivered by the negotiated dates of Deliverables 21 (Draft) and 22 (Final).

2.2 SCOPE OF WORK

All GHG emission inventories and associated work provided to CAB shall be in accordance with this RFP, including its attachments and any addenda.

CONTRACTOR shall provide professional and technical services in a satisfactory manner, as determined by CAB, to assist the STATE in achieving and implementing the mandates of Act 234, HAR 11-60.1 Subchapter 11, Greenhouse Gas Emissions, the estimation of county level GHG emissions and sinks, and GHG emission inventory development work that also supports Act 32, Act 15, and Act 16.

CONTRACTOR may propose alternative Tasks, in addition to, or in lieu of, those detailed below, to better address the state needs, and knowledge gained during the proposal preparation process. Task One through Task Seven reflect CAB's current assessment of state needs and available GHG information. For example, if the CONTRACTOR determines that key supplemental information is available to support quarterly reporting of GHG emission inventory estimates for the most recent emission year, CAB would like that work to be proposed. Task Two through Task Seven specify the emission years associated with the Deliverables. If the CONTRACTOR determines that changes in those years would better support state needs, that work could be

justified and proposed; for example, it would make sense to have the most recent year that data is available included in the first report, but that could require shifting the reporting of other years to later reports.

- I. **Task One: Document the Methodology detailed in the CONTRACTOR'S RFP Submittal to Prepare GHG Emission Inventories and Projections.** The CONTRACTOR shall ensure that the CAB is provided with accurate GHG emissions data for regulatory decision making, and for supporting other Hawaii State and County (Hawaii, Honolulu, Kauai, and Maui) efforts to reduce GHG emissions that are consistent with the principles and goals adopted for the Paris Agreement. While Act 234 explicitly excludes GHG emissions from aviation for achieving the GHG reductions, and IPCC guidelines exclude GHG emissions associated with international transport, Act 15 (as implemented in HRS §225P-5) does not exclude greenhouse gas emissions from aviation. Multiple representations of GHG emissions are needed to address the accountings specified in Act 234, Act 32, Act 15, and Act 16. The CAB seeks the estimation and reporting of GHG emissions and sink categories and goals that address current and evolving state needs. The inventory shall include, at the state and county levels, GHG emissions of sources, reductions in GHGs from sinks, and associated uncertainty estimates by source category and sector (e.g., Transportation, Stationary Combustion, Substitution of ODSs, Agricultural Soil Carbon, Forest Fires, Urban Trees, Forest Carbon, Landfills, and Wastewater Treatment) and by energy economic sector/end-use sector (e.g., Energy Industries; Residential, Commercial, and Industrial Sources; Ground Transportation, Domestic Marine, Domestic Aviation, International Bunker Fuel Marine, International Bunker Fuel Aviation). Task One shall also include annual GHG emissions from HAR affected facilities (facilities subject to HAR 11-60.1-204 (a)).
- a. The methodology used by the CONTRACTOR for compiling GHG emission inventories and projections shall:
1. Be consistent with that previously used to determine the statewide 1990 GHG emissions inventory baseline level, estimating statewide GHG emissions for the 2007, 2010, and 2015-2017 emission years as available, and projecting GHG emissions for 2020, 2025, and 2030.
 2. Research, develop, and validate data sources (e.g., federal, state, county) and methods of analysis to improve the accuracy of GHG emission inventories, GHG projections, and uncertainty estimates. The CONTRACTOR shall include key source categories and sectors (e.g., Energy Industries, Commercial and Industrial Sources, Ground Transportation, Domestic Aviation, International Aviation, Domestic Marine, International Marine, ODSs, Agricultural Soil Carbon, Forest Fires, Landfills, Wastewater Treatment, etc.), key fossil fuels (e.g., coal, diesel fuel, residual fuel, jet fuel, and gasoline excluding ethanol), and key carbon sinks (e.g., Forest Carbon and Urban Trees). Identify, prioritize, and implement additional GHG emission disaggregation approaches (e.g., tourist related vs. resident related, data centers²⁶) to aid in the identification of high payoff reduction efforts. Identify, prioritize, and implement key "Areas for Improvement" for prior GHG emission reports.
 3. Provide the collection, referencing, and tracking of relevant information including, but not limited to, international (e.g., IPCC, ICAO²⁷, IMO²⁸),

federal (e.g., EPA^{29,30,31}), state (e.g., Act 234, Act 32, Hawaii Government Vehicle Purchasing Guidelines³²), and county regulations, legal opinions (e.g., SCOT-17-0000630³³), and guidance documents, GHG related activity data, GHG emissions and sink data, and assumptions in compiling emissions during the contract period. Due to the range of compliance needs (e.g., associated with Act 234, Act 32, Act 15, Act 16), multiple representations of total emissions and sinks are expected to be needed, and are likely to evolve during the effort.

4. Account for changes to relevant information that may occur during this contract period and enable efficient updates to GHG emission and carbon sink estimates for all applicable emission years. These changes are expected to include, but are not limited to, EPA changes to GWPs, updates to HAR affected facility GHG estimates, and revisions to county, state, and federal datasets used in calculating GHG emissions. Since rules, guidance documents, and GHG emissions data are all subject to potential updates during this contract period, the methodology shall be designed to enable such changes to be easily incorporated into the analytical tools for estimating and projecting GHG emissions.
5. Be consistent with, or superior to, up-to-date guidance from EPA and IPCC. Relevant information is expected to include the current EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks³⁴, the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and 2019 Refinement of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories³⁵, and United Nations Framework Convention on Climate Change (UNFCCC) guidelines for inventory reporting.³⁶
6. Examine and leverage, as appropriate, publicly available air pollutant emissions modeling tools for estimating the impacts of energy technologies and policies on GHG emissions and the environment (e.g., GLIMPSE³⁷, GCAM-USA³⁸, MARKAL/TIMES^{39,40,41}, LEAP-IBC⁴²). Identify, document, and report candidate Hawaii specific areas for improvement to support potential future improvements in the modeling tools.
7. Include the implementation of quantitative uncertainty estimates for both actual and projected GHG emissions and carbon sinks. Examine the uncertainty estimation challenges (e.g., large variations in some emission levels from one report to another) associated with prior Hawaii GHG emission inventories. Evaluate approaches for performing quantitative “uncertainties associated with both annual estimates of emissions and removals [e.g., sinks], and emission and removal trends over time”⁴³, including those used by the EPA and IPCC to conduct uncertainty analyses of GHG emissions (e.g., "Annex 7 Uncertainty" of the Inventory of U.S. Greenhouse Gas Emissions and Sinks (1990-2017)⁴⁴ and IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories⁴⁵). The CONTRACTOR shall evaluate and conduct, as appropriate, uncertainty estimates using relevant methods to evaluate robustness of established estimation methods for Hawaii data.
8. Include the implementation of QA/QC procedures consistent with, or superior to, EPA and IPCC guidance (e.g., "Annex 8 QA/QC Procedures" of the Inventory of U.S. Greenhouse Gas Emissions and Sinks (1990-2017)⁴⁶). Examine the QA/QC challenges associated with prior Hawaii GHG emission inventories. Evaluate approaches for performing QA/QC.

9. Include the identification, evaluation, and implementation of key GHG information (e.g., GHG Inventories⁴⁷, GPC⁴⁸, ICLEI⁴⁹) from county, state, and federal agencies as well as any other agencies that could enable improvements to the GHG inventories if they were augmented. To facilitate these improvements during the contract, the CONTRACTOR shall coordinate with relevant agencies to develop and implement candidate approaches. Candidate approaches would be expected to include the application of contract resources to collect and/or quality assure relevant data. If candidate approaches cannot be implemented during the contract, the CONTRACTOR shall coordinate with relevant agencies to identify challenges, and to develop and document longer term approaches. Candidate approaches would be expected to identify additional data to be collected and/or quality assured. The CONTRACTOR shall expand the scope of historical efforts to reflect the data availability and validation challenges that are noted in the prior Hawaii GHG emission inventories.
10. Include the reporting of trends in key GHG emission metrics and industry benchmarks and associated metrics that support calculation of GHG emissions. The purpose of these metrics is to complement exist metrics associated with Hawaii's sustainability goals (e.g., Electricity: Renewable/Efficiency, Average Fuel Use Per Person Annually, and Total Energy Use⁵⁰). The identification and selection process for metrics shall include the review of GHG documents from county, state, federal, and other agencies (e.g., references 51 and 52).
11. Include the reporting of key supplemental GHG emission information to better enable readers to comprehend total GHG emissions and assess environmental (e.g., climate change) impacts. The CONTRACTOR shall include quantified GHG emissions associated with the ODSs addressed in the Montreal Protocol, and relevant subsequent agreements (e.g., Kigali amendment to the Montreal Protocol).⁵³ The CONTRACTOR shall evaluate scientific research and include supplemental GHG emissions and projection information based on alternative GWP values and climate forcers⁵⁴ (e.g., black carbon, short term sulfates, and organic carbon) contributing to climate change (e.g., references 55,56,57, 58, and 59). The CONTRACTOR shall investigate the relevance of carbon leakage to state and county GHG goals and, as appropriate, identify and include supplemental information. The CONTRACTOR shall check for and identify any implementations of life-cycle analyses^{60,61} in statewide and national GHG emission inventories for possible application on existing or future efforts.
12. Include the identification, quantification, documentation, and tracking of important discrepancies between different data sources for information and datasets^{62,63} used to develop the emission inventories and projections. This documentation will assist the reader in understanding the discrepancies that exist, and the CAB in identifying needed coordination with information sources to resolve them. The CONTRACTOR shall track and report available historical values; not just those from the most recent prior report.
13. Be documented in sufficient detail to enable independent validation of results and assessment of conclusions. The methodology, and the data that is utilized for compiling GHG emission inventories, shall not include proprietary information that would prevent completely unfettered independent validation of the results.

14. Include the development of supporting data files in machine-readable formats (e.g. spreadsheet, database) and documentation that support the public review and use of GHG emissions inventory report information (e.g., references 64 and 65).
 15. Be presented to CAB and other government reviewers at a kickoff meeting as specified in Deliverable 1.
- b. In developing the proposed methodology for compiling GHG emission inventories according to that specified in I.a.1 through I.a.14 of the Scope of Services, the CONTRACTOR shall also:
1. Evaluate the implementation of EPA's SIT, Projection Tool, and associated user guides for preparing the inventories of statewide GHG emissions. Note that the SIT may be based on different guidance documents than used by EPA for the national GHG emissions inventory. Therefore, approach modifications may be required for the SIT to compile emission inventories in accordance with the most up-to-date IPCC and EPA guidance. Note that work under Task Five evaluates the accuracy and capability of EPA's SIT in compiling emission inventories by comparing inventories compiled with the EPA tool to those prepared with the most up-to-date IPCC and EPA guidance. This comparison is needed because, currently, the SIT does not include uncertainty and quality analyses.
 2. Examine the approach used by EPA to characterize emissions using the inventory of U.S. GHG emissions, carbon sinks, and the GHG Reporting Program.⁶⁶ These two complementary EPA programs are equivalent to Hawaii's approach of tracking both statewide and HAR affected facility GHG emissions. The EPA discussion regarding the similarities and differences between its two programs provides a useful reference for this effort.

II. **Task Two: Update Estimates of Hawaii Greenhouse Gas Emissions and Carbon Sinks.** The CONTRACTOR shall update prior estimates for the 1990, 2007, 2010, 2015, 2016, 2017 and additional historical inventories of Hawaii statewide and county (Hawaii, Honolulu, Kauai, and Maui) GHG emissions as emission estimates become available (e.g., inventories for 2005 and 2018-2021). The CONTRACTOR shall include the estimation and reporting of GHG emissions and sink categories and goals that address current (e.g., Act 234, Act 32, Act 15, Act 16) and evolving state needs. The CONTRACTOR shall use the methodology documented in Task One to update these estimates. The CONTRACTOR shall include and document comprehensive reviews of prior report estimates, associated references, data, and methodologies, and shall confirm validity or identify needed revisions. Steps for completing Task Two are as follows:

- a. Provide preliminary update to statewide and county GHG inventories for prior 1990 (baseline), 2007, 2010, 2015-2017 (Deliverable 2). Information from these inventory updates will be used to complete the following first annual GHG emissions report (preliminary): Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).

- b. Provide interim update to statewide and county GHG inventories for prior 1990 (baseline), 2005, 2007, 2010, and 2015-2019 for Deliverable 3. Information from these inventory updates will be used to complete the following second annual GHG emissions report (interim): Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- c. Provide final update to statewide and county GHG inventories for prior 1990 (baseline), 2005, 2007, 2010, 2015-2021 for Deliverable 4. Information from these inventory updates will be used to complete the following third annual GHG emissions report (final): Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).

III. **Task Three: Compile New Emission Inventories of Hawaii Greenhouse Gas Emissions and Carbon Sinks.** The CONTRACTOR shall estimate statewide and county GHG emissions and carbon sinks for 2005, 2018, 2019, 2020, 2021 and 2022. The CONTRACTOR shall include the estimation and reporting of GHG emissions and sink categories and goals that address current (e.g., Act 234, Act 32, Act 15, Act 16) and evolving state needs. The CONTRACTOR shall use the methodology documented in Task One to develop these estimates. The CONTRACTOR shall categorize these sources according to source category and sector (e.g., Energy and Waste Sectors, Industrial, Commercial, and Residential Stationary Combustion Source Categories, etc.) and county (Hawaii, Honolulu, Kauai, and Maui) within the statewide sources of emissions. The CONTRACTOR shall also estimate GHG emission levels for each HAR affected facility. Steps for completing Task Three are as follows:

- a. Compile preliminary emission inventories of the 2005, 2018, and 2019 statewide and county actual GHG emissions and carbon sinks for Deliverable 5. Information from this task will eventually be included in the Preliminary Report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- b. Compile interim emission inventories of the 2020 and 2021 statewide and county actual GHG emissions and carbon sinks for Deliverable 6. Information from this task will eventually be included in the Final Report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- c. Compile final emission inventories of the 2022 statewide and county actual GHG emissions and carbon sinks for Deliverable 7. Information from this task will eventually be included in the Final Report: Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).

IV. **Task Four: Compile Emission Inventories of Hawaii Greenhouse Gas Emissions and Carbon Sinks from Projected Estimates and Determine Progress Relative to Statewide Emissions Limit.** The CONTRACTOR shall estimate projected annual statewide GHG emissions and carbon sinks for 2020-2045. The CONTRACTOR shall include the estimation and reporting of GHG emissions and sink categories and goals that address current (e.g., Act 234, Act 32, Act 15, Act 16) and evolving state needs. The CONTRACTOR shall use the methodology documented in Task One to develop these projections. The CONTRACTOR shall categorize these sources according to source category and sector (e.g., Agriculture, Forestry, and Other Land Use Sector; Enteric Fermentation Source Category; etc.) and county (Hawaii, Honolulu, Kauai, and Maui) for the statewide sources of emissions. The CONTRACTOR shall compile actual and projected GHG emission levels for each HAR affected facility, or each partnering

group of HAR affected facilities, from 2010 forward. The CONTRACTOR shall use the results from Tasks Three and Four to assess the statewide progress relative to the statewide GHG emissions limit. The CONTRACTOR shall document the progress relative to the statewide GHG emissions limit in accordance with HAR §11-60.1-204(k). Steps for completing Task Four are as follows:

- a. Compile preliminary annual statewide and county GHG emission inventory projections for the 2020-2045 emission years for Deliverable 8. Information from this task will be used to complete the following first annual GHG emissions report (preliminary): Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- b. Compile interim annual statewide and county GHG emission inventory projections for the 2022 - 2045 emission years for Deliverable 9. Information from this task will be used to complete the following second annual GHG emissions report (interim): Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20)
- c. Compile final annual statewide and county GHG emission inventory projections for the 2023 - 2045 emission years for Deliverable 10. Information from this task will be used to complete the following third annual GHG emissions report (final): Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).
- d. Compile preliminary assessment of statewide progress relative to the statewide GHG emissions limit for Deliverable 11. Information from this task will be used to complete the following first annual GHG emissions report (preliminary): Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- e. Compile interim assessment of statewide progress relative to the statewide GHG emissions limit for Deliverable 12. Information from this task will be used to complete the following second annual GHG emissions report (interim): Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- f. Compile final assessment of statewide progress relative to the statewide GHG emissions limit for Deliverable 13. Information from this task will be used to complete the third annual GHG emissions report (final): Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).

- V. **Task Five: Task Five: Evaluate the Capability and Accuracy of EPA's SIT and Projection Tool to Develop Hawaii GHG Inventories and projections and Provide Associated SIT and Projection Tool Training.** The CONTRACTOR shall compile Hawaii GHG inventories and projections using EPA's SIT and Projection Tool to compare with inventories compiled in Task Three, and projections compiled in Task Four. The evaluation shall include methodology differences (e.g., input data, calculation methods, QA/QC, and uncertainty estimation procedures) and associated significances. The CONTRACTOR shall document issues and potential improvements to assist the CAB in advocating to EPA for general and Hawaii specific improvements. The contractor shall provide associated training to CAB personnel on use of the SIT and Projection Tool to compile and project GHG emissions, and as appropriate, assist in augmenting EPA guidance documents to enable future independent development of statewide GHG inventories and projections. Steps for completing Task Five are as follows:

- a. For Deliverable 14, compare preliminary inventories in Task 5 to those in Task 3 and Task 4 for 2015-2019 actual emissions and projected 2020-2045 emissions, respectively. Document associated augmentation for estimating actual and projected statewide GHG emissions with the SIT and Projection Tool. Also, provide training to CAB personnel on use of the SIT and Projection Tool. Information from this task shall be used to complete the following first annual GHG emissions report (preliminary): Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- b. For Deliverable 15, compare interim inventories in Task 5 to those in Task 3 and Task 4 for 2015-2021 actual emissions and projected 2022-2045 emissions, respectively. Document associated augmentation for estimating actual and projected actual statewide GHG emissions with the SIT and Projection Tool. Also, provide training to CAB personnel on the use of the SIT and Projection Tool. Information from this task shall be used to complete the following second annual GHG emissions report (interim): Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- c. For Deliverable 16, compare final inventories in Task 5 to those in Task 3 and Task 4 for 2015-2022 actual emissions and projected 2023-2045 emissions, respectively. Document associated augmentation for estimating actual and projected actual statewide GHG emissions with the SIT and Projection Tool. Also, provide training to CAB personnel on the use of the SIT and Projection Tool. Information from this task shall be used to complete the following third annual GHG emissions report (final): Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).

VI. **Task Six: Prepare Technical Support Documents (TSDs).** The primary purpose of the TSDs is to provide technical information to support GHG emissions inventory development and to confirm completion of key technical efforts under Task Two through Task Five of the Scope of Work. The CONTRACTOR shall prepare TSDs consistent with the methodology from Task One that contain the information needed to compile annual GHG emission reports developed under Task Seven. Each TSD shall be submitted to the CAB for review prior to submittal of the draft report. The CONTRACTOR shall prepare these support documents with information (e.g., data, calculations) in machine-readable format and references sufficient to enable independent validation of results and assessment of conclusions. The CONTRACTOR shall provide the following deliverables (TSDs):

- a. TSD: Preliminary - update the statewide and county GHG inventories for 1990 (baseline), 2007, 2010, and 2015-2017 for Deliverable 2. Information from this task will be used for the following first annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- b. TSD: Interim - update the statewide and county GHG inventories for 1990 (baseline), 2005, 2007, 2010, and 2015-2019 for Deliverable 3. Information from this task will be used for the following second annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- c. TSD: Final - update the statewide and county GHG inventories for 1990 (baseline), 2005, 2007, 2010, and 2015-2021 for Deliverable 4. Information from

this task will be used for the following third annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).

- d. TSD: Preliminary – create new inventories of statewide and county GHG emissions and carbon sinks for 2005, 2018, and 2019 for Deliverable 5. Information from this task will be used for the following first annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Deliverables 17 and 18).
- e. TSD: Interim – create new inventory of statewide and county GHG emissions and carbon sinks for 2020 and 2021 for Deliverable 6. Information from this task will be used for the following second annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverable 19 and 20).
- f. TSD: Final – create new inventory of statewide and county GHG emissions and carbon sinks for 2022 for Deliverable 7. Information from this task will be used for the following third annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).
- g. TSD: Preliminary – create projections for 2020-2045 emission years for Deliverable 8. Information from this task will be used for the following first annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019. (Deliverables 17 and 18)
- h. TSD: Interim – create projections for 2022-2045 emission years for Deliverable 9. Information from this task will be used for the following second annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverables 19 and 20).
- i. TSD: Final – projections for 2023-2045 emission years for Deliverable 10. Information from this task will be used for the following third annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverables 21 and 22).
- j. TSD: Preliminary – assessment of statewide progress relative to the statewide GHG emissions limit for the following first annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019. (Deliverable 11)
- k. TSD: Interim – assessment of statewide progress relative to the statewide GHG emissions limit for the following second annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Deliverable 12).
- l. TSD: Final - assessment of statewide progress relative to the statewide GHG emissions limit for the following third annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2022 (Deliverable 13).
- m. TSD: Preliminary - evaluate the capability and accuracy of EPA's SIT and Projection Tool to develop Hawaii GHG inventories for 2015-2019 actual emissions and 2020-2045 projections and provide associated training on the tools for the following first annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019. (Deliverable 14)
- n. TSD: Interim - evaluate the capability and accuracy of the EPA SIT and Projection Tool to develop Hawaii GHG inventories for 2015-2021 actual emissions and projected 2022-2045 emissions and provide associated tool training for the following second annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2020 and 2021. (Deliverable 15)

- o. TSD: Final - evaluate the capability and accuracy of the EPA SIT and Projection Tool to develop Hawaii GHG inventories for 2015-2022 actual emissions and projected 2023-2045 emissions and associated tool training for the following third annual GHG emissions report: Hawaii Greenhouse Gas Emissions Report for 2022. (Deliverable 16)

VII. Task Seven: Prepare Annual GHG Emissions Reports. The purpose of the reports is to provide public annual progress reports listing GHG emission levels for each HAR affected facility and the statewide progress relative to the statewide GHG emission limit. The CONTRACTOR shall prepare emission reports that include all relevant references, assumptions, associated rationale and significances, and modifications to emission estimates from prior reports (e.g., “Hawaii Greenhouse Gas Inventory: 1990 and 2007”⁶⁷, “Hawaii Greenhouse Gas Emissions Report for 2015”). The CONTRACTOR shall prepare these emission reports with non-proprietary information (e.g., data, calculations) in machine-readable format and references. The CONTRACTOR shall include electronic spreadsheet data to document data used, validation, QA/QC, and uncertainty estimates (annual and trend) that are provided in a format for “public consumption”. The CONTRACTOR shall ensure that documentation is sufficient to support independent validation of report results and conclusions. The CONTRACTOR shall ensure that each report includes the most current estimate of historical statewide and county GHG emissions (1990, 2005, 2007, 2010, 2015-2021 emission years, as applicable), new annual statewide GHG emissions (2005 and 2018-2022 emission years, as applicable), and projected statewide GHG emissions (e.g., 2020-2045 emission years, as applicable). For each annual GHG Emissions Report, the CONTRACTOR shall submit at least one draft version to CAB for review and comment. The CONTRACTOR shall submit additional draft versions of the annual GHG Emissions Report to the CAB for review and comment as needed for approval. After CAB approves a draft version, the CONTRACTOR shall submit the approved (Final) version of the report to CAB. The CONTRACTOR shall prepare the following annual GHG emission report Deliverables:

- a. Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Draft, 1st annual report) (Deliverable 17)
- b. Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Final, 1st annual report) (Deliverable 18)
- c. Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Draft, 2nd annual report) (Deliverable 19)
- d. Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Final, 2nd annual report) (Deliverable 20)
- e. Hawaii Greenhouse Gas Emissions Report for 2022 (Draft, 3rd annual report) (Deliverable 21)
- f. Hawaii Greenhouse Gas Emissions Report for 2022 (Final, 3rd annual report) (Deliverable 22)

List of Deliverables

1. Kickoff meeting with associated documentation of methodology, data sources, expected challenges, and planned approaches.
2. TSD: Preliminary - update to the statewide and county GHG inventories for 1990 (baseline), 2007, 2010, 2015-2017 for the Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019.
3. TSD: Interim - update to the statewide and county GHG inventories for 1990 (baseline), 2005, 2007, 2010, 2015-2019 for the Hawaii Greenhouse Gas Emissions Report for 2020 and 2021.
4. TSD: Final - update to the statewide and county GHG inventories for 1990 (baseline), 2005, 2007, 2010, 2015-2021 for the Hawaii Greenhouse Gas Emissions Report for 2022.
5. TSD: Preliminary – new inventory of statewide and county GHG emissions and carbon sinks for 2005, 2018, and 2019 for the Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019.
6. TSD: Interim – new inventory of statewide and county GHG emissions and carbon sinks for 2020 and 2021 for the Hawaii Greenhouse Gas Emissions Report for 2020 and 2021.
7. TSD: Final – new inventory of statewide and county GHG emissions and carbon sinks for 2022 for the Hawaii Greenhouse Gas Emissions Report for 2022.
8. TSD: Preliminary – statewide and county projections for 2020-2045 emission years for the Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019.
9. TSD: Interim – statewide and county projections for 2022-2045 emission years for the Hawaii Greenhouse Gas Emissions Report for 2020 and 2021.
10. TSD: Final – statewide and county projections for 2023-2045 emission years for the Hawaii Greenhouse Gas Emissions Report for 2022.
11. TSD: Preliminary – assessment of statewide progress relative to the statewide GHG emissions limit for the Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019.
12. TSD: Interim – assessment of statewide progress relative to the statewide GHG emissions limit for the Hawaii Greenhouse Gas Emissions Report for 2020 and 2021.
13. TSD: Final - assessment of statewide progress relative to the statewide GHG emissions limit for the Hawaii Greenhouse Gas Emissions Report for 2022.
14. TSD: Preliminary – SIT and Projection Tool training and tool evaluation to develop Hawaii GHG inventories for 2015-2019 actual emissions and projected 2020-2045 emissions for the Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019.
15. TSD: Interim – SIT and Projection Tool training and tool evaluation to develop Hawaii GHG inventories for 2015-2021 actual emissions and projected 2022- 2045 emissions for the Hawaii Greenhouse Gas Emissions Report for 2020 and 2021.
16. TSD: Final – SIT and Projection Tool training and tool evaluation to develop Hawaii GHG inventories for 2015-2022 actual emissions and projected 2023-2045 emissions for the Hawaii Greenhouse Gas Emissions Report for 2022.
17. Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Draft, 1st Annual Report)*
18. Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019 (Final, 1st Annual Report)*

19. Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Draft, 2nd Annual Report)*
20. Hawaii Greenhouse Gas Emissions Report for 2020 and 2021 (Final, 2nd Annual Report)*
21. Hawaii Greenhouse Gas Emissions Report for 2022 (Draft, 3rd Annual Report)*
22. Hawaii Greenhouse Gas Emissions Report for 2022 (Final, 3rd Annual Report)*

*Includes electronic spreadsheet data and calculations

2.3 HAWAII DEPARTMENT OF HEALTH RESPONSIBILITIES

The CAB is responsible for reviewing and commenting on annual GHG emission reports as needed for approval.

2.4 TERM OF CONTRACT

The contract shall be for a period of approximately three years and is intended to begin on December 15, 2021 and end on December 14, 2024 (see SECTION 1.3, RFP Schedule and Significant Dates).

Unless terminated, the CONTRACTOR and the STATE may extend the term of the contract for three (3) additional twelve (12) month periods or portions thereof without the necessity of re-soliciting, upon mutual agreement in writing at least sixty (60) days prior to the expiration of the contract. The contract price or commission paid to the CONTRACTOR for the extended period shall remain the same or as described in the offer.

When interests of the STATE or the CONTRACTOR so require, the STATE or the CONTRACTOR may terminate the contract for convenience by providing six (6) weeks prior written notice to the other party.

Payment to the CONTRACTOR shall be made on a fixed price basis for completed tasks according to HAR §3-122-136. Offerors shall provide their bid information using Offer Form, OF-2 (see SECTION SEVEN, Attachment 2) and the Table of Deliverables and Fixed Price Payments (see SECTION SEVEN, Attachment 3). In the Table of Deliverables and Fixed Price Payments, Offerors should propose a fixed payment price, as a percentage of the total, for each of the 22 discrete deliverables.

The proposed fixed price payments, which are increments of the total bid price, may not be identical to the values provided in the Cost Proposal, which are actual costs, but the payments should roughly correspond with the relative weight of effort and cost of a deliverable. The exceptions, which may have payment percentages higher than their relative actual cost to complete due to their importance to the project, are the final three emissions reports (Hawaii Greenhouse Gas Emissions Report for 2005, 2018, and 2019; Hawaii Greenhouse Gas Emissions Report for 2020 and 2021; and Hawaii Greenhouse Gas Emissions Report for 2022). While the final dates and payment percentages in the Table of Deliverables and Fixed Price Payments are negotiable, for this proposal, Offerors should use the percentages indicated for the three final emissions reports. Upon completion of a deliverable, as approved by the STATE, the CONTRACTOR will be paid the amount of the fixed price payment.

If federal grant funds are used for the contract, the CONTRACTOR shall comply with any applicable requirements.

The contract, including contract price, may be modified according to the STATE's established procedures and requirements.

2.5 CONTRACT ADMINISTRATOR

For the purposes of this contract, Barry Ching, Program Specialist, Clean Air Branch, (808) 586-4200, or authorized representative, is designated the Contract Administrator.

SECTION THREE

PROPOSAL FORMAT AND CONTENT

3.1 PROPOSAL SUBMITTAL

Offerors must submit one hardcopy of the original proposal, a signed transmittal letter, and the required forms as described in Sections 3.9 and 3.10 below. Do not submit documents by fax or email. Turn in all the completed documents by the proposal due date and time to the CAB Procurement Officer (see Section 1.3 for address).

Any and all costs incurred by the Offeror in preparing or submitting a proposal shall be the Offeror's sole responsibility whether or not any award results from this RFP. The STATE shall not reimburse such costs.

3.2 OFFEROR'S AUTHORITY TO SUBMIT AN OFFER

The STATE will not participate in determinations regarding an Offeror's authority to sell a product or service. If there is a question or doubt regarding an Offeror's right or ability to obtain and sell a product or service, the Offeror shall resolve that question prior to submitting an offer.

3.3 REQUIRED REVIEW

- 3.3.1 Before submitting a proposal, each Offeror must thoroughly and carefully examine this RFP, any attachment, addendum, and other relevant document, to ensure Offeror understands the requirements of the RFP. Offeror must also become familiar with State, local, and Federal laws, statutes, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the work required.
- 3.3.2 Should Offeror find defects and questionable or objectionable items in the RFP, Offeror shall notify the CAB in writing prior to the deadline for written questions as stated in *1.2 RFP Schedule and Significant Dates*, as amended. This will allow the issuance of any necessary corrections and/or amendments to the RFP by addendum, and mitigate reliance of a defective solicitation and exposure of proposal(s) upon which award could not be made.

3.4 TAX LIABILITY

- 3.4.1 Work to be performed under this solicitation is a business activity taxable under HRS Chapter 237, and if applicable, taxable under HRS Chapter 238. CONTRACTOR is advised that it is liable for the Hawaii General Excise Tax (GET) at the current 4.5% for sales made on Oahu, and at the 4% rate for the islands of Hawaii, Maui, Molokai, and Kauai. If, however, an Offeror is exempt by the HRS from paying the GET and therefore not liable for the taxes on this solicitation, Offeror shall state its tax-exempt status and cite the HRS chapter or section allowing the exemption.

- 3.4.2 Offeror shall submit its current Federal I.D. No. and Hawaii General Excise Tax License I.D. number in the space provided on Offer Form, OF-1 (see SECTION SEVEN, Attachment 1), thereby attesting that the Offeror is doing business in the STATE and that Offeror will pay such taxes on all sales made to the STATE.

3.5 PROPERTY OF STATE

All proposals become the property of the State of Hawaii.

3.6 CONFIDENTIAL INFORMATION

- 3.6.1 If an Offeror believes that any portion of a proposal, offer, specification, protest, or correspondence contains information that should be withheld from disclosure as confidential, then the Offeror shall inform the Procurement Officer named on the cover of this RFP in writing and provide justification to support the Offeror's confidentiality claim. Price is not considered confidential and will not be withheld.
- 3.6.2 An Offeror shall request in writing nondisclosure of information such as designated trade secrets or other proprietary data Offeror considers to be confidential. Such requests for nondisclosure shall accompany the proposal, be clearly marked, and shall be readily separable from the proposal in order to facilitate eventual public inspection of the non-confidential portion of the proposal.

3.7 EXCEPTIONS

Should Offeror take any exception to the terms, conditions, specifications, or other requirements listed in the RFP, Offeror shall list such exceptions in this section of the Offeror's proposal. Offeror shall reference the RFP section where exception is taken, a description of the exception taken, and the proposed alternative, if any. The STATE reserves the right to accept or not accept any exceptions.

No exceptions to statutory requirements of the General Conditions (GC) shall be considered.

3.8 PROPOSAL OBJECTIVES

- 3.8.1 One of the objectives of this RFP is to make proposal preparation easy and efficient, while giving Offerors ample opportunity to highlight their proposals. The evaluation process must also be manageable and effective.
- 3.8.2 Proposals shall be prepared in a straightforward and concise manner, in a format that is reasonably consistent and appropriate for the purpose. Emphasis will be on completeness, clarity, and content.
- 3.8.3 When an Offeror submits a proposal, it shall be considered a complete plan for accomplishing the tasks described in this RFP and any supplemental tasks the Offeror has identified as necessary to successfully complete the obligations outlined in this RFP.

- 3.8.4 The proposal shall describe in detail the Offeror's ability and availability of services to meet the goals and objectives of this RFP as stated in Section 2.2, SCOPE OF WORK.
- 3.8.5 Offeror shall submit a proposal that includes an overall strategy, timeline, and plan for the work proposed, as well as expected results and possible shortfalls.

3.9 PROPOSAL FORMS

- 3.9.1 To be considered responsive, the Offeror's proposal shall respond to and include all items specified in this RFP and any subsequent addendum. Any proposal offering any other set of terms and conditions that conflict with the terms and conditions provided in the RFP or in any subsequent addendum may be rejected without further consideration.

- 3.9.2 Offer Form, OF-1. Offer Form, OF-1 must be completed using Offeror's exact legal name as registered with the Department of Commerce and Consumer Affairs, if applicable, in the appropriate space on Offer Form, OF-1 (SECTION SEVEN, Attachment 1). Failure to do so may delay proper execution of the Contract.

The Offeror's authorized signature on the Offer Form, OF-1 shall be an original signature in ink, which shall be required before an award, if any, can be made. The submission of the proposal shall indicate Offeror's intent to be bound.

- 3.9.3 Offer Form, OF-2. Pricing shall be submitted on Offer Form, OF-2 (SECTION SEVEN, Attachment 2). The price shall be the all-inclusive cost, including the GET, to the STATE. No other costs will be honored. Any unit prices shall be inclusive.

3.10 PROPOSAL CONTENTS

Proposals must:

- 3.10.1 Include a transmittal letter to confirm that the Offeror shall comply with the requirements, provisions, terms, and conditions specified in this RFP.
- 3.10.2 Include a signed Offer Form, OF-1 with the complete name and address of Offeror's firm and the name, mailing address, telephone number, and fax number of the person the STATE should contact regarding the Offeror's proposal. Also include a completed Offer Form, OF-2.
- 3.10.3 If subcontractor(s) will be used, append a statement to the transmittal letter from each subcontractor, signed by an individual authorized to legally bind the subcontractor and stating:
- a. The general scope of work to be performed by the subcontractor; and
 - b. The subcontractor's willingness to perform the SCOPE OF WORK.
- 3.10.4 Provide all of the information requested in this RFP in the order specified.

3.10.5 Be organized into sections, following the format below to the degree possible.

- a. Transmittal Letter
See SECTION SEVEN, Attachment 1, Offer Form, OF-1.
- b. To address qualifications and experience, provide the following for key project team personnel proposed for this contract:
 - 1) Name and address of the key personnel;
 - 2) Key personnel resumes; and
 - 3) Documentation that, combined, personnel have experience with the following:
 - i. Developing Statewide GHG inventories;
 - ii. Using IPCC guidance documents;
 - iii. Using EPA GHG guidance documents; and
 - iv. Compiling emission inventories with EPA State Inventory and Projection Tool.
- c. Document company experience and past performance as follows:
 - 1) Indicate (yes or no) whether the company has had completed contracts that would provide experience in the following areas:
 - i. Developing statewide GHG inventories;
 - ii. Using IPCC guidance documents;
 - iii. Using EPA GHG guidance documents; and
 - iv. Working with EPA State Inventory and Projection Tool.
 - 2) Provide information, as applicable, on relevant prior contracts, the relevance to this CAB project, and associated customer references in the following areas for each contract:
 - i. Scope of work;
 - ii. Completeness;
 - iii. Quality;
 - iv. Timeliness;
 - v. Project cost as initially awarded;
 - vi. Project cost at completion;
 - vii. The role of any key personnel proposed as it pertains to this CAB project;
 - viii. Customer reference and contact information; and
 - ix. Other relevant information as appropriate.
 - 3) Document any lawsuits, arbitration, and/or mediation involving your company, whether the company was a defendant or plaintiff, within the last five years.
 - 4) Document any formal or informal complaints either against your company, or by your company, within the last five years.

- d. Address proposal responsiveness, quality, and completeness as follows:
 - 1) Provide descriptions of how you plan to address the proposal tasks specified in the RFP and how this will be accomplished by the proposed completion dates; and
 - 2) Provide descriptions of the proposal deliverables specified in the RFP and associated delivery dates.
- e. Document the proposal cost for this CAB project based on the following:
 - 1) Cost of proposed project at the task level or finer;
 - 2) Basis of those costs;
 - 3) Proposed cost reimbursement associated with government acceptance of deliverables. Note that a minimum of 20% for the 2005, 2018 and 2019 final reports, 10% for the 2020 and 2021 final reports, and 10% for the 2022 final report is required. Please see Attachment 3, Table of Deliverables and Fixed Price Payments.
 - 4) Identify any sub-contractor for documenting cost (Sub-contractors may not be changed without written approval from CAB); and
 - 5) Note that project firm fixed price cost shall not exceed budget stated in RFP.

3.11 RECEIPT AND REGISTER OF PROPOSALS

Proposals will be received and receipt verified by two or more procurement officials on or after the date and time specified in *1.2 RFP Schedule and Significant Dates*, as amended.

The register of proposals and proposals of the Offeror(s) shall be open to public inspection upon posting of award pursuant to Section 103D-701, HRS.

3.12 BEST AND FINAL OFFER (BAFO)

If the STATE determines a BAFO is necessary, it shall request one from the Offeror. Any BAFO received after the deadline shall not be considered.

3.13 MODIFICATION PRIOR TO SUBMITTAL DEADLINE OR WITHDRAWAL OF OFFERS

3.13.1 The Offeror may modify or withdraw a proposal before the proposal due date and time.

3.13.2 Any change, addition, or deletion of attachment(s) or data entry of an Offer may be made prior to the deadline for submittal of offers.

3.14 MISTAKES IN PROPOSALS

3.14.1 Mistakes shall not be corrected after award of contract.

- 3.14.2 When the Procurement Officer knows or has reason to conclude before award that a mistake has been made, the Procurement Officer should request the Offeror to confirm the proposal. If the Offeror alleges a mistake, the proposal may be corrected or withdrawn pursuant to this section.
- 3.14.3 Once discussions are commenced or after best and final offers are requested, any priority-listed Offeror may freely correct any mistake by modifying or withdrawing the proposal until the time and date set for receipt of best and final offers.
- 3.14.4 If discussions are not held, or if the best and final offers upon which award will be made have been received, mistakes shall be corrected to the intended correct offer whenever the mistake and the intended correct offer are clearly evident on the face of the proposal, in which event the proposal may not be withdrawn.
- 3.14.5 If discussions are not held, or if the best and final offers upon which award will be made have been received, an Offeror alleging a material mistake of fact which makes a proposal non-responsive may be permitted to withdraw the proposal if: the mistake is clearly evident on the face of the proposal but the intended correct offer is not; or the Offeror submits evidence which clearly and convincingly demonstrates that a mistake was made.

Technical irregularities are matters of form rather than substance evident from the proposal document, or insignificant mistakes that can be waived or corrected without prejudice to other Offerors; that is, when there is no effect on price, quality, or quantity. If discussions are not held or if best and final offers upon which award will be made have been received, the Procurement Officer may waive such irregularities or allow an Offeror to correct them if either is in the best interest of the STATE. Examples include the failure of an Offeror to: return the number of signed proposals required by the request for proposals; sign the proposal, but only if the unsigned proposal is accompanied by other material indicating the Offeror's intent to be bound; or to acknowledge receipt of an amendment to the request for proposal, but only if it is clear from the proposal that the Offeror received the amendment and intended to be bound by its terms; or the amendment involved had no effect on price, quality or quantity.

SECTION FOUR

EVALUATION CRITERIA

Evaluation criteria and the associated points are listed below. The award will be made to the responsible Offeror whose proposal is determined to be the most advantageous to the STATE based on the evaluation criteria listed in this section.

The total number of points used to score this contract is 100.

1) Qualifications and experience of key project team personnel proposed for this contract	Points
a. Key project team personnel for this contract proposal.	15
b. Experience developing Hawaii statewide GHG Inventories.	
c. Experience developing non-Hawaii statewide GHG Inventories.	
d. Experience implementing IPCC guidance documents.	
e. Experience implementing EPA GHG guidance documents.	
f. Experience with EPA State Inventory and Projection Tool.	
g. Familiarity with Hawaii GHG laws, regulations, and programs.	
h. Other relevant experience as appropriate.	
2) Company Experience and Past Performance	Points
a. Experience developing Hawaii statewide GHG Inventories.	10
b. Experience developing non-Hawaii statewide GHG Inventories.	
c. Experience implementing IPCC guidance documents.	
d. Experience implementing EPA GHG guidance documents.	
e. Experience with EPA State Inventory and Projection Tool.	
f. Experience with Hawaii GHG laws, regulations, and programs.	
g. Other relevant experience as appropriate.	
h. Prior completed contracts and customer references.	
i. Past lawsuits.	
j. Formal complaints	
3) Proposal Responsiveness, Quality, and Completeness	Points
a. <u>Methodology and approaches for completing work tasks.</u>	55
i. Task One: Methodology to prepare Hawaii statewide GHG emission inventories and projections that comply with IPCC and EPA guidance, including training for implementing EPA's State Inventory and Projection Tool. As appropriate, document relevant experience and discuss applicability to this project.	
ii. Task One: Identification of anticipated sources of Hawaii GHG emission inventory information needed for this task. As appropriate, document relevant experience and discuss applicability to this project.	
iii. Task One: Approach to update existing Hawaii statewide GHG inventories to maintain consistency with both prior inventories and current IPCC and EPA guidance throughout the contract. As appropriate, document relevant experience and discuss applicability to this project.	

iv. Task One: Approach to implement quantitative uncertainty estimation, quality assurance, and quality control procedures in the preparation of Hawaii statewide GHG emission inventories. As appropriate, document relevant experience and discuss applicability to this project.	
v. Task Two: Implementation of Task One description to update of 1990, 2005, 2007, 2010, and 2015-2021 Hawaii statewide GHG emissions inventories.	
vi. Task Three: Implementation of Task One description for compilation of new Hawaii statewide GHG inventories for 2005, 2018, 2019, 2020, 2021, and 2022.	
vii. Task Four: Implementation of Task One description for projection of Hawaii statewide GHG inventories and determining progress relative to statewide emissions limit.	
viii. Task Five: Methodology to evaluate the EPA's SIT and Projection Tool for potential future development of Hawaii GHG Inventories and provide associated training on the tool. As appropriate, document relevant experience and discuss applicability to this project.	
<u>b. Description of proposal deliverables specified in the RFP and associated delivery dates.</u>	
i. Task Six: Ability of Technical Support Document to enable independent validation of results and assessment of conclusions based on the work performed in Tasks One through Five.	
ii. Task Seven: Ability of the Annual GHG Emission Reports to fully document the work performed in Tasks One through Six.	
<u>c. Risk management approach to support technical quality and on-schedule completion of the technical effort.</u>	
i. Present the risk management approach to be implemented for the technical effort.	
ii. Identify key risk factors and planned mitigations.	
iii. As appropriate, document relevant experience and discuss applicability to this project.	
4) Cost Proposal	Points
a. Detailed and rational cost basis of proposed project.	20
b. Total project value (e.g. reasonableness of cost)	
c. Individual task value (e.g. reasonableness of cost)	
e. Total project cost	
f. Individual task cost	

SECTION FIVE

CONTRACTOR SELECTION AND CONTRACT AWARD

5.1 EVALUATION OF PROPOSALS

The Procurement Officer, or an evaluation committee of at least three (3) qualified State employees selected by the Procurement Officer, shall evaluate proposals. The evaluation will be based solely on the evaluation criteria set out in Section Four of this RFP.

Prior to holding any discussion, a priority list shall be generated consisting of offers determined to be acceptable or potentially acceptable. However, proposals may be accepted without such discussions.

If numerous acceptable and potentially acceptable proposals are submitted, the evaluation committee may limit the priority list to the three highest ranked, responsible Offerors.

5.2 DISCUSSION WITH PRIORITY LISTED OFFERORS

The STATE may invite priority listed Offerors to discuss with their proposals to ensure thorough, mutual understanding. The STATE in its sole discretion shall schedule the time and location for these discussions, generally within the timeframe indicated in *1.2 RFP Schedule and Significant Dates*. The STATE may also conduct discussions with priority listed Offerors to clarify issues regarding the proposals before requesting Best and Final Offers, if necessary.

5.3 AWARD OF CONTRACT

Method of Award. Award will be made to the responsible Offeror whose proposal is determined to be the most advantageous to the STATE based on the evaluation criteria set forth in the RFP.

The notice of award, if any, resulting from this solicitation shall be posted on the Hawaii Awards & Notices System (HANDS), which is available on the SPO website:
<https://hands.ehawaii.gov/hands/>

5.4 RESPONSIBILITY OF OFFERORS

Offeror is advised that in order to be awarded a contract under this solicitation, Offeror will be required, to be compliant with all laws governing entities doing business in the STATE including the following chapters and pursuant to HRS §103D-310(c):

1. Chapter 237, General Excise Tax Law;
2. Chapter 383, Hawaii Employment Security Law;
3. Chapter 386, Worker's Compensation Law;
4. Chapter 392, Temporary Disability Insurance;
5. Chapter 393, Prepaid Health Care Act; and
6. §103D-310(c), Certificate of Good Standing (COGS) for entities doing business in the State.

The STATE will verify compliance on Hawaii Compliance Express (HCE).

Hawaii Compliance Express. The HCE is an electronic system that allows vendors/contractors/service providers doing business with the STATE to demonstrate compliance with applicable laws. It is an online system that replaces the necessity of obtaining paper compliance certificates from the Department of Taxation, Federal Internal Revenue Service; Department of Labor and Industrial Relations, and Department of Commerce and Consumer Affairs.

Vendors/contractors/service providers should register with HCE prior to submitting an offer at <https://vendors.ehawaii.gov/hce/>. The annual registration fee is \$12.00 and the 'Certificate of Vendor Compliance' is accepted for the execution of contract and final payment.

Timely Registration on HCE. Vendors/contractors/service providers are advised to register on HCE as soon as possible. If a vendor/contractor/service provider is not compliant on HCE at the time of award, an Offeror will not receive the award.

5.5 PROPOSAL AS PART OF THE CONTRACT

This RFP and all or part of the successful proposal may be incorporated into the contract.

5.6 PUBLIC EXAMINATION OF PROPOSALS

Except for confidential portions, the proposals shall be made available for public inspection upon posting of award pursuant to HRS §103D-701.

If a person is denied access to a STATE procurement record, the person may appeal the denial to the Office of Information Practices in accordance with HRS §92F-42(12).

5.7 DEBRIEFING

Pursuant to HAR §3-122-60, a non-selected Offeror may request a debriefing to understand the basis for award.

A written request for debriefing shall be made within three (3) working days after the posting of the award of the contract. The Procurement Officer or designee shall hold the debriefing within seven (7) working days to the extent practicable from the receipt date of written request.

Any protest by the requestor following a debriefing, shall be filed within five (5) working days, as specified in HAR §103D-303(h).

5.8 PROTEST PROCEDURES

Pursuant to HRS §103D-701 and HAR §3-126-3, an actual or prospective Offeror who is aggrieved in connection with the solicitation or award of a contract may submit a protest. Any protest shall be submitted in writing to the Procurement Officer.

A protest shall be submitted in writing within five (5) working days after the aggrieved person knows or should have known of the facts giving rise thereto; provided that a protest based upon the content of the solicitation shall be submitted in writing prior to the date set for receipt of offers. Further provided that a protest of an award or proposed award shall be submitted within five (5) working days after the posting of award or if requested, within five (5) working days after the PO's debriefing was completed.

5.9 APPROVALS

Any agreement arising out of this offer may be subject to the approval of the Department of the Attorney General, and to all further approvals, including the approval of the Governor, as required by statute, regulation, rule, order, or other directive.

5.10 CONTRACT EXECUTION

Successful Offeror receiving award shall enter into a formal written contract in the form as in Exhibit B. No performance or payment bond is required for this contract.

No work is to be undertaken by the CONTRACTOR prior to the effective date of contract. The State of Hawaii is not liable for any work, contract, costs, expenses, loss of profits, or any damages whatsoever incurred by the CONTRACTOR prior to the official starting date.

If an option to extend is mutually agreed upon, the CONTRACTOR shall be required to execute a supplement to the contract for the additional extension period.

5.11 INSURANCE

5.11.1 Prior to the contract start date, the CONTRACTOR shall procure at its sole expense and maintain insurance coverage acceptable to the STATE in full force and effect throughout the term of the Contract. The Offeror shall provide proof of insurance for the following minimum insurance coverage(s) and limit(s) in order to be awarded a contract. The type of insurance coverage is listed as follows:

1. Commercial General Liability Insurance

Commercial general liability insurance coverage against claims for bodily injury and property damage arising out of all operations, activities or contractual liability by the CONTRACTOR, its employees and subcontractors during the term of the Contract. This insurance shall include the following coverage and limits specified or required by any applicable law: bodily injury and property damage coverage with a minimum of \$1,000,000 per occurrence; personal and advertising injury of \$1,000,000 per occurrence; broadcasters' liability insurance of \$1,000,000 per occurrence; and with an aggregated limit of \$2,000,000. The commercial general liability policy shall be written on an occurrence basis and the policy shall provide legal defense costs and expenses in addition to the limits of liability stated above. The CONTRACTOR shall be responsible for payment of any deductible applicable to this policy.

2. Automobile Liability Insurance

Automobile liability insurance covering owned, non-owned, leased, and hired vehicles with a minimum of \$1,000,000 for bodily injury for each person, \$1,000,000 for bodily injury for each accident, and \$1,000,000 for property damage for each accident.

3. Appropriate levels of per occurrence insurance coverage for workers' compensation and any other insurance coverage required by Federal or State law.

5.11.2 The CONTRACTOR shall deposit with the SPO, on or before the effective date of the Contract, certificate(s) of insurance necessary to satisfy the SPO that the provisions of the Contract have been complied with, and to keep such insurance in effect and provide the certificate(s) of insurance to the SPO during the entire term of the Contract. Upon request by the SPO, the CONTRACTOR shall furnish a copy of the policy or policies.

5.11.3 The CONTRACTOR will immediately provide written notice to the SPO and contracting department or agency should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed up expiration.

5.11.4 The certificates of insurance shall contain the following clauses:

1. "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."
2. "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy."

5.11.5. Failure of the CONTRACTOR to provide and keep in force such insurance shall constitute a material default under the Contract, entitling the STATE to exercise any or all of the remedies provided in the Contract (including without limitation terminating the Contract). The procuring of any required policy or policies of insurance shall not be construed to limit the CONTRACTOR'S liability hereunder, or to fulfill the indemnification provisions of the Contract. Notwithstanding said policy or policies of insurance, the CONTRACTOR shall be responsible for the full and total amount of any damage, injury, or loss caused by the CONTRACTOR'S negligence or neglect in the provision of services under the Contract.

5.12 PAYMENT

Payments shall be made to the awarded CONTRACTOR on a fixed price basis according to HAR §3-122-136. Upon receipt of products or reports that meet the expectations of the RFP (see section 2.2 Scope of Work) and the approval of the STATE, the CONTRACTOR shall be paid the price set for that product or report.

5.13 CONTRACT INVALIDATION

If any provision of this contract is found to be invalid, such invalidation will not be construed to invalidate the entire contract.

SECTION SIX

SPECIAL PROVISIONS

6.1 OFFER GUARANTY

A proposal security deposit is NOT required for this RFP.

6.2 ACCEPTANCE AND TESTING

Emission inventories work shall be in accordance with that specified in Section 2.2, SCOPE OF WORK. The work is subject to CAB review and comment as needed for approval pursuant to Section 2.3, HAWAII DEPARTMENT OF HEALTH RESPONSIBILITIES.

6.2 INTELLECTUAL PROPERTY RIGHTS

The STATE reserves the right to unlimited, irrevocable, worldwide, perpetual, royalty-free, non-exclusive licenses to use, modify, reproduce, perform, release, display, create derivative works from, and disclose the work product, and to transfer the intellectual property to third parties for STATE purposes.

6.3 TERMINATIONS FOR CONVENIENCE OR UNAVAILABILITY OF FUNDS

Clarify conditions when funds are limited but assurance of payment for completed performance.

ENDNOTES

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- ¹ State of Hawaii, Department of Health, “Amendment and Compilation of Chapter 11-60.1 Hawaii Administrative Rules, Hawaii Administrative Rules 11 - 60.1 Air Pollution Control”, June 19, 2014; http://health.hawaii.gov/cab/files/2014/07/HAR_11-60_1-typed.pdf
- ² Hawaii Public Utilities Commission, Docket: 2014-0183, “INSTITUTING A PROCEEDING TO REVIEW THE POWER SUPPLY IMPROVEMENT PLANS FOR HAWAIIAN ELECTRIC COMPANY, INC., HAWAII ELECTRIC LIGHT COMPANY, INC., AND MAUI ELECTRIC COMPANY, LIMITED.”; <https://dms.puc.hawaii.gov/dms/dockets?action=details&docketNumber=2014-0183>
- ³ Hawaii Public Utilities Commission, Docket: 2017-0226, “INSTITUTING A PROCEEDING RELATED TO THE HAWAIIAN ELECTRIC COMPANIES’ GRID MODERNIZATION STRATEGY.”; <https://dms.puc.hawaii.gov/dms/dockets?action=details&docketNumber=2017-0226>
- ⁴ Hawaii Public Utilities Commission, Docket 2018-0165, “INSTITUTING A PROCEEDING TO INVESTIGATE INTEGRATED GRID PLANNING.”; <https://dms.puc.hawaii.gov/dms/dockets?action=details&docketNumber=2018-0165>
- ⁵ Hawaii Clean Energy Initiative (HCEI); <http://www.hawaiicleanenergyinitiative.org/>
- ⁶ Renewable Portfolio Standard (RPS); http://puc.hawaii.gov/reports/legislature/attachment/2013-puc-rps-report_final-w-appnds/
- ⁷ Energy Efficiency Portfolio Standard (EEPS); <http://health.hawaii.gov/cab/hawaii-greenhouse-gas-program/>
- ⁸ Hawaii Climate Change Mitigation & Adaption Initiative; <https://climateadaptation.hawaii.gov/initiative/>
- ⁹ State of Hawaii, Act 032, A Bill for an Act Relating to Climate Change, approved by the Governor on June 6, 2017; https://www.capitol.hawaii.gov/session2017/bills/GM1132_.PDF
- ¹⁰ State of Hawaii, Act 015, A Bill for an Act Relating to Environmental Protection, approved by the Governor on June 4, 2018; https://www.capitol.hawaii.gov/session2018/bills/GM1115_.PDF
- ¹¹ State of Hawaii, Act 016, A Bill for an Act Relating to the Environment, approved by the Governor on June 4, 2018; https://www.capitol.hawaii.gov/session2018/bills/GM1116_.PDF
- ¹² Hawaii Revised Statutes, 225P-3, Hawaii climate change mitigation and adaptation commission; general functions, duties, and powers; https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0225P/HRS_0225P-0003.htm
- ¹³ Hawaii Revised Statutes, 225P-4, Greenhouse gas sequestration task force; https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0225P/HRS_0225P-0004.htm
- ¹⁴ Hawaii Revised Statutes, 225P-5, Zero emissions clean economy target; https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0225P/HRS_0225P-0005.htm
- ¹⁵ Hawaii Revised Statutes, 225P-6, Carbon offset program; https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0225P/HRS_0225P-0006.htm
- ¹⁶ State of Hawaii, Department of Health, Hawaii Greenhouse Gas Program website; <http://health.hawaii.gov/cab/hawaii-greenhouse-gas-program/>
- ¹⁷ ICF, prepared for State of Hawaii, Department of Health, Hawaii Greenhouse Gas Emissions Report for 2015, January 2019; https://health.hawaii.gov/cab/files/2019/02/2015-Inventory_Final-Report_January-2019-004-1.pdf
- ¹⁸ ICF, prepared for State of Hawaii, Department of Health, Hawaii Greenhouse Gas Emissions Report for 2016, December 2019; https://health.hawaii.gov/cab/files/2019/12/2016-Inventory_Final-Report_December2019-1.pdf
- ¹⁹ ICF, prepared for State of Hawaii, Department of Health, Hawaii Greenhouse Gas Emissions Report for 2017, April 2021, https://health.hawaii.gov/cab/files/2021/04/2017-Inventory_Final-Report_April-2021.pdf
- ²⁰ U.S Energy Information Administration; <https://www.eia.gov/>
- ²¹ State of Hawaii, Act 092, A Bill for an Act Relating to Energy Data, approved by the Governor on June 7, 2019; https://www.capitol.hawaii.gov/session2019/bills/GM1193_.PDF
- ²² United Nations Climate Change, The Paris Agreement; <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
- ²³ European Commission, EU Climate Action, Carbon leakage; https://ec.europa.eu/clima/policies/ets/allowances/leakage_en
- ²⁴ State of Hawaii Supreme Court, SCOT-19-0000044, 09-JUN-2020;

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- ²⁵ State of Hawaii, Department of Land and Natural Resources, News Release, “State Climate Commission Encourages Urgent Actions to Combat Emissions”, November 28, 2018; <http://climate.hawaii.gov/wp-content/uploads/2018/11/NR-Climate-Commission-Recommend-Urgent-Action-to-Combat-Emissions-Nov.-28-2018.pdf>
- ²⁶ A.S.G Andrae, “Comparison of Several Simplistic High-Level Approaches for Estimating the Global Energy and Electricity Use of ICT Networks and Data Centers”, International Journal of Green Technology, 2019, 5, 50-63; <https://ijgtech.com/ijgtv5a6/>
- ²⁷ United Nations, International Civil Aviation Organization (ICAO); <https://www.icao.int/about-icao/Pages/default.aspx>
- ²⁸ United Nations, International Maritime Organization (IMO); <http://www.imo.org/en/About/Pages/Default.aspx>
- ²⁹ U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (GHGRP); <https://www.epa.gov/ghgreporting>
- ³⁰ U.S. Environmental Protection Agency, Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks; <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-passenger-cars-and-trucks>
- ³¹ U.S. Environmental Protection Agency, Office of Inspector General, Improvements Needed in EPA Efforts to Address Methane Emissions From Natural Gas Distribution Pipelines, Report No. 14-P-0324, July 25, 2014; https://www.epa.gov/sites/production/files/2015-09/documents/20140725-14-p-0324_0.pdf
- ³² State of Hawaii, Hawaii State Energy Office, STATE VEHICLE PURCHASING GUIDELINES; <https://energy.hawaii.gov/energy-efficiency-in-soh/programsachieving-efficiencylead-by-examplevehicle-purchasing-guidelines>
- ³³ State of Hawaii, Supreme Court, SCOT-17-0000630, APPEAL FROM THE PUBLIC UTILITIES COMMISSION (Docket No. 2017-0122); <https://www.courts.state.hi.us/wp-content/uploads/2019/05/SCOT-17-0000630.pdf>
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