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OFM DIRECTOR'S OFFICE

**Sole Source Contract
between the
State of Washington
Office of the Financial Management
and
Life Cycle Associates, LLC**

This Contract is made and entered into by and between the state of Washington, Office of Financial Management, hereinafter referred to as the "AGENCY", and the below named firm, hereinafter referred to as "CONTRACTOR."

Company Name: Life Cycle Associates, LLC

Address: 884 Portola Road, Suite A11

Address: Portola Valley, CA 94028

Phone: 650-740-0410

FAX: 484-313-9504

Email: pont@lifecycleassociates.com

WA State UBI Number: 603302721

BACKGROUND

Transportation produces the largest share of Washington's greenhouse gas emissions, typically close to half of the state's emissions (about 45 percent in recent years). Addressing this source of emissions is a key to achieving Washington's statutory greenhouse gas reduction goals (RCW 70.235.020). In 2009-2011, Washington Department of Ecology's (Ecology) Air Quality Program commissioned an analysis of the implications of launching a Low Carbon Fuel Standard program to reduce these emissions.¹ In 2013 a review of the original analysis was conducted to consider the degree to which updated assumptions might alter the original conclusions.²

As a next step, Governor Inslee has directed, by Executive Order 14-04, the Office of Financial Management (OFM) with other agencies, and advice from subject matter experts, affected industries, and public interests, to evaluate the technical feasibility, costs and benefits, and job implications of requiring the use of cleaner transportation fuels through standards that reduce the carbon intensity of these fuels over time. Building on the original work and subsequent review, the consultant commissioned under this contract will:

¹ *A Low Carbon Fuel Standard in Washington: Informing the Decision*, TIAX LLC, 2011

² *WA LCFS Analysis: Implication of Updated Assumptions*, Life Cycle Associates, 2013

- Describe and discuss the technological, fuel, and cost containment mechanism options available to Washington, now and in the future, that could be used to meet a clean fuel standard (CFS).
- Assess the innovation opportunities, resource availability issues, and infrastructure requirements associated with fuels and technologies applicable to meeting a CFS.
- Assign values for the carbon intensity of transportation fuels used in Washington using the best available science and widely accepted life-cycle modeling tools.
- Develop hypothetical scenarios to achieve a CFS representing a diversity of opinion regarding the extent to which the established options could be used to meet the standard.
- Calculate the costs and benefits of each of the compliance scenarios to Washington, using REMI PI+ as the core modeling tool, with appropriate sensitivity analysis.

The work conducted for this process will use the best available research and policy analysis, be conducted in a transparent manner, and reflect a broad spectrum of potential assumptions that shape the analysis. The analysis will inform decision makers on how best to devise or adapt a CFS program to reduce the carbon intensity of transportation fuels used in Washington and the economic and technical implications of such an approach.

SCOPE OF WORK

- A. Exhibit A, attached hereto and incorporated by reference, contains the *General Terms and Conditions* governing work to be performed under this contract, the nature of the working relationship between the AGENCY and the CONTRACTOR, and specific obligations of both parties.
- B. The CONTRACTOR will provide services and staff, and otherwise do all things necessary for or incidental to the performance of work, as set forth in Exhibit B.
- C. The CONTRACTOR shall produce written documents (deliverables) by the dates indicated in Exhibit B.

PERIOD OF PERFORMANCE

The period of performance under this contract will be from June 5, 2014, or date of execution, whichever is later, through December 31, 2014.

DES FILING REQUIREMENT

The provisions of Chapter 39.26 RCW require the AGENCY to file this sole source contract with the Department of Enterprise Services (DES) for review. No contract so filed is effective nor shall work commence under it until the tenth (10th) working day following the date of filing.

COMPENSATION

Total compensation payable to CONTRACTOR for satisfactory performance of the work under this contract shall not exceed \$170,000 for all things necessary for or incidental to the performance of work as set forth in the Exhibit B, Scope of Work & Deliverables. CONTRACTOR'S compensation for services rendered shall be based on the summary table set forth in Exhibit C, Compensation and Budget.

CONTRACTOR shall receive reimbursement for travel and other expenses as identified in Exhibit C. The maximum amount to be paid to the CONTRACTOR for authorized expenses shall not exceed \$7,500, which amount is included in the contract total above.

Such expenses may include airfare (economy or coach class only), other transportation expenses, and lodging and subsistence necessary during periods of required travel. CONTRACTOR shall receive compensation for travel expenses at current state travel reimbursement rates (State Administrative & Accountin Manual Sectin 10.90.

BILLING PROCEDURES AND PAYMENT

AGENCY will pay CONTRACTOR upon acceptance of services provided and receipt and approval of properly completed invoices, which shall be submitted to the Contract Manager not more frequently than monthly.

The invoices shall describe and document, to the AGENCY'S satisfaction, a description of the work performed, the applicable Task, the name of the Associate performing the work, the number of hours worked by each Associate, and the corresponding fees. The invoices shall be accompanied by a monthly status/progress report. Payment shall be made following the satisfactory completion of each task described in Exhibit B, Scope of Work & Deliverables. However, the cost to acquire the REMI PI+ model may be invoiced separately. The invoice shall include the contract reference number K1528. If expenses are invoiced, the contractor must provide a detailed breakdown of each type. A receipt must accompany any single expense in the amount of \$50.00 or more in order to receive reimbursement.

Payment shall be considered timely if made by the AGENCY within thirty (30) calendar days after receipt of properly completed invoices. Payment shall be sent to the address designated by the CONTRACTOR.

The AGENCY may, in its sole discretion, terminate the contract or withhold payments claimed by the CONTRACTOR for services rendered if the CONTRACTOR fails to satisfactorily comply with any term or condition of this contract.

No payments in advance or in anticipation of services or supplies to be provided under this contract shall be made by the AGENCY.

CONTRACT MANAGEMENT

The Contract Manager for each of the parties shall be the contact person for all communications and billings regarding the performance of this contract.

CONTRACTOR Contract Manager	AGENCY Contract Manager
Jennifer Pont, Project Manager Life Cycle Associates, LLC 884 Portola Road, Suite A11 Portola Valley, CA 94028 Phone : 650-740-0410 FAX: 484-313-9504 Email: pont@lifecycleassociates.com	Jim Cahill , Senior Budget Assistant to the Governor Office of Financial Management P.O. Box 43113 Olympia, WA 98504-3113 Phone: (360) 902-0569 Email address: jim.cahill@ofm.wa.gov

INSURANCE

The CONTRACTOR shall provide insurance coverage, which shall be maintained in full force and effect during the term of this contract, as follows:

1. Commercial General Liability Insurance Policy. Provide a Commercial General Liability Insurance Policy, including contractual liability, in adequate quantity to protect against legal liability arising out of contract activity but no less than \$1,000,000 per occurrence.

Additionally, the CONTRACTOR is responsible for ensuring that any subcontractors provide adequate insurance coverage for the activities arising out of subcontracts.

2. Automobile Liability. In the event that services delivered pursuant to this contract involve the use of vehicles, either owned or unowned by the CONTRACTOR, automobile liability insurance shall be required. The minimum limit for automobile liability is:

\$1,000,000 per occurrence, using a Combined Single Limit for bodily injury and property damage.

3. The insurance required shall be issued by an insurance company/ies authorized to do business within the state of Washington, and shall name the state of Washington, its agents and employees as additional insureds under the insurance policy/ies.

All policies shall be primary to any other valid and collectable insurance.
CONTRACTOR shall instruct the insurers to give AGENCY thirty (30) calendar days advance notice of any insurance cancellation.

CONTRACTOR shall submit to AGENCY within fifteen (15) calendar days of the contract effective date, a certificate of insurance that outlines the coverage and limits defined in the *Insurance* section. CONTRACTOR shall submit renewal certificates as appropriate during the term of the contract.

ASSURANCES

AGENCY and the CONTRACTOR agree that all activity pursuant to this contract will be in accordance with all the applicable current federal, state and local laws, rules, and regulations.

ORDER OF PRECEDENCE

Each of the exhibits listed below is by this reference hereby incorporated into this contract. In the event of an inconsistency in this contract, the inconsistency shall be resolved by giving precedence in the following order:

1. Applicable federal and state of Washington statutes and regulations
2. Special terms and conditions as contained in this basic contract instrument
3. Exhibit A – General Terms and Conditions
4. Exhibit B – Scope of Work and Deliverables
5. Exhibit C - Compensation and Budget
6. Any other provision, term or material incorporated herein by reference or otherwise incorporated

ENTIRE AGREEMENT

This contract, including referenced exhibits, represents all the terms and conditions agreed upon by the parties. No other statements or representations, written or oral, shall be deemed a part hereof.

CONFORMANCE

If any provision of this contract violates any statute or rule of law of the state of Washington, it is considered modified to conform to that statute or rule of law.

APPROVAL

This contract shall be subject to the written approval of the AGENCY'S authorized representative and shall not be binding until so approved. The contract may be altered, amended, or waived only by a written amendment executed by both parties.

LIFE CYCLE ASSOCIATES

OFFICE OF FINANCIAL MANAGEMENT

Atika Unnasch
Signature
Managing Director June 9, 2014
Title Date

Tracy Guerin
Tracy Guerin
6/5/14
Deputy Director Date

**EXHIBIT A -
GENERAL TERMS AND CONDITIONS**

DEFINITIONS

As used throughout this contract, the following terms shall have the meaning set forth below:

- A. "AGENCY" shall mean the (AGENCY TITLE) of the State of Washington, any division, section, office, unit or other entity of the AGENCY, or any of the officers or other officials lawfully representing that AGENCY.
- B. "AGENT" shall mean the Director, and/or the delegate authorized in writing to act on the Director's behalf.
- C. "CONTRACTOR" shall mean that firm, provider, organization, individual or other entity performing service(s) under this contract, and shall include all employees of the CONTRACTOR.
- D. "SUBCONTRACTOR" shall mean one not in the employment of the CONTRACTOR, who is performing all or part of those services under this contract under a separate contract with the CONTRACTOR. The terms "SUBCONTRACTOR" and "SUBCONTRACTORS" means SUBCONTRACTOR(s) in any tier.

ACCESS TO DATA

In compliance with RCW 39.29.080, the CONTRACTOR shall provide access to data generated under this contract to AGENCY, the Joint Legislative Audit and Review Committee, and the State Auditor at no additional cost. This includes access to all information that supports the findings, conclusions, and recommendations of the CONTRACTOR'S reports, including computer models and methodology for those models.

ADVANCE PAYMENTS PROHIBITED

No payments in advance of or in anticipation of goods or services to be provided under this contract shall be made by the AGENCY.

AMENDMENTS

This contract may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

AMERICANS WITH DISABILITIES ACT (ADA) OF 1990, PUBLIC LAW 101-336, also referred to as the "ADA" 28 CFR Part 35

The CONTRACTOR must comply with the ADA, which provides comprehensive civil rights protection to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications.

ASSIGNMENT

Neither this contract, nor any claim arising under this contract, shall be transferred or assigned by the CONTRACTOR without prior written consent of the AGENCY.

ATTORNEYS' FEES

In the event of litigation or other action brought to enforce contract terms, each party agrees to bear its own attorney fees and costs.

CONFIDENTIALITY/SAFEGUARDING OF INFORMATION

The CONTRACTOR shall not use or disclose any information concerning the AGENCY, or information that may be classified as confidential, for any purpose not directly connected with the administration of this contract, except with prior written consent of the AGENCY, or as may be required by law.

CONFLICT OF INTEREST

Notwithstanding any determination by the Executive Ethics Board or other tribunal, the AGENCY may, in its sole discretion, by written notice to the CONTRACTOR terminate this contract if it is found after due notice and examination by the AGENT that there is a violation of the Ethics in Public Service Act, Chapter 42.52 RCW; or any similar statute involving the CONTRACTOR in the procurement of, or performance under this contract.

In the event this contract is terminated as provided above, the AGENCY shall be entitled to pursue the same remedies against the CONTRACTOR as it could pursue in the event of a breach of the contract by the CONTRACTOR. The rights and remedies of the AGENCY provided for in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law. The existence of facts upon which the AGENT makes any determination under this clause shall be an issue and may be reviewed as provided in the "Disputes" clause of this contract.

COPYRIGHT PROVISIONS

Unless otherwise provided, all materials produced under this contract shall be considered "works for hire" as defined by the U.S. Copyright Act and shall be owned by the AGENCY. The AGENCY shall be considered the author of such materials. In the event the materials are not considered "works for hire" under the U.S. Copyright laws, CONTRACTOR hereby irrevocably assigns all right, title, and interest in materials, including all intellectual property rights, to the AGENCY effective from the moment of creation of such materials.

Materials means all items in any format and includes, but is not limited to, data, reports, documents, pamphlets, advertisements, books, magazines, surveys, studies, computer programs, films, tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, register and the ability to transfer these rights.

For materials that are delivered under the contract, but that incorporate pre-existing materials not produced under the contract, CONTRACTOR hereby grants to the AGENCY a nonexclusive, royalty-free, irrevocable license (with rights to sublicense others) in such

materials to translate, reproduce, distribute, prepare derivative works, publicly perform, and publicly display. The CONTRACTOR warrants and represents that CONTRACTOR has all rights and permissions, including intellectual property rights, moral rights and rights of publicity, necessary to grant such a license to the AGENCY.

The CONTRACTOR shall exert all reasonable effort to advise the AGENCY, at the time of delivery of materials furnished under this contract, of all known or potential invasions of privacy contained therein and of any portion of such document that was not produced in the performance of this contract.

The AGENCY shall receive prompt written notice of each notice or claim of infringement received by the CONTRACTOR with respect to any data delivered under this contract. The AGENCY shall have the right to modify or remove any restrictive markings placed upon the data by the CONTRACTOR.

COVENANT AGAINST CONTINGENT FEES

The CONTRACTOR warrants that no person or selling agent has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established agents maintained by the CONTRACTOR for securing business.

The AGENCY shall have the right, in the event of breach of this clause by the CONTRACTOR, to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration or recover by other means the full amount of such commission, percentage, brokerage or contingent fee.

DISALLOWED COSTS

The Contractor is responsible for any audit exceptions or disallowed costs incurred by its own organization or that of its Subcontractors.

DISPUTES

Except as otherwise provided in this contract, when a dispute arises between the parties and it cannot be resolved by direct negotiation, either party may request a dispute hearing with AGENT.

1. The request for a dispute hearing must:

- Be in writing;
- State the disputed issue(s);
- State the relative positions of the parties;
- State the CONTRACTOR'S name, address, and contract number; and
- Be mailed to the AGENT and the other party's (respondent's) contract manager within 3 working calendar days after the parties agree that they cannot resolve the dispute.

2. The respondent shall send a written answer to the requester's statement to both the agent and the requester within 5 working calendar days.
3. The AGENT shall review the written statements and reply in writing to both parties within 10 working days. The AGENT may extend this period if necessary by notifying the parties.
4. The parties agree that this dispute process shall precede any action in a judicial or quasi-judicial tribunal.

Nothing in this contract shall be construed to limit the parties' choice of a mutually acceptable ADR method in addition to the dispute resolution procedure outlined above.

DUPLICATE PAYMENT

The AGENCY shall not pay the CONTRACTOR, if the CONTRACTOR has charged or will charge the State of Washington or any other party under any other contract or agreement, for the same services or expenses.

GOVERNING LAW

This contract shall be construed and interpreted in accordance with the laws of the State of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Thurston County.

INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR shall indemnify, defend, and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims for injuries or death arising out of or resulting from the performance of the contract. "Claim," as used in this contract, means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorney's fees, attributable for bodily injury, sickness, disease, or death, or injury to or destruction of tangible property including loss of use resulting therefrom.

CONTRACTOR'S obligations to indemnify, defend, and hold harmless includes any claim by CONTRACTORS' agents, employees, representatives, or any subcontractor or its employees.

CONTRACTOR expressly agrees to indemnify, defend, and hold harmless the State for any claim arising out of or incident to CONTRACTOR'S or any subcontractor's performance or failure to perform the contract. CONTRACTOR'S obligation to indemnify, defend, and hold harmless the State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials.

CONTRACTOR waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

INDEPENDENT CAPACITY OF THE CONTRACTOR

The parties intend that an independent contractor relationship will be created by this contract. The CONTRACTOR and his or her employees or agents performing under this contract are not employees or agents of the AGENCY. The CONTRACTOR will not hold himself/herself out as or claim to be an officer or employee of the AGENCY or of the State of Washington by reason hereof, nor will the CONTRACTOR make any claim of right, privilege or benefit that would accrue to such employee under law. Conduct and control of the work will be solely with the CONTRACTOR.

INDUSTRIAL INSURANCE COVERAGE

The CONTRACTOR shall comply with the provisions of Title 51 RCW, Industrial Insurance. If the CONTRACTOR fails to provide industrial insurance coverage or fails to pay premiums or penalties on behalf of its employees, as may be required by law, AGENCY may collect from the CONTRACTOR the full amount payable to the Industrial Insurance accident fund. The AGENCY may deduct the amount owed by the CONTRACTOR to the accident fund from the amount payable to the CONTRACTOR by the AGENCY under this contract, and transmit the deducted amount to the Department of Labor and Industries, (L&I) Division of Insurance Services. This provision does not waive any of L&I's rights to collect from the CONTRACTOR.

LICENSING, ACCREDITATION AND REGISTRATION

The CONTRACTOR shall comply with all applicable local, state, and federal licensing, accreditation and registration requirements/standards, necessary for the performance of this contract.

LIMITATION OF AUTHORITY

Only the AGENT or AGENT'S delegate by writing (delegation to be made prior to action) shall have the express, implied, or apparent authority to alter, amend, modify, or waive any clause or condition of this contract. Furthermore, any alteration, amendment, modification, or waiver or any clause or condition of this contract is not effective or binding unless made in writing and signed by the AGENT.

NONCOMPLIANCE WITH NONDISCRIMINATION LAWS

In the event of the CONTRACTOR'S non-compliance or refusal to comply with any nondiscrimination law, regulation, or policy, this contract may be rescinded, canceled or terminated in whole or in part, and the CONTRACTOR may be declared ineligible for further contracts with the AGENCY. The CONTRACTOR shall, however, be given a reasonable time in which to cure this noncompliance. Any dispute may be resolved in accordance with the "Disputes" procedure set forth herein.

NONDISCRIMINATION

During the performance of this contract, the CONTRACTOR shall comply with all federal and state nondiscrimination laws, regulations and policies.

PRIVACY

Personal information including, but not limited to, "Protected Health Information," collected, used, or acquired in connection with this contract shall be protected against unauthorized use, disclosure, modification or loss. CONTRACTOR shall ensure its directors, officers, employees, subcontractors or agents use personal information solely for the purposes of accomplishing the services set forth herein. CONTRACTOR and its subcontractors agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the agency or as otherwise required by law.

Any breach of this provision may result in termination of the contract and the demand for return of all personal information. The CONTRACTOR agrees to indemnify and hold harmless the AGENCY for any damages related to the CONTRACTOR'S unauthorized use of personal information.

PUBLICITY

The CONTRACTOR agrees to submit to the AGENCY all advertising and publicity matters relating to this contract wherein the AGENCY'S name is mentioned or language used from which the connection of the AGENCY'S name may, in the AGENCY'S judgment, be inferred or implied. The CONTRACTOR agrees not to publish or use such advertising and publicity matters without the prior written consent of the AGENCY.

RECORDS MAINTENANCE

The CONTRACTOR shall maintain books, records, documents, data and other evidence relating to this contract and performance of the services described herein, including but not limited to accounting procedures and practices that sufficiently and properly reflect all direct and indirect costs of any nature expended in the performance of this contract.

CONTRACTOR shall retain such records for a period of six years following the date of final payment. At no additional cost, these records, including materials generated under the contract, shall be subject at all reasonable times to inspection, review or audit by the AGENCY, personnel duly authorized by the AGENCY, the Office of the State Auditor, and federal and state officials so authorized by law, regulation or agreement.

If any litigation, claim or audit is started before the expiration of the six (6) year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved.

REGISTRATION WITH DEPARTMENT OF REVENUE

The CONTRACTOR shall complete registration with the Washington State Department of Revenue and be responsible for payment of all taxes due on payments made under this contract.

RIGHT OF INSPECTION

The CONTRACTOR shall provide right of access to its facilities to the AGENCY, or any of its officers, or to any other authorized agent or official of the state of Washington or the federal government, at all reasonable times, in order to monitor and evaluate performance, compliance, and/or quality assurance under this contract.

SAVINGS

In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date of this contract and prior to normal completion, the AGENCY may terminate the contract under the "Termination for Convenience" clause, without the ten-day notice requirement, subject to renegotiation at the AGENCY'S discretion under those new funding limitations and conditions.

SEVERABILITY

The provisions of this contract are intended to be severable. If any term or provision is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of the contract.

SITE SECURITY

While on AGENCY premises, CONTRACTOR, its agents, employees, or subcontractors shall conform in all respects with physical, fire or other security policies or regulations.

SUBCONTRACTING

Neither the CONTRACTOR nor any SUBCONTRACTOR shall enter into subcontracts for any of the work contemplated under this contract without obtaining prior written approval of the AGENCY. In no event shall the existence of the subcontract operate to release or reduce the liability of the contractor to the Department for any breach in the performance of the contractor's duties. This clause does not include contracts of employment between the contractor and personnel assigned to work under this contract.

Additionally, the CONTRACTOR is responsible for ensuring that all terms, conditions, assurances and certifications set forth in this agreement are carried forward to any subcontracts. CONTRACTOR and its subcontractors agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the agency or as provided by law.

TAXES

All payments accrued because of payroll taxes, unemployment contributions, any other taxes, insurance or other expenses for the CONTRACTOR or its staff shall be the sole responsibility of the CONTRACTOR.

TERMINATION FOR CAUSE

In the event the AGENCY determines the CONTRACTOR has failed to comply with the conditions of this contract in a timely manner, the AGENCY has the right to suspend or terminate this contract. Before suspending or terminating the contract, the AGENCY shall notify the CONTRACTOR in writing of the need to take corrective action. If corrective action is not taken within 30 calendar days, the contract may be terminated or suspended.

In the event of termination or suspension, the CONTRACTOR shall be liable for damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, e.g., cost of the competitive bidding, mailing, advertising and staff time.

The AGENCY reserves the right to suspend all or part of the contract, withhold further payments, or prohibit the CONTRACTOR from incurring additional obligations of funds during investigation of the alleged compliance breach and pending corrective action by the CONTRACTOR or a decision by the AGENCY to terminate the contract. A termination shall be deemed a "Termination for Convenience" if it is determined that the CONTRACTOR: (1) was not in default; or (2) failure to perform was outside of his or her control, fault or negligence.

The rights and remedies of the AGENCY provided in this contract are not exclusive and are, in addition to any other rights and remedies, provided by law.

TERMINATION FOR CONVENIENCE

Except as otherwise provided in this contract, the AGENCY may, by 10 calendar days written notice, beginning on the second day after the mailing, terminate this contract, in whole or in part. If this contract is so terminated, the AGENCY shall be liable only for payment required under the terms of this contract for services rendered or goods delivered prior to the effective date of termination.

TERMINATION PROCEDURES

Upon termination of this contract, the AGENCY, in addition to any other rights provided in this contract, may require the CONTRACTOR to deliver to the AGENCY any property specifically produced or acquired for the performance of such part of this contract as has been terminated. The provisions of the "Treatment of Assets" clause shall apply in such property transfer.

The AGENCY shall pay to the CONTRACTOR the agreed upon price, if separately stated, for completed work and services accepted by the AGENCY, and the amount agreed upon by the CONTRACTOR and the AGENCY for (i) completed work and services for which

no separate price is stated, (ii) partially completed work and services, (iii) other property or services that are accepted by the AGENCY, and (iv) the protection and preservation of property, unless the termination is for default, in which case the AGENT shall determine the extent of the liability of the AGENCY. Failure to agree with such determination shall be a dispute within the meaning of the "Disputes" clause of this contract. The AGENCY may withhold from any amounts due the CONTRACTOR such sum as the AGENT determines to be necessary to protect the AGENCY against potential loss or liability.

The rights and remedies of the AGENCY provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

After receipt of a notice of termination, and except as otherwise directed by the AGENT, the CONTRACTOR shall:

1. Stop work under the contract on the date, and to the extent specified, in the notice;
2. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the contract that is not terminated;
3. Assign to the AGENCY, in the manner, at the times, and to the extent directed by the AGENT, all of the rights, title, and interest of the CONTRACTOR under the orders and subcontracts so terminated, in which case the AGENCY has the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
4. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the AGENT to the extent AGENT may require, which approval or ratification shall be final for all the purposes of this clause;
5. Transfer title to the AGENCY and deliver in the manner, at the times, and to the extent directed by the AGENT any property which, if the contract had been completed, would have been required to be furnished to the AGENCY;
6. Complete performance of such part of the work as shall not have been terminated by the AGENT; and
7. Take such action as may be necessary, or as the AGENT may direct, for the protection and preservation of the property related to this contract, which is in the possession of the CONTRACTOR and in which the AGENCY has or may acquire an interest.

TREATMENT OF ASSETS

- A. Title to all property furnished by the AGENCY shall remain in the AGENCY. Title to all property furnished by the CONTRACTOR, for the cost of which the CONTRACTOR is entitled to be reimbursed as a direct item of cost under this contract, shall pass to and vest in the AGENCY upon delivery of such property by the CONTRACTOR. Title to other property, the cost of which is reimbursable to the CONTRACTOR under this contract, shall pass to and vest in the AGENCY upon (i) issuance for use of such property in the performance of this contract, or (ii)

commencement of use of such property in the performance of this contract, or (iii) reimbursement of the cost thereof by the AGENCY in whole or in part, whichever first occurs.

- B. Any property of the AGENCY furnished to the CONTRACTOR shall, unless otherwise provided herein or approved by the AGENCY, be used only for the performance of this contract.
- C. The CONTRACTOR shall be responsible for any loss or damage to property of the AGENCY that results from the negligence of the CONTRACTOR or which results from the failure on the part of the CONTRACTOR to maintain and administer that property in accordance with sound management practices.
- D. If any AGENCY property is lost, destroyed or damaged, the CONTRACTOR shall immediately notify the AGENCY and shall take all reasonable steps to protect the property from further damage.
- E. The CONTRACTOR shall surrender to the AGENCY all property of the AGENCY prior to settlement upon completion, termination or cancellation of this contract
- F. All reference to the CONTRACTOR under this clause shall also include CONTRACTOR'S employees, agents or SUBCONTRACTORS.

WAIVER

Waiver of any default or breach shall not be deemed a waiver of any subsequent default or breach. Any waiver shall not be construed to be a modification of the terms of this contract unless stated to be such in writing and signed by authorized representative of the AGENCY.

**EXHIBIT B -
SCOPE OF WORK AND DELIVERABLES**

- A. Consistent with the methodology used in *A Low Carbon Fuel Standard in Washington: Informing the Decision*, a report by TIAX LLC, 2011, and
 - B. Using California LCFS reviews and Life Cycle Associates, *WA LCFS Analysis: Implication of Updated Assumptions* (July 3, 2013), among other sources (see attached list of references) to inform and support the analysis, and
 - C. In consultation and collaboration with Washington's Office of Financial Management (OFM), supporting agencies, and other subject matter experts, Contractor shall:
1. Re-evaluate the availability of low carbon fuels and update carbon intensity values for previously analyzed fuel pathways.

- a. Re-evaluate the availability of low carbon fuels in general including the potential for locally supplied low carbon fuels based on feedstock supplies, existing and likely conversion facilities, and possible market penetration within the State.

To develop feasible goals for a CFS and to identify impacts on the State, it is necessary to estimate the potential quantities of lower carbon fuels available. In this task, the contractor will estimate the availability of low carbon fuels and feedstocks in the near, mid and long term, and address uncertainty in assumptions through scenario analysis.

The contractor will use available literature to quantify volumes of low carbon fuels that might be used to comply with a CFS. Information regarding current and proposed fuel production facilities including capacity, feedstock type and availability, and construction/operating status will be evaluated. Availability of these volumes must consider competing demand from other western states and provinces (California, Oregon, and British Columbia) that have committed to such a program via the Pacific Coast Collaborative.

The contractor will use available literature to assist in quantifying volumes of available local feedstocks. Once the producible feedstock volumes are credibly estimated, the contractor will apply conversion factors from the literature, previous projects, or embedded in the life cycle carbon intensity modeling tool used to determine maximum possible volumes of low carbon transportation fuels that can be derived from local feedstock supplies. These volumes will help define analysis scenarios.

Finally the contractor will classify each fuel/feedstock combination as either near, mid or long term in nature. The classification approach will be:

- Near – Currently available in commercial quantities, or expected to be available in the next 2-3 years, considering infrastructure, vehicle

compatibility/availability, and regulatory structure to accommodate the consumption of the fuel in Washington state

- Mid – Can be currently made, but not commercialized due to: feedstock/fuel availability, distribution infrastructure, vehicle compatibility, availability or cost. (Technology to produce is currently available but possibly not commercialized, or infrastructure to distribute is not available, or vehicle technology unavailable. Expectation based on best available information currently is that hurdles to introduction could be overcome and commercial quantities of fuel made available in 5-7 years.)
- Long – Not currently available due to lack of feedstock/conversion technology, cost, distribution infrastructure, vehicle compatibility and not projected to become available in significant quantities for at least 10 years.

b. Using the most current GREET Model, update and quantify carbon intensity values for:

1. gasoline³
2. diesel
3. low carbon fuels, including electricity
4. natural gas (CNG/LNG)
5. up to five additional pathways, as needed, to include in compliance modeling

(As appropriate, use CARB values adjusted for Washington electricity mix and transport distances)

In this task, the contractor will update carbon intensity values for previously analyzed fuel pathways and several additional, new fuel pathways that may contribute to CFS compliance. Carbon intensity is also referred to as well to wheel (WTW) or full fuel-cycle emissions; it is defined as the grams of carbon dioxide equivalents per megajoule of fuel (g CO₂eq/MJ) emitted during the recovery, processing, transport, and use of transportation fuels.

Carbon intensity will be quantified consistent with generally acceptable life cycle analyses and methodologies using a life cycle carbon intensity modeling tool that is widely accepted, customizable, comprehensive, inclusive of fuels and technologies likely to be part of a Washington CFS, and generally recognized as representative of the best science and research available (e.g., the latest version of Argonne National Laboratories GREET model).

The extent to which the chosen life cycle carbon intensity modeling tool will be customized for Washington purposes will be a subject of discussion with OFM and supporting agencies. However, the contractor should take into account the

³ This includes analysis based upon the carbon intensity of the petroleum used to produce gasoline and diesel fuels.

possibility that significant customization of the tool may be necessary as part of this work.

In addition, a tool will be developed to adjust existing CARB Method 2B carbon intensity values such that the carbon intensity will reflect transport to and distribution within Washington rather than transport to and distribution within California.

Methods and appropriate tools for addressing emissions associated with land use change (direct and indirect) will be decided through consultation with OFM, and supporting agencies. However, it is not expected that the contractor will need to derive new values or build new tools to address this facet of the program.

Task 1 Deliverables:

- Estimates of volumes of low carbon fuels including the potential from locally supplied low carbon feedstocks. Classification of these fuels according to whether they will be available in the near (2-3 years), mid (5-7 years) or long term (10 years or more).
- Development of carbon intensity values for each of the pathways to be considered (including gasoline blendstock and diesel).
- Modification of life cycle model(s) - as appropriate, including development of a tool to adjust existing CARB Method 2B carbon intensity values such that the carbon intensity will reflect transport to and distribution within Washington rather than transport to and distribution within California.

Estimated timeline: End of June, 2014

2. Using current version of the VISION model, update Washington baseline and business as usual (BAU) cases, as appropriate, and adjust and model compliance scenarios; create REMI PI+ model inputs for economic analysis, based on the VISION model outputs.
 - a. Update Washington baseline and Business As Usual (BAU) cases, as appropriate.
 - b. Using current version of the VISION model, adjust and model compliance scenarios with updated assumptions to bracket the technological range of possible ways that compliance with the standard might be achieved. Assumptions to be updated include but are not limited to:
 1. fuel prices
 2. vehicle prices
 3. fuel economy
 4. vehicle sales and technology shares
 5. vehicle miles travelled
 6. compliance timeframe

Fuel price assumptions are developed as part of the economic analysis in Task 3 which will then be used as inputs to the VISION model. Assumptions regarding annual vehicle sales and technology shares must be feasible and the fleet must be compatible with the projected fuel mix for each year of the scenario projection. Any vehicle warranty issues that may arise should be discussed. The deployment of alternative fuels and vehicles in the scenarios must be feasible from an infrastructure standpoint. Infrastructure costs for each scenario will be developed outside of the VISION model and used in the economic analysis in Task 3. Infrastructure costs must also be quantified in the BAU case for compliance with the state and federal renewable fuel standards;

To quantify the benefits of a Washington CFS, in consultation with OFM and supporting agencies the contractor will define and model a business as usual (BAU) case and up to eight different compliance scenarios for gasoline and fuels that may substitute for gasoline and for diesel and fuels that may substitute for diesel. These compliance scenarios neither prescribe nor predict how compliance will be attained. Rather, they are intended to bound the range of what's possible in terms of compliance with a Washington CFS.

The BAU scenario should consider existing federal and state policies relevant to a Washington CFS. The modeling scenarios will assume a range of low carbon fuel, infrastructure requirements, and vehicle penetration rates over time. The modeling scenarios should take into account potential implications of policy design mechanisms (e.g., cost containment) on technological innovation and penetration rates. The modeling output will be number of vehicles, quantities of conventional and low carbon fuel as a function of time, etc., and GHG emission reductions over time.

Once the scenarios are defined, the contractor will develop model inputs including: low carbon fuel penetration rates, light and heavy duty advanced vehicle penetration rates, and GHG emission factors for the low carbon fuels assumed. Argonne National Laboratory's VISION Model will be employed to model the scenarios.

The VISION Model is an accounting tool of vehicle stock and fuel consumption for the United States light and heavy duty fleets. Based on fuel economy, fleet age profile, vehicle retirement rates, vehicle sales, input low carbon fuel shares and GHG emission factors, it outputs quantities of fuel for autos, light trucks and the heavy duty fleet as well as lifecycle GHG emissions. In addition to the CFS scenarios evaluated, the contractor will also run a baseline scenario to determine business as usual conditions. The model outputs can be used to guide Washington policy and design considerations such as efficacy of moving forward with a CFS, setting reduction targets and timing of a possible CFS.

The fuel volume and vehicle population profiles estimated by the VISION model will be used by the contractor and/or their subcontractor, to determine the economic

modeling inputs necessary for evaluating the economic impact of a Washington CFS for each scenario considered.

- c. Create REMI PI+ model inputs for economic analysis, based on the VISION model outputs.

Task 2 Deliverables:

- Updated Washington baseline and business as usual (BAU) case.
- Identification, design and selection of compliance scenarios.
- Estimates of GHG emission reductions over time for each scenario considered.
- Estimates of the various outputs listed above, including but not limited to fuel volumes and expenditures, vehicle expenditures and required infrastructure expenditures over time for the BAU case and each compliance scenario considered.
- REMI PI+ model inputs for economic analysis based on the VISION model outputs.

Estimated timeline: End of July, 2014

3. Using REMI PI+ and supporting analysis, estimate the economic affects within the state of Washington of implementing a Washington CFS.

The contractor must identify how the economic analysis will account for: federal and state policies other than the CFS, such as federal fuel economy regulations; improvements in vehicle technologies; and the impact of CFS credit trading on overall compliance costs of the program. The selection of fuel price schedules should reflect all fuel production and delivery costs as well as market conditions. This would include, to the extent they are known, requirements related to federal and state fuel specifications, labeling requirements and similar policies. Once assumptions have been approved by OFM, the contractor will conduct an economic analysis with the following steps and outputs.

For the fuel market analysis below, OFM intends to use an analysis approach similar to that used by the California Air Resources Board in their economic analysis of the California Low Carbon Fuel Standard. (See <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>). The contractor should review the California methodology and describe in detail an approach that is substantially similar to that used by California, but modified as appropriate to reflect Washington specific market, resource availability, fueling infrastructure, and use conditions.

The contractor will employ the best available public information about the: 1) feedstock costs, 2) production and refining cost of fuel products, and 3) transportation, wholesale and retail markets for all transportation fuels used now in the State or that are contemplated to be used in the future in the compliance scenarios.

Fuel market analysis:

- Step 1. Estimate net costs of producing petroleum fuels for use in Washington.

- Step 2. Estimate net costs of producing and distributing low carbon fuels that could be used in Washington, to meet the CFS.
- Step 2A. Assess all costs of production and distribution of low carbon transportation fuels, including but not limited to:
 - Capital costs for building new fuel production facilities
 - Operating costs associated with the facilities
 - Production costs
 - Feedstock costs
 - Co-product Credits
 - Regulatory/labeling costs
 - Distribution costs of the products including storage and transport
 - Fuel Dispensing Costs (including hydrogen, CNG, electricity)
- Step 2B. Assess potential cost savings to producers, e.g. alternative fuel tax incentives/cost-saving measures (federal and state). Note: tax incentives are a cost to the state.
- Step 2C. Assess the biofuel-related infrastructure costs attributable to the Federal Renewable Fuel Standard (RFS2), and the Washington Renewable Fuel Standard. Any costs associated with meeting these state and federal requirements would not be attributable to Washington's CFS.
- Step 3: Estimate the cost of Washington's current business as usual transportation fuel mix.

Compliance Scenario Modeling:

- Step 4: Using REMI PI+ estimate the net costs or savings (economic impacts) resulting from the different compliance scenarios by:
 - 1) Applying overall production and distribution costs (using the costs from Steps 1 and 2 above) to the compliance scenarios. Each of these compliance scenarios will include an assumed mix of fuels that satisfies the CFS reduction targets.
 - 2) Estimating how the fuel procurement costs or savings incurred by fuel providers under a CFS might be reflected in fuel prices, and thereby affect businesses, consumers, and government agencies on an aggregate (i.e., macroeconomic) level.
 - 3) Conducting sensitivity analyses as determined in consultation with OFM based upon OFM review of initial analysis results, contractor input, and feedback from OFM. Note: the sensitivity analysis may include modeling of one or more policy mechanisms designed to avoid escalating fuel costs. Please refer to Task 4 discussion.

- Step 5. Based upon existing literature and supporting analysis estimate the net cost or savings to fuel providers that would occur in each CFS compliance scenario due to the increased use of low carbon fuels. The results of this analysis should also be expressed as the net costs and savings relative to the current costs of the business as usual fuel mix as estimated in Step 3 above. The analysis must fully account for cost savings/incentives realized by fuel producers through federal RIN and CFS credit prices and take these savings into account in the reported CFS economic and fuel price impacts. Incorporate these results to the extent possible into overall economic analysis.
- Step 6. Using REMI PI+ and supporting analysis estimate the compliance costs and potential savings for Washington consumers, including businesses, employment, household income and gross state product. The questions for analysis include, but may not be limited to:
 - A. Impact on the cost of transportation fuel, or select sectors of the state economy, including the possible economic benefits of increased low carbon fuels production in Washington;
 - B. Impact to jobs and personal income from a CFS;
 - C. Impacts to the general public, businesses, local governments, and state agencies; and
 - D. Cost of compliance for small businesses, as extrapolated or estimated from macroeconomic results and existing literature to the extent possible. Where quantitative estimates are not possible, key potential impacts should be noted qualitatively.

Within the scope of the contract budget, additional questions or economic sectors to be analyzed may be added in consultation with the contractor, OFM and supporting agencies.

Task 3 Deliverables:

- Fuel prices as a function of demand to be utilized in the Task 2 VISION modeling work
- REMI modeling inputs, and inputs associated with supporting analysis, with accompanying documentation describing development of inputs and key assumptions.
- Economic analysis estimating the economic effects within the state of Washington of implementing a Washington Clean Fuel Standard. (Analysis will include the various outputs listed above).

Estimated timeline: First week of September, 2014

4. Identify and assess various policy mechanisms to avoid escalating fuel costs.

In this task, the contractor will identify and assess various policy mechanisms to avoid escalating fuel costs, such as those considered by UC Davis in, *A Report on the Economics of California's Low Carbon Fuel Standard and Cost Containment Mechanisms* (October

2013, CD-ITS-RR-13-23.) The contractor should be prepared to recommend and incorporate into the modeling done for this project one or more such policy options, in consultation with OFM and supporting agencies. In addition, the contractor should be prepared to model differing implementations of the selected policy option or options (e.g., price points).

NOTE: In June 2012 and March 2013, respectively, the Boston Consulting Group (BCG) produced “*Understanding the Impacts of AB32*” and “*BCG and CARB LCFS Models: Review of impact of assumptions in three different areas*”. Regarding California’s LCFS, BCG’s analyses suggest that anticipated low-CI fuels/credits will not materialize and that the only way for regulated parties to comply with the LCFS is to restrict gasoline/ diesel sales in the state significantly and blend it with high cost ethanol causing motor vehicle fuel prices to rise significantly.

WSPA, the Rockefeller Brothers Fund, and the Alliance of Automobile Manufacturers subsequently contracted with the UC Davis Policy Institute for Energy, Environment and the Economy to facilitate an expert evaluation of these reports. Among the recommendations of the expert review panel, was advice to remain alert for signals that the LCFS is leading to excessive fuel costs and to assess policy actions that might avoid cost escalations.

Task 4 Deliverables:

- Identification, assessment, recommendation of policy mechanisms to avoid escalating fuel costs.
- Incorporation of cost containment policy mechanisms into definition of scenarios modeled in Task 2.
- Evaluation of program options allowing the use of credit trading and comparison of their effectiveness to options that do not include credit trading. Incorporate credit trading concepts into definition of scenarios modeled in Task 2.

Estimated timeline: First week of September, 2014

Additional Deliverables:

- Presentations:
 - Task 1 results - via teleconference
 - Task 2 results - via teleconference
 - Task 3 and task 4 results – one, in-person meeting
 - Contingency presentations as needed either via video conference or in-person.
- Reports:
 - Monthly status/progress reports
 - Draft Final Report - September 12, 2014
 - Final Report – September 26, 2014

List of References:

Transitions to Alternative Vehicles and Fuels, National Research Council, The National Academies Press, 2013.

California's Low Carbon Fuel Standard: Compliance Outlook for 2020, ICF June 2013

Understanding the Impacts of AB32, Boston Consulting Group, June 2012.

BCG and ARB LCFS models: Review of impact of different assumptions in three areas, Boston Consulting Group, March 2013.

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Advanced Biofuel Market Report 2013, Environmental Entrepreneurs, Mary Solecki and Bob Epstein of E2 and Anna Scodel, Goldman School of Public Policy.

Development of a biorefinery optimized biofuel supply curve for the Western United States, Nathan Parker, Peter Tittmann, Quinn Hart, Richard Nelson, Ken Skog, Anneliese Schmidt, Edward Gray, Bryan Jenkins, 2010.

Spatially Explicit Projection of Biofuel Supply for Meeting Renewable Fuel Standard, Nathan Parker, U.C. Davis Institute of Transportation Studies, 2012.

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U.S. Billion Ton Update, Biomass Supply for a Bioenergy and Bioproducts Industry, Oak Ridge National Laboratory, U.S. Department of Energy, August 2011.

Will Washington Provide Its Own Feedstocks for Biofuels?, Suzette P. Galinato, Douglas L. Young, Craig S. Frear and Jonathan K. Yoder, Washington State University, December, 2009.

Report to the Washington State Legislature, Wood to Energy in Washington: Imperatives, Opportunities, and Obstacles to Progress, C. Larry Mason, Richard Gustafson, John Calhoun, Bruce R. Lippke, and Natalia Raffaelli, University of Washington, June 2009.

Low Carbon Fuel Policy and Analysis. Yeh, S. and D. Sperling. 2013. *Energy Policy* 56 (May): 1–4.

Low Carbon Fuel Standards: Implementation Scenarios and Challenges. Yeh, Sonia and Daniel Sperling (2010). *Energy Policy* 38 (11), 6955 – 6965.

Meeting an 80% Reduction in Greenhouse Gas Emissions from Transportation by 2050: A Case Study in California, Yang, Christopher, David L. McCollum, Ryan W. McCarthy, Wayne Leighty (2009) “*Transportation Research Part D* 14D (3), 147 – 156.

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Status Review of California's Low Carbon Fuel Standard, Yeh, Sonia, Julie Witcover, January 2014 Issue, Institute of Transportation Studies, University of California, Davis, UCD-ITS-RR-14-01.

Toward a Global Low Carbon Fuel Standard. Sperling, D. and S. Yeh, *Transport Policy*, 17 (2010) 47–49.

EXHIBIT C

COMPENSATION AND BUDGET

Detailed Budget Summary Table - June 2014 to December 31, 2014

		Task 1 Fuel Availability & Update CI Values		Task 2 Scenario Analysis		Task 3 Economic Analysis		Task 4 Policy Mechanisms to Control Cost		Total	
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost
Life Cycle Associates Labor	\$/hr										
Stefan Unnasch	Mng Director	175									
		20	\$3,500	0	\$0	12	\$2,100	6	\$1,050	38	\$6,650
Jennifer Pont	Project Manager	150									
		154	\$23,100	224	\$33,600	38	\$5,700	40	\$6,000	456	\$68,400
Susan Boland	Sr Scientist	115									
		40	\$4,600	0	\$0	0	\$0	0	\$0	40	\$4,600
Ashley Henderson	Env. Scientist	100									
		24	\$2,400	4	\$400	48	\$4,800	0	\$0	76	\$7,600
Total Labor			\$33,600		\$34,000		\$12,600		\$7,050		\$87,250
Travel									\$472		\$472
Other Direct Costs (REMI PI+)*											\$30,800
Subcontractor							\$35,000		\$6,500		\$41,500
G&A on Subcontractor	4.9%										\$2,034
TOTAL COST											\$162,056

* REMI PI+ License acquired by JFA for \$28,000. Line item includes JFA G&A of 10%, but no JFA fee. No LCA G&A on this item.

Additional trips for Jennifer Pont \$1,972 each

Additional trips for Michael Lawrence \$4,700 each

Subcontractor is Jack Faucett Associates

Associates, LLC
All