



# Special Public Meeting Notice & Agenda

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**May 7, 2020**

**1:30 p.m.**

**Teleconference**

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The Oregon Public Utility Commission (PUC) is holding a Special Public Meeting to address the matters described below. During this meeting the PUC will conduct:

- ☐ Public Hearing (public comments accepted)
- X Public Hearing and Commissioner Work Session (public comments accepted)
- ☐ Commissioner Work Session only

This meeting is open to the public and accessible to persons with disabilities. To request accommodation at least 48 hours before the meeting or for general information, please email [puc.publicmeetings@state.or.us](mailto:puc.publicmeetings@state.or.us) or call 503-378-6611. If held in the PUC Hearing Room, Hearing Loop assistive listening technology is available.

Meetings may be canceled due to [inclement weather or other emergencies](#).

To attend in person, you may:

**Listen by phone.** Call 866-390-1828 then enter the passcode 2252868#.

The PUC may enter into an executive session during this meeting to consider information exempt from disclosure by law under ORS 192.660(2)(f), or to consult with counsel under ORS 192.660(2)(h). **All executive sessions are closed to the general public.**

## Comments for Public Hearing

If a Public Hearing is designated above, the PUC will accept public comments in the following ways:.

- **By telephone during the meeting** – Call 866-390-1828 then enter passcode 2252868#. To assist the Commission in managing public comment, please notify the PUC 24 hours in advance that you intend to comment or are available to answer questions by phone (503-378-6611 or [puc.publicmeetings@state.or.us](mailto:puc.publicmeetings@state.or.us)).

- **In writing** – Send comments via email to [puc.filingcenter@state.or.us](mailto:puc.filingcenter@state.or.us). In the subject line, list the public meeting date, and docket number, if any. *Comments received after noon on the day before this meeting may not be considered by the Commission.*

## **Agenda**

1. PACIFICORP  
UE 374 Commission appointment of an Independent Evaluator for Coad Decommissioning Costs in PacifiCorp's General Rate Case Proceeding  
Staff contact: Steve Storm, 503-378-5264  
Email: [steve.storm@state.or.us](mailto:steve.storm@state.or.us)

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
SPECIAL PUBLIC MEETING DATE: May 7, 2020**

**REGULAR** \_\_\_\_ **CONSENT** \_\_\_\_ **EFFECTIVE DATE** \_\_\_\_\_

**DATE:** May 6, 2020

**TO:** Public Utility Commission

**FROM:** Steve Storm

**THROUGH:** Bryan Conway

**SUBJECT:** OREGON PUBLIC UTILITY COMMISSION STAFF:  
(Docket No. UE 374)  
Commission appointment of an Independent Evaluator for Coal  
Decommissioning Costs in PacifiCorp's General Rate Case proceeding.

**STAFF RECOMMENDATION:**

Staff recommends that the Public Utility Commission of Oregon (Commission) appoint Dr. Ranajit Sahu as an Independent Evaluator for PacifiCorp's Decommission Studies, pursuant to Section 4.3.4. of the 2020 Protocol.

Staff recommends the Commission allow PacifiCorp to file a deferral for the later recovery in rates of the cost of the independent evaluator, pursuant to Section 4.3.4.

**DISCUSSION:**

Issue

Whether the Commission should appoint Dr. Ranajit Sahu as an Independent Evaluator for PacifiCorp's Decommission Studies, pursuant to Section 4.3.4. of the 2020 Protocol, and further allow PacifiCorp to file for the deferral of costs associated with the IE for later ratemaking treatment.

Applicable Law

Section 4.3.4. of the 2020 Protocol provides:

Any party, at its discretion and cost, may pursue actions it deems necessary or appropriate to review and evaluate the Decommissioning Studies or Decommissioning Costs and may take an positions based on its review and findings. If a Commission issues an order identifying an independent evaluator for the Decommission studies, and the Commission Order provides for the deferral and later recovery in rates of the cost of the independent evaluator, the Company agrees to initially pay for this independent evaluation.

Upon application, ORS 757.259(2)(e) provides the Commission with discretion to defer, for later ratemaking treatment, identifiable expenses or revenues, the recovery or refund of which the commission finds should be deferred in order to minimize the frequency of rate changes or the fluctuation of rate levels or to match appropriately the costs borne by and benefits received by ratepayers.

## Analysis

### *Background*

Parties to the 2020 Protocol, including Staff, PacifiCorp, Oregon Citizens' Utility Board (CUB), and Alliance of Western Consumers (AWEC), agreed to Section 4.3.4., which provides for the Commission to appoint an Independent Evaluator (IE) to review PacifiCorp's Decommissioning Studies related to decommissioning costs for its coal-fired plants. These costs are at issue in PacifiCorp's currently pending General Rate Case (GRC) proceeding, docketed as UE 374. Section 4.3.4. also provides that PacifiCorp will pay the initial costs for an IE, provided that a Commission Order provides for the deferral and later recovery in rates of the costs.

### *RFP Process*

In order to identify an IE for the purposes of this case, Staff began the RFP process by meeting with Staff management to discuss both the objective of and approach to developing an RFP to procure the services of an IE. Staff management notified the Commission in mid-December 2019 that Staff was starting the work to develop an RFP for an IE, including preparation of a Statement of Work (SOW).

Staff developed the SOW based in part on the Statement of Work in PacifiCorp's RFP, issued by the Company for obtaining the services of a consultant for developing AACE International Class 3 estimates of the decommissioning costs for multiple coal plants (or coal plant units) wholly or partially owned by the Company. PacifiCorp provided some of the Company's RFP materials in response to Staff's Informal Request in Docket No. UM 1050. PacifiCorp provided additional materials used in its RFP in early February. Staff worked with Agency Business Service's staff to further refine the RFP,

including development of bid scoring criteria, and Staff management reviewed the draft SOW in mid-February.

Business Service's staff posted the finalized RFP on February 25, 2020, with a closing date of March 17, 2020. Business Service's staff notified Staff on March 11 that it had received indications from 13 firms of interest in performing as the primary contractor. The Agency received no responses to the RFP as of its close date. Staff requested Business Service's staff to reissue the RFP, and this was done on March 18, 2020, with an April 2, 2020, close date. The re-issued RFP was augmented by Business Service's staff contacting 13 firms Staff had identified as potentially successful bidders regarding the re-issued RFP. The re-issued RFP received indications from 17 firms of interest in performing as the primary contractor, with three of these also having indicated an interest in the first issuance of the RFP. Two of the firms that indicated interest were on Staff's list.

Business Service's staff advised Staff of potentially extending the re-issued RFP's close date by an additional week. Staff management concurred and the re-issued RFP's close date was extended to April 9, 2020. Staff provided Staff management with an update on the RFP process on April 2, 2020. Additionally, Staff's attorney in Docket No. UM 1050 provided representatives of CUB and AWEC the status of the RFP process on April 2, 2020. Business Service's staff notified Staff on April 9, 2020, that the re-issued RFP had no respondents.

A conference call with Staff, Staff's attorney, Staff management, CUB, and AWEC took place on April 10, 2020. Attendees discussed the lack of responses to the Agency's re-issued RFP, as well as potentially contacting an individual identified by Sierra Club in response to a conversation with CUB. This individual is Ranajit ("Ron") Sahu, Ph.D., and CUB had provided his credentials to Staff on April 7, 2020.

Agency management determined that, after receiving no responses to either the initial or the re-issued RFP, a sole sourcing procurement was now appropriate and communicated this to Staff, Staff management, and Business Service's staff on April 10, 2020. Staff management contacted Dr. Sahu on or about April 14, 2020, and he indicated he was interested in responding to the sole source offer with an estimate of costs. Staff management agreed on April 14, 2020, to waive the RFP's requirement that the successful bidder be a Professional Engineer (PE).

The Agency received Dr. Sahu's cost proposal on April 16, 2020, and this was reviewed by Staff, Staff management, and Agency management on or about the same day. Business Service's staff provided the Director of the Utility Program with an emailed status report regarding Dr. Sahu's cost proposal and the sole sourcing procurement

approach on April 17, 2020, and Staff provided the Director with the RFP's SOW as the documentation of the key activities and deliverables associated with contracting with Dr. Sahu.

Business Service's staff provided a draft contract to Staff and Staff management on April 22, 2020. Staff, Staff's attorney, Staff management, Business Service's staff, and Agency management have worked to refine the RFP's SOW into a contract for engaging Dr. Sahu's services. This activity was near completion as of May 6, 2020.

The RFPs can be found in Attachment A and A-1.

At the conclusion of this process, Staff worked with CUB and AWECC to identify Dr. Ranajit Sahu as its proposed IE. Dr. Sahu's resume can be found in Attachment B. Briefly, Dr. Sahu has a Ph.D. in Mechanical Engineering, and has more than 30 years of experience in the fields of environmental, mechanical, and chemical engineering in a wide range of roles.

#### *Contract Provisions*

The Contract provides for Dr. Sahu to provide an Independent Evaluation of PacifiCorp's Coal Decommissioning Costs, as originally filed in OPUC Docket No. UM 1968, and recently included in PacifiCorp's general rate case proceeding. The Statement of Work to be completed is included as Exhibit A to the Contract.

Upon execution of the Contract, Staff will provide Dr. Sahu with protective orders in both UE 374 and UM 1050, which will allow for the provision of confidential information to Dr. Sahu as required by his review. Staff discussed this provision with PacifiCorp prior to offering the final contract to Dr. Sahu, and agreed to handle confidential information in this manner based on PacifiCorp's input.

CUB, Staff, AWECC, and PacifiCorp have also agreed that Dr. Sahu's contractual deliverables will be filed directly in UE 374 on the same date that Staff and Intervenor file Opening Testimony, which is scheduled for June 4, 2020. Dr. Sahu will be available to appear as a witness at the UE 374 hearing, if necessary.

Costs under the contract are capped at \$58,225. Dr. Sahu will be paid directly by PacifiCorp, as contemplated in the 2020 Protocol. To facilitate that process, the contract provides for Dr. Sahu to provide invoices directly to the PUC, who will then review and verify charges prior to forwarding the invoices to PacifiCorp for payment. PacifiCorp has agreed to pay invoices within 30 days of receipt.

The contract can be found in Attachment C.

*Use in UE 374*

As described above, Staff, CUB, AWEK and PacifiCorp have agreed that Dr. Sahu will file the deliverables in the Statement of Work in OPUC Docket No. UE 374, and these will be filed on June 22, 2020.

All parties will then have the opportunity to review Dr. Sahu's analysis and to comment on the analysis and reports in their respective subsequent rounds of testimony. Dr. Sahu is also available for appearance at the evidentiary hearing scheduled in this proceeding, if necessary.

*Deferral of IE Costs*

Section 4.3.4. provides that PacifiCorp will pay the initial costs for an IE, if the Commission Order identifying the IE also provides for the deferral and later recovery in rates of the cost of the independent evaluator. Staff recommends that the Commission allow PacifiCorp to file such a deferral, pursuant to its agreement in the 2020 Protocol.

Conclusion

Staff engaged in a lengthy and robust process to identify an IE to address PacifiCorp's Coal Decommissioning Costs. Staff, CUB, and AWEK recommend that the Commission identify Dr. Sahu as the independent evaluator in this case, as described above. Staff further finds that Section 4.3.4. of the 2020 Protocol allows for the payment situation contemplated by the contract, and therefore recommends that the Commission allow PacifiCorp to file a deferral for IE costs pursuant to that provision.

**PROPOSED COMMISSION MOTION:**

Appoint Dr. Ranajit Sahu as an Independent Evaluator for PacifiCorp's Decommission Studies, pursuant to Section 4.3.4. of the 2020 Protocol.

Allow PacifiCorp to file a deferral for the later recovery in rates of the cost of the independent evaluator, pursuant to Section 4.3.4.

ATTACHMENT A

RFP PUC-1026-20 / INDEPENDENT EVALUATION OF THERMAL POWER PLANT DEMOLITION ESTIMATES STUDY

**STATE OF OREGON**



**COVER PAGE**

OREGON PUBLIC UTILITY COMMISSION

**INDEPENDENT EVALUATION OF THERMAL POWER PLANT  
DEMOLITION ESTIMATES STUDY**

Intermediate Request for Proposal (RFP)

**RFP PUC-1026-20**

Date of Issue: February 26, 2020

Closing Date: March 17, 2020

Single Point of Contact (SPC): **Rich Palmer – Procurement & Contract Specialist**

Address:	<b>201 High Street SE – Suite 100</b>
City, State, Zip	<b>Salem, OR 97301</b>
Phone (voice)	<b>503-378-6619</b>
E-mail:	<b><a href="mailto:Rich.Palmer@state.or.us">Rich.Palmer@state.or.us</a></b>



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## SECTION 1: GENERAL INFORMATION

### 1.1 INTRODUCTION

The State of Oregon, acting by and through the Public Utility Commission, (“Agency”), is issuing this Request for an Independent Review of Thermal Power Plant Demolition Estimates.

Additional details on the Scope of the goods or services or both are included in the Scope of Work section.

Agency anticipates the award of one Contract from this solicitation. The initial term of the Contract is anticipated to be one year.

### 1.2 SCHEDULE

The table below represents a tentative schedule of events. All times are listed in Pacific Time. All dates listed are subject to change. N/A denotes that event is not applicable to this solicitation.

Event	Date	Time
Questions / Requests for Clarification Due	March 12, 2020	3:00PM
Closing (Proposal Due)	See RFP cover page	
Issuance of Notice of Award (approx.)	March 26, 2020	

### 1.3 SINGLE POINT OF CONTACT (SPC)

The SPC for this solicitation is identified on the Cover Page, along with the SPC’s contact information. Offeror shall direct all communications related to any provision of the solicitation, whether about the technical requirements of the solicitation, contractual requirements, the solicitation process, or any other provision only to the SPC.

## SECTION 2: AUTHORITY, OVERVIEW, AND SCOPE

### 2.1 AUTHORITY AND METHOD

Agency is issuing this solicitation pursuant to its authority under ORS 279A.050.

Agency is using the solicitation method, pursuant to ORS 279B.070 and OAR 125-247.0270.

### 2.2 DEFINITION OF TERMS

For the purposes of this solicitation, capitalized words will refer to the following definitions.

### 2.2.1 General Definitions

Capitalized terms not specifically defined in this document are defined in OAR 125-246-0110.

“Oregon Public Utility Commission” – Agency or PUC.

## 2.3 OVERVIEW

PacifiCorp (“Company”), an indirect wholly-owned subsidiary of Berkshire Hathaway Energy Company<sup>1</sup> (“BHE”), is a United States regulated electric utility company headquartered in Oregon. PacifiCorp is principally engaged in the business of generating, transmitting, distributing and selling electricity and serves 1.9 million retail electric customers in portions of Utah, Oregon, Wyoming, Washington, Idaho, and California. PacifiCorp's combined service territory covers approximately 141,400 square miles and includes diverse regional economies across six states.

PacifiCorp operates 17 thermal electric facilities that generate electricity from coal, natural gas, or geothermal resources. The Company's thermal plants are located in Wyoming, Utah, Arizona, Colorado, Oregon, Washington, and Montana. PacifiCorp's thermal generating plants include several that are coal-fueled (“coal plants” and “coal plant units”), such as Dave Johnston (Units 1, 2, 3, 4), Hunter (Units 1, 2, 3), Huntington (Units 1, 2), Jim Bridger (Units 1, 2, 3, 4), Naughton (Units 1, 2, 3), and Wyodak (Unit 1). PacifiCorp co-owns several additional coal-fueled generating plants (or units of coal plants) the Company does not operate, including Colstrip (Units 3, 4) and Hayden (Units 1, 2).

PacifiCorp engaged Kiewit Engineering Group Inc. (“Kiewit”) to prepare and deliver a study of the total costs (Q4 2019 dollars) to decommission, decontaminate, and demolish several coal plants (or specific units of some coal plants) owned or partially owned by the Company (“PacifiCorp's Study”). The costs include remediating and restoring each plant site at the end of all activities. Certain cost estimates in PacifiCorp's Study were provided by the Company. PacifiCorp requested a design basis, current and reliable cost estimates, schedule estimates, and other relevant information for the decommissioning and demolition of certain of its thermal generating resources.

The intent of PacifiCorp's Study was for Kiewit, with input from North American Dismantling Corporation (NADC), a PacifiCorp approved demolition contractor, to prepare AACE International (“AACE” and formerly known as the Association for the Advancement of Cost Engineering) Class 3 cost estimates, schedule estimates, and other relevant information for site investigation and project development, decommissioning, decontamination, demolition, remediation, and reclamation of the following coal-fired thermal plants in PacifiCorp's fleet:

- Hunter Power Plant (Hunter): Units 1, 2, and 3
- Huntington Power Plant (Huntington): Units 1 and 2
- Dave Johnston Power Plant (Dave Johnston): Units 1, 2, 3, and 4

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<sup>1</sup> All shares of outstanding common stock of BHE are privately held by a limited group of investors. Berkshire Hathaway, Inc. is the predominant investor in BHE.

- Jim Bridger Steam Plant (Jim Bridger): Units 1, 2, 3, and 4
- Naughton Power Plant (Naughton): Units 1, 2, and 3
- Wyodak Power Plant (Wyodak): Unit 1
- Hayden Generating Station (Hayden): Units 1 and 2 (operated by Xcel)

The Oregon Public Utility Commission (“OPUC” or “Commission”) regulates aspects of PacifiCorp’s operations related to providing electricity service to customers in the State of Oregon. The intended use of information in PacifiCorp’s Study is in the Company’s depreciation and other proceeding(s) for setting rates as well as in regulatory processes related to the retirement of multiple coal-fueled generating facilities. PacifiCorp made its Study<sup>2</sup> available to the Commission on January 17, 2020.<sup>3</sup>.

The purpose of this RFP is for OPUC to contract with a qualified organization to review and evaluate both methodologies employed and results obtained in PacifiCorp’s Study; to independently develop Class 3 estimates of costs to decommission, decontaminate, and demolish several coal plants (or specific units of some coal plants) owned<sup>4</sup> or operated by PacifiCorp, including remediating and restoring each plant site, at the end of all activities, to a condition that meets the requirements of all permits and regulation in place at the time of PacifiCorp’s Study; and to deliver to OPUC a report regarding its review and evaluation and its independent cost estimates, as well as all supporting documentation. OPUC refers to these and related activities collectively as “OPUC’s Review.” The information in OPUC’s Review will be used in PacifiCorp’s Oregon depreciation proceeding(s) for setting rates as well as in regulatory processes related to the retirement of multiple coal-fueled generating facilities.

### **PacifiCorp’s Study**

PacifiCorp engaged Kiewit to prepare, with input from NADC, a PacifiCorp-approved demolition contractor with which Kiewit has subcontracted, AACE Class 3 cost estimates, schedule estimates, and other relevant information for decommissioning and demolishing specific coal-fueled generation resources.

PacifiCorp’s Study was performed in two phases.

#### Phase 1 – Preparation of an Overall Decommissioning Scope Design Basis

- Preparation and submission of a draft Design Basis
- Adjustment of the Design Basis based on PacifiCorp’s comments
- Submission of the final Design Basis

<sup>2</sup> PacifiCorp’s Study, as provided to OPUC on January 17, 2020, is confidential in its entirety.

<sup>3</sup> The version of PacifiCorp’s Study provided on January 17<sup>th</sup> did not include materials related to the Colstrip plant. PacifiCorp expects an updated version to include Colstrip to be available by March 31, 2020.

<sup>4</sup> PacifiCorp is a partial owner of several coal plants (or coal plant units).

Phase 2 – Preparation of Cost Spreadsheet and Reports

- Visits to plant sites to obtain information
- Preparation and submission of the draft spreadsheet reports
- Adjustments to the spreadsheets and reports based on PacifiCorp's comments
- Submission of the final spreadsheet reports

Plants and constituent units included in PacifiCorp's Study are:

- Dave Johnston Units 1, 2, 3 and 4
- Jim Bridger Units 1, 2, 3 and 4
- Hayden Units 1 and 2
- Hunter Units 1, 2 and 3
- Huntington Units 1 and 2
- Naughton Units 1, 2 and 3
- Wyodak Unit 1
- Colstrip Units 3 and 4<sup>5</sup>

PacifiCorp is a co-owner of the Hayden and Colstrip plants, but does not operate either plant. PacifiCorp is the sole or a partial owner of the other plants included in PacifiCorp's Study, and is the operator of these plants.

Cost estimates for closure of coal combustion residuals (CCR) ponds and landfills have been prepared for PacifiCorp by other parties, and PacifiCorp provided these to Kiewit for inclusion in the Class 3 estimates. These include, but may not be limited to the following ponds and landfills:

- Dave Johnstone: Ash Pods 4A and 4B; Industrial Solid Waste Landfill Expansion Site
- Jim Bridger: Ash Landfill; Flue Gas Desulfurization (FGD) Ponds 1 and 2
- Hunter: CCR Landfill
- Huntington: CCR Landfill
- Naughton: North and South Ash Ponds; FGD Ponds 1, 2, 4, and 5
- Hayden: CCR Landfill and several ponds

The Scope of Work for PacifiCorp's Study stated that it did not define every detail of the Work and that the Company's expectation was that the Consultant would "use its expertise and

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<sup>5</sup> PacifiCorp added the Colstrip units to its initial list and expects an updated version that includes cost estimates for Colstrip Units 3 and 4 to be available by March 31, 2020.

experience to determine the full extent of the information gathering, inspection, investigation and analysis necessary to define the ultimate work.”

### **Phase 1: Preparation of Overall Decommissioning Scope Design Basis**

Kiewit was to prepare one high-level design basis template for coal-fired thermal power plants in PacifiCorp’s fleet, excluding switchyards and substations unless PacifiCorp provided the cost estimates for these. The purpose of the design basis was to:

- A. Serve as the basis for the cost and schedule estimates provided in Phase 2 of this PacifiCorp’s study.
- B. Guide future PacifiCorp engineers’ preparation of specifications for future PacifiCorp thermal power plant retirements and retirement studies.

The design basis was to include the following content at a minimum:

- 1. Site investigation and development: A description of the high level work requirements for investigation of site conditions and project development in preparation for retirement of the thermal power plant.
- 2. Decommissioning: A high level description of events, conditions, and requirements that must be met before demolition begins.
- 3. Pre-demolition decontamination: A high level description of decontamination requirements that must be met before demolition begins.
- 4. Demolition: A high level description, including means and methods, of the demolition and salvage work. Demolition is to include criteria for disposition of underground infrastructure, as well as removal of slabs and foundations.
- 5. Post-demolition remediation: A high level description of the site condition after demolition and completion of remediation. Post-demolition remediation will include bringing the site, including subsurface, to a condition that meets the requirements of all permits and regulations in place as of the time PacifiCorp’s Study is conducted.
- 6. Reclamation: A high level description of site condition after site civil work is complete and the site is ready for the next phase of its life.

### **Phase 2: Preparation of Cost Spreadsheet and Reports**

Kiewit was to prepare narrative reports and working Excel-based spreadsheet reports for each plant in PacifiCorp’s Study.

- 1. Each narrative report was to include the following:
  - 1.1. Names and roles of the parties involved in preparing the report
  - 1.2. Process used to prepare the report
  - 1.3. Scope and battery limits of the report
  - 1.4. Indices used in preparing the report
  - 1.5. Assumptions
  - 1.6. High level schedules

- 1.7. Indicative cash flows
  - 1.8. Owner's (or owners,' where applicable) permitting requirements
  - 1.9. Summary of typical owner's responsibilities for demolition, salvage, and scrap
  - 1.10. Other relevant information
2. The spreadsheet reports were to be prepared to allow for future updates of inputs and assumptions. The cost estimates that were developed were to be consistent with AACE Class 3 cost estimate guidelines. The spreadsheet report was to include the following:
    - 2.1 Site investigation and development: The cost estimate for site investigation and development was to address items such as American Land Title Association (ALTA) surveys, environmental studies, inventory assessments, preparation of specifications, and Owner's Engineer effort.
    - 2.2 Decommissioning: The cost estimate for decommissioning was to be representative of items including equipment shutdown and safe condition, disconnection of the transmission system, removal of personal property, and closeout of operating permits. Decommissioning was to also address disposition of spares and inventory, consumables, chemicals and universal wastes. While there may not be individual entries for each of the above items, an overall estimate of expected staffing and labor hours for contractor services was to be included, and an area for owner's costs may have been completed by PacifiCorp.
    - 2.3 Pre-demolition decontamination: The cost estimate for decontamination was to address cleanup, removal and disposition of materials that require special handling or disposal prior to demolition. Two line items were anticipated, one for asbestos removal (asbestos-containing material, or ACM) and the other to include a proxy for lead, polychlorinated biphenyls (PCB), chlorofluorocarbons (CFC), radioisotopes, oils, fuels and miscellaneous hazardous materials.
    - 2.4 Demolition, salvage and scrap: The cost estimate was to have line items for demolition costs, salvage credits, and scrap credits. The spreadsheet was to include allowances for asbestos and other hazardous materials discovered during demolition, removal of surplus fuel, and removal and disposal of ash.
    - 2.5 Scrap value adjustments. The spreadsheet was to include one cell for a steel scrap index and one cell for a copper scrap index at the time the study was performed. It was to also include one cell for "current" steel scrap index and one cell for "current" copper scrap index. The spreadsheet was to incorporate the ability to update the cost estimates of steel scrap and copper scrap as a ratio of the respective scrap "current" and "at the time of study" indices. A reference to the source of steel and copper scrap indices was to be included.
    - 2.6 Reclamation. This was expected to be the most expensive component of the steps required to prepare the sites for future use. The cost estimate for reclamation was to address site grading, erosion control, vegetative cover, access control, closing of landfills, closing raw water and evaporation ponds, and termination of environmental permits.

- 2.7 Plant total estimate. The spreadsheet was to include a subtotal for the above items. Estimates for project indirects and contingency were to be added and total project costs with and without credit for salvage and scrap were to be provided.

### **Phase 3: Review of Draft Report and Costs by Two Additional Contractors**

Kiewit obtained independent reviews from two demolition contractors of a draft of PacifiCorp's Study and the cost estimates in the Study. The demolition contractors, listed below, are on PacifiCorp's approved vendor list (AVL):

1. Bierlein Companies, Inc. (Midland, MI)
2. Brandenburg Industrial Service Company (Chicago, IL)

### **PacifiCorp's Study: Kiewit's Deliverables**

Kiewit was to provide PacifiCorp with the following:

1. One final demolition design basis template for coal-fired thermal power plants.
2. Working spreadsheets and narrative reports as described above for each plant in PacifiCorp's Study.

### **PacifiCorp's Study: Limitations Applicable to Kiewit's Work**

Areas for each plant that were to have been included in Kiewit's estimates are located inside each plant fence, with the following adjustments:

- a. Closure of ash ponds, FGD ponds, and ash/CCR landfills is excluded from the scope. Kiewit understands that PacifiCorp has the needed information for those facilities and will provide costs to be included in the spreadsheet. Kiewit will request from PacifiCorp, to be included in the cost estimate spreadsheet for closing of ash/FGD ponds and landfills, the costs of:  
(i) preparing sites for construction of final cover; (ii) final cover; (iii) erosion control; (iv) leachate collection system if required; (v) operations and inventory removal; (vi) demolition/removal site improvements; (vii) replace/rebuild site access controls as required; (viii) borrow area reclamation; (ix) professional services; and (x) administration and contingency.
- b. Substation and switchyard removal, i.e. fenced interconnection facilities, is excluded from the scope. PacifiCorp will be responsible for estimating the cost of any potential removal of substations and switchyards. Costs will be included in the spreadsheet if directed by PacifiCorp.
- c. Removal of transmission facilities, from the high side of the GSU to dead-end structures outside the switchyards, is included.
- d. Coal piles – cost estimates for removal of all coal from coal piles (including bedding coal) will be by PacifiCorp and included in the spreadsheet if directed by PacifiCorp. Cost of removal of mechanical equipment and above-ground and underground structures will be included in the estimate, with underground structures removal to depths established at the kick-off meeting.



- e. Roads, rail and bridges are assumed to be removed inside plant fencelines. Removal of such infrastructure outside plant fencelines is excluded. Costs for out of scope infrastructure will be included in the spreadsheet if provided by PacifiCorp.
- f. Jim Bridger – removal of the Evaporation Pond (non-CCR) is included. The “wetland” pond below FGD Pond 2 and outside the fence line is assumed to remain, and is therefore not included. Guidance is requested on whether removal of the Surge Pond south of 9 Mile Road should be included.
- g. Dave Johnston – parking lot and security station south of the river is assumed to remain. River intakes/outfalls are assumed to be abandoned in place upon removal of all mechanical equipment.
- h. Hunter Station – reservoir on the east (may be associated with the “Experimental Farm”), 2nd coal pile and pond are outside the property gates and are excluded. Kiewit understands the coal pile and coal handling structures west of the fence line may be related to a coal prep plant owned by others.
- i. Huntington Station – removal of two transmission structures outside the plant fence, across Deer Creek Road from the plant switchyard, are assumed to be included.
- j. Wyodak – all shared facilities with the adjacent plants, outside the fence line, are assumed to remain.
- k. Hayden Station – Closure of the ash/CCR landfill and ponds are included unless PacifiCorp has obtained the needed information for those facilities from others.

### **SCOPE OF IE WORK FOR OPUC’S REVIEW**

OPUC’s Review is to have multiple related parts. OPUC identifies the first of these as OPUC’s Independent Evaluation and the second as OPUC’s Independent Cost Estimates. Additionally, OPUC’s Review may require authoring and delivering to OPUC Staff OPUC’s IE’s written testimony regarding PacifiCorp’s Study and OPUC’s Review and may require a personal appearance at an OPUC hearing regarding PacifiCorp’s Study and OPUC’s Review.

Content included in OPUC’s Review may be used by Commission Staff and Intervening Parties in testimony or other filings in one or more Commission proceedings related to the allocation of costs for PacifiCorp’s system to the Company’s Oregon customers. This may require the preparation of redacted as well as non-redacted versions of OPUC’s Review and related testimony.

Information regarding the Scope of Work required for specific parts of OPUC’s Review follows.

#### **OPUC’s Independent Evaluation**

OPUC needs a reliable and independent review and assessment of PacifiCorp’s Study, performed by a qualified third party evaluator (“OPUC’s IE”), including review and assessment of the methodologies employed and assumptions used of the cost estimates included in PacifiCorp’s Study, and—potentially—of costs for which estimates were not included in PacifiCorp’s Study, but should have been included given the scope of PacifiCorp’s Study. OPUC’s IE shall prepare and submit OPUC’s Independent Evaluation, to include a narrative report and working spreadsheet reports.

OPUC's Independent Evaluation represents three deliverables. The first is a narrative report documenting OPUC's IE's review and assessment of PacifiCorp's Study and discussing its findings with reference to specific coal plants in PacifiCorp's Study. The second deliverable is a working electronic version of all spreadsheet reports OPUC's IE relied upon in developing and documenting OPUC's Independent Evaluation. The spreadsheet reports are to be created and developed using Microsoft Excel. The third deliverable is an electronic copy of all other materials OPUC's IE relied upon in developing OPUC's Independent Evaluation.

The narrative report prepared by OPUC's IE will include the following:

1. Names and roles of the individuals involved in preparing OPUC's Independent Evaluation.
2. Relevant professional certifications and training for each individual named.
3. Discussion documenting OPUC's IE's review and assessment of the process used to prepare PacifiCorp's Study.
4. Discussion documenting OPUC's IE's review and assessment of the scope and limitations of PacifiCorp's Study, specifically including but not limited to:
  - 4.1. The applicability and appropriateness of using a single design basis template for each coal plant included in PacifiCorp's Study.
  - 4.2. Completeness of the cost estimates included in PacifiCorp's Study, including those Kiewit understood to be provided by PacifiCorp (see "PacifiCorp's Study: Limitations Applicable to Kiewit's Work" above) as well as those that were actually provided by PacifiCorp, if and where different.
5. Discussion documenting OPUC's IE's review and assessment of any indices used and how they were used in preparing PacifiCorp's Study.
6. Discussion documenting OPUC's IE's review and assessment of any quantitative forecasts, including of indices, used in preparing PacifiCorp's Study.
7. Discussion documenting OPUC's IE's review and assessment of the assumptions used in preparing PacifiCorp's Study, distinguishing between those provided by PacifiCorp versus those provided by Kiewit.
8. Discussion documenting OPUC's IE's review and assessment of the methodologies used in preparing PacifiCorp's Study, distinguishing between those used by PacifiCorp versus those used by Kiewit.
9. Discussion documenting OPUC's IE's review and assessment of the high level schedules included in PacifiCorp's Study,
10. Discussion documenting OPUC's IE's review and assessment of cash flows included in PacifiCorp's Study.
11. Discussion documenting OPUC's IE's review and assessment of owner's (or, where applicable, owners') permitting requirements, as documented in PacifiCorp's Study.

12. Discussion documenting OPUC's IE's review and assessment of the summary of typical owner's responsibilities for demolition, salvage and scrap, as documented in PacifiCorp's Study.
13. Discussion documenting OPUC's IE's review and assessment of any other information relevant to the cost estimates included in PacifiCorp's Study.

The spreadsheet reports OPUC's IE delivers to OPUC as part of OPUC's Review will include clear identification of:

1. Each spreadsheet report file included
2. Each spreadsheet contained within each spreadsheet file
3. Each column and row heading within each spreadsheet, where the indicated cell(s) contain data or formulae.
4. Each parameter used in each spreadsheet

The electronic copy of all other materials OPUC's IE relied upon in developing OPUC's Independent Evaluation will include clear identification of each document, including its source (and hyperlink where applicable) and the date of OPUC's IE's retrieval of each document if from electronic sources such as websites. These materials are to be in spreadsheet or pdf format, as applicable, and be clearly labeled.

### **OPUC's Independent Cost Estimates**

As a part of OPUC's Review, OPUC's IE is to prepare and deliver an AACE Class 3 cost estimate for each item in PacifiCorp's Study where OPUC's IE does not concur with either the process employed; the assumptions, methodology, index, or forecast used; or with the cost estimate (or the range of cost estimates) obtained in PacifiCorp's Study.

Additionally, OPUC's IE is to prepare and deliver an AACE Class 3 cost estimate for those items that were not included in PacifiCorp's Study which OPUC's IE believes should have been included given the indicated scope of PacifiCorp's Study. Each individual cost estimate developed by OPUC's IE is to be consistent with AACE Class 3 cost estimate guidelines and stated in Q4 2019 dollars.

The OPUC Independent Cost Estimate's narrative report prepared by OPUC's IE is to include the following:

1. Names and roles of the individuals involved in preparing OPUC's Independent Cost Estimates.
2. Relevant professional certifications and training for each individual named.
3. Discussion of the reason(s) an individual cost estimate or set of related cost estimates prepared by OPUC's IE represents a better or more appropriate basis for estimating the costs of decommissioning one or more of PacifiCorp's coal-fueled generating plant units than does the corresponding cost estimate in PacifiCorp's Study.

4. Discussion documenting any index OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the source and vintage of each such index.
5. Discussion documenting any forecast OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the source and vintage of each such forecast.
6. Discussion documenting each assumption OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the reason(s) each such assumption was necessary and appropriate.
7. The individual cost estimates prepared by OPUC's IE, with each estimate clearly identified as to the task or component to which it applies, as well as the coal plant or coal plant unit(s) to which it applies. The individual cost estimates are to include the range of expected costs as well as the point estimate.
8. For each individual cost estimate prepared by OPUC's IE, the value of the corresponding (where applicable) individual cost estimate in PacifiCorp's Study for a basis of comparison. This is to include specifying the location within PacifiCorp's Study of each corresponding (where applicable) individual cost estimate.
9. The individual cost estimates prepared by OPUC's IE are to be organized and presented by coal plant or unit(s) of a coal plant, as appropriate.

OPUC's IE shall prepare and submit to OPUC OPUC's Independent Cost Estimates, to include a narrative report and working Excel spreadsheet reports.

### **Testimony Regarding PacifiCorp's Study and OPUC's Review**

OPUC's Review may include testimony authored by OPUC's IE regarding OPUC's Review. OPUC refers to this testimony as OPUC's IE's Testimony. This testimony will include discussion documenting OPUC's IE's review and assessment of PacifiCorp's Study and the methods and assumptions used and the results obtained in Oregon's Independent Cost Estimates.

1. Testimony will include an exhibit containing the witness qualifications for each author.
2. Testimony will include exhibits—such as tables and charts—that serve to reinforce key points of the testimony.
3. OPUC Staff will provide OPUC's IE with a Word document template to be used for OPUC's IE's testimony.
4. OPUC's IE will provide a draft version of its testimony within 10 calendar days of the date OPUC Staff receives the final version of other parts of OPUC's Review.
5. OPUC Staff will provide written comments regarding the draft testimony to OPUC's IE within 10 calendar days of receiving it.
6. The final version of the testimony will incorporate OPUC's IE's consideration of OPUC Staff's written comments regarding the draft testimony and will be provided to OPUC Staff within 7 calendar days of OPUC's IE receiving written comments from OPUC Staff.
7. Testimony, at OPUC Staff's sole discretion, will be filed in an OPUC proceeding that includes consideration of PacifiCorp's Study and its results.

8. OPUC Staff will provide OPUC's IE with information regarding the mechanics and logistics of OPUC's IE filing the final version of its testimony. This information will be provided via email no less than 3 calendar days prior to the date OPUC Staff requires the testimony to be filed.

### **Appearance by OPUC's IE as an Expert Witness**

OPUC's IE may be required to appear as an expert witness regarding OPUC's Review and PacifiCorp's Study, OPUC's IE's findings regarding PacifiCorp's Study and its results, and any alternative results obtained by OPUC's IE. Such an appearance will be in a hearing in the context of an OPUC proceeding that includes consideration of the results of PacifiCorp's Study.

1. OPUC Staff will provide OPUC's IE with advance notice via email that such an appearance will be required, with such advance notice to be not less than 30 calendar days prior to the date for OPUC's IE's appearance.
2. Such an appearance will be at OPUC's location in Salem, Oregon.

### **Use of Content in OPUC's Review by OPUC Staff**

Content or portions thereof in OPUC's Independent Evaluation, OPUC's Independent Cost Estimates, or OPUC's IE's Testimony may be used by OPUC Staff in testimony or other filings in one or more Commission proceedings related to the allocation of costs for PacifiCorp's system to the Company's Oregon customers. This content may also be presented or otherwise made available, in the context of a Commission proceeding, to third parties. In all such cases, the source will be appropriately cited.

### **Other**

1. OPUC's IE shall perform all aspects of its work in a safe manner. Any work performed at PacifiCorp's facilities shall be performed in a manner consistent with the safety rules, processes and procedures in place at the individual facilities. OPUC's IE's personnel may be required to attend safety training or safety briefings specific to each facility. OPUC's IE's personnel will be required to use personal protective equipment at generating facilities.
2. OPUC's IE shall control and maintain documentation in a manner consistent with the confidentiality or non-disclosure agreement between PacifiCorp and OPUC's IE. This may require OPUC's IE to submit both redacted and unredacted versions of OPUC's Review.

## **2.4 MINIMUM OFFEROR REQUIREMENTS**

### **2.4.1 BUSINESS**

Offeror must submit each of the following with its Offer to be considered for evaluation:

1. Offeror's written acknowledgment of and consent to OPUC's IE's work product(s) being shared with third parties in regulatory proceedings.

2. Evidence the Offeror is a professionally licensed Engineer or Engineering firm in one or more of the States of Oregon, Washington, Utah, and Wyoming.
3. Documentation of relevant project experience by providing project details and reference contact information<sup>6</sup> for projects which involved one or more of six discipline areas of power generation. The six discipline areas as used here are: (1) Boiler/HRSG; (2) large electric apparatus; (3) balance of plant systems (pumps, valves, piping systems, fans, blowers, air cooled condensers, and cooling towers); (4) electrical systems (including switch gear and system protection); (5) control systems; and (6) water treatment systems. Offeror should include a sufficient number of projects so that each of the six discipline areas has three or more projects indicating experience in that discipline area. Offeror is to include no less than 10 projects in total. All projects listed on this document are to have been completed within the last 10 years.

Regarding this third requirement, Offeror is to use the separate document, Attachment “D”, “Bidder Submittal List of Projects by Discipline.xlsx” that available in the bid documents to provide the requested documentation.

## **MINIMUM SUBMISSION REQUIREMENTS**

### **2.4.2 Offer Format and Quantity**

Offer should follow the format and reference the sections listed in the Offer Content Requirements section. Responses to each section and subsection should be labeled to indicate the item being addressed. Offer must describe in detail how requirements of this solicitation will be met and may provide additional related information.

### **Work Product to be Shared with Third Parties**

Offer must include Offeror’s written acknowledgment of and consent to OPUC’s IE’s work product being shared with third parties in regulatory proceedings. The Agency requires that a successful bid meet this requirement.

### **Professionally Licensed**

Offer must include evidence the Offeror is a professionally licensed Engineer or Engineering firm in one or more of the States of Oregon, Washington, Utah, and Wyoming.

Offeror shall **submit one electronic copy of its Offer via email to the SPC**. In addition, if Offeror believes any of its Offer is exempt from disclosure under Oregon Public Records Law (ORS 192.311 through 192.478), Offeror shall complete and submit the Disclosure Exemption Affidavit (Attachment B) and a fully redacted version of its Offer, clearly identified as the redacted version.

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<sup>6</sup> Reference contact information for each listed project is to include company name, contact person’s name, and contact person’s telephone number.

### **2.4.3 Authorized Representative**

A representative authorized to bind the Offeror shall sign the Offer. Failure of the authorized representative to sign the Offer may subject the Offer to rejection by Agency.

## **2.5 PROCUREMENT PROCESS**

### **2.5.1 Public Notice**

The solicitation, including all Addenda and attachments, is published in the Oregon Procurement Information Network (ORPIN) at <http://orpin.oregon.gov>. Solicitation documents will not be mailed to prospective Offerors.

Agency shall advertise all Addenda on ORPIN. Prospective Offeror is solely responsible for checking ORPIN to determine whether or not any Addenda have been issued. Addenda are incorporated into the solicitation by this reference.

### **2.5.2 Questions / Requests for Clarification**

All inquiries, whether relating to the solicitation process, administration, deadline or method of award, or to the intent or technical aspects of the solicitation must:

- Be emailed to the SPC.
- Reference the RFP number.
- Identify Offeror's name and contact information.
- Be sent by an authorized representative.
- Refer to the specific area of the solicitation being questioned (i.e. page, section and paragraph number); and
- Be received by the due date and time for Questions/Requests for Clarification identified in the Schedule.

### **2.5.3 Offer Conference**

A pre-Proposal conference will not be held for this solicitation.

### **2.5.4 Offer Submission**

Offeror is solely responsible for ensuring its Offer is received by the SPC in accordance with the solicitation requirements before Closing. Agency is not responsible for any delays in mail or by common carriers or by transmission errors or delays or mistaken delivery. Offer submitted by any means not authorized may be rejected.

### **2.5.5 Modification or Withdrawal of Proposals**

Any Offeror who wishes to make modifications to an Offer already received by Agency shall submit its modification in one of the manners listed in the Offer Submission Options section and must denote the specific change(s) to the Offer submission.

If an Offeror wishes to withdraw a submitted Offer, it shall do so prior to Closing. The Offeror shall submit a Written notice Signed by an authorized representative of its intent to withdraw its Offer in accordance with OAR 125-247-0440. The notice must include the RFP number and be submitted to the SPC.

#### **2.5.6 Offer Due Date**

Offer and all required submittal items must be received by the SPC on or before Closing. Offer received after the Closing will not be accepted. All Offer modifications or withdrawals must be completed prior to Closing. **Proposals and all required submittal items are to be emailed to the SPC ([Rich.Palmer@state.or.us](mailto:Rich.Palmer@state.or.us))**

Offers received after Closing are considered LATE and will NOT be accepted for evaluation. Late Offers will be returned to the respective Offeror or destroyed.

#### **2.5.7 Offer Rejection**

Agency may reject an Offer for any of the following reasons:

- Offeror fails to substantially comply with all prescribed solicitation procedures and requirements, including but not limited to the requirement that Offeror's authorized representative sign the Offer in ink.
- Offeror fails to meet the responsibility requirements of ORS 279B.110.
- Offeror makes any contact regarding this solicitation with State representatives such as State employees or officials other than the SPC or those the SPC authorizes, or inappropriate contact with the SPC.
- Offeror attempts to inappropriately influence a member of the Evaluation Committee.
- Offer is conditioned on Agency's acceptance of any other terms and conditions or rights to negotiate any alternative terms and conditions that are not reasonably related to those expressly authorized for negotiation in the RFP or Addenda.

#### **2.5.8 Opening of Offers**

There will be no public Opening of Offers. Offers received will not be available for inspection until after the evaluation process has been completed and the Notice Award is issued. However, Agency will record and make available the identity of all Offerors after Opening.

### **2.6 OFFER CONTENT REQUIREMENTS**

Offer must address each of the items listed in this section and all other requirements set forth in this solicitation. Offeror shall describe the Goods to be provided or the Services to be performed or both. An Offer that merely offers to provide the goods or services as stated in this solicitation will be considered non-Responsive to this solicitation and will not be considered further.



### 2.6.1 Offer Certification Sheet

The Offeror shall complete and submit the Offeror Information and Certification Sheet (Attachment C).

### 2.6.2 Costs

Submit a detailed Price Offer (**Attachment D**) that includes the following items:

- For each activity described in the Scope of Work, the costs must include identifiable costs, time estimates for completing each activity, and a summary of all proposed costs,
- The Price Proposal must include separate line items for personnel, travel, supplies, other costs, and administrative and overhead charges; and
- For all fully loaded personnel costs, the costs offered must include the name and title of all positions for each individual staff person who will perform the Work, and list the salary/wage and fringe rate separately for each such individual.

### Cost Subtotals

Costs must be subtotaled by the following components of OPUC's Review, as identified in the Scope of Work: 1) OPUC's Independent Evaluation; 2) OPUC's Independent Cost Estimates; 3) testimony regarding PacifiCorp's Study and OPUC's Review; and 4) appearance by OPUC's IE as an expert witness regarding PacifiCorp's Study and OPUC's Review.

### Format

Submission of a Price Offer should include submission as a separate electronic file.

### 2.6.3 Public Record/Confidential or Proprietary Information

All Offers are public record and are subject to public inspection after Agency issues the Notice of the Intent to Award. If an Offeror believes that any portion of its Offer contains any information that is a trade secret under ORS Chapter 192.345(2) or otherwise is exempt from disclosure under the Oregon Public Records Law (ORS 192.311 through 192.478), Offeror shall complete and submit the Disclosure Exemption Affidavit (Attachment B) and a fully redacted version of its Offer.

Offeror is cautioned that cost information generally is not considered a trade secret under Oregon Public Records Law (ORS 192.311 through 192.478) and identifying the Offer, in whole, as exempt from disclosure is not acceptable. Agency advises each Offeror to consult with its own legal counsel regarding disclosure issues.

If Offeror fails to identify the portions of the Offer that Offeror claims are exempt from disclosure, Offeror has waived any future claim of non-disclosure of that information.

## 2.7 EVALUATION PROCESS

### 2.7.1 Responsiveness and Responsibility Determination

Offers received prior to Closing will be reviewed for Responsiveness to all solicitation requirements including compliance with Minimum Requirements section and Offer Content Requirements section. If the Offer is unclear, the SPC may request clarification from Offeror. However, clarifications may not be used to rehabilitate a non-Responsive Offer. If the SPC finds the Offer non-Responsive, the Offer may be rejected, however, Agency may waive mistakes in accordance with OAR 125-247-0470.

At any time prior to award, Agency may reject an Offeror found to be not Responsible.

### 2.7.2 Evaluation Criteria

Offers meeting the requirements outlined in the Offer Content Requirements section will be evaluated by an Evaluation Committee. Evaluators will assign a score of 0 to 10 for the evaluation criterion listed below in this section.

SPC may request further clarification to assist the Evaluation Committee in gaining additional understanding of Offers. A response to a clarification request must be to clarify or explain portions of the already submitted Offer and may not contain new information not included in the original Offer.

#### 2.7.2.1 Evaluation

Proposal will be evaluated on the following criterion:

##### **Relevant Project Experience**

Provide relevant project experience utilizing the Attachment “D” Form by providing project details and reference contact information in each of six discipline areas of power generation. The six discipline areas as used here are (1) Boiler/HRSG; (2) large electric apparatus; (3) balance of plant systems (pumps, valves, piping systems, fans, blowers, air cooled condensers, and cooling towers); (4) electrical systems (including switch gear and system protection); (5) control systems; and (6) water treatment systems. Offeror should include a sufficient number of projects so that each of the six discipline areas has three or more projects indicating experience in that discipline area. Offeror is to include no less than 10 projects in total. All projects listed on this document are to have been completed within the last 10 years.

Regarding this third requirement, Offeror is to use the separate document (Attachment “D”) “Bidder Submittal List of Projects by Discipline.xlsx” that available in the bid documents to provide the requested documentation.

SCORE	EVALUATION OF RELEVANT PROJECT EXPERIENCE
60	OUTSTANDING – Response shows that each of the six areas has at least 12 projects indicating experience in that area and includes all requested information.
54	VERY GOOD – Response shows that each of the six areas has at least 10 projects indicating experience in that area and includes all requested information.
48	GOOD – Response shows that each of the six areas has at least 7 projects indicating experience in that area and includes all requested information.
42	ADEQUATE – Response shows that each of the six areas has at least 5 projects indicating experience in that area and includes all requested information.
30	FAIR – Response shows that each of the six areas has at least 3 projects indicating experience in that area and includes all requested information.
0	RESPONSE OF NO VALUE – Response does not meet Agency’s minimum requirement.

## 2.8 PRICE EVALUATION

The SPC will conduct the price evaluation. The SPC will award a price score to each Price Proposal based upon the percentage of the proposed price as compared to the lowest Offeror’s price using the following formula:

$$\frac{\text{lowest price of qualified Offerors}}{\text{price being scored}} \times \text{price points possible} = \text{price score}$$

## 2.9 NEXT STEP DETERMINATION

Agency may conduct additional rounds of competition if in the best interest of the State. Additional rounds of competition may consist of, but will not be limited to:

- Establishing a Competitive Range
- Presentations/Demonstrations/Additional Submittal Items
- Interviews
- Best and Final Offers

If Agency elects to conduct additional round(s), Agency shall provide written notice to all Offerors describing the next step. At any time, Agency may dispense with the selected additional round and: (1) issue a Notice of Intent to Award to the highest ranking Responsible Offeror; or (2) elect to conduct an alternative round of competition; or (3) cancel the solicitation.

## 2.10 PREFERENCES

### 2.10.1 Oregon Supplies and Services

Agency prefers Oregon goods and services, and for evaluation purposes, per ORS 279A.128, Agency shall subtract 5% from the price for any Offeror proposing all Goods fabricated or processed or all Services performed entirely in Oregon before calculating the price score.

## 2.11 POINT AND SCORE CALCULATIONS

Relevant Project Experience	60 Points total possible
Cost Proposal	40 points total Possible
<b>Total</b>	<b>100 points possible</b>

## 2.12 RANKING OF OFFERORS

The SPC will total the final average score (calculated by totaling the points awarded by each Evaluation Committee member and dividing by the number of members), together with references, and final price. After each applicable preference has been applied, SPC will determine rank order for each respective Offer and Offeror, with the highest score receiving the highest rank, and successive rank order determined by the next highest score.

# SECTION 3: AWARD AND NEGOTIATION

## 3.1 AWARD NOTIFICATION PROCESS

### 3.1.1 Award Consideration

Agency, if it awards a Contract, shall award a Contract to the highest ranking Responsible Offeror(s) based upon the scoring methodology and process described in Section 3. Agency may award less than the full Scope defined in this solicitation.

### 3.1.2 Notice of Award

Agency will notify all Offerors in Writing that Agency is awarding a Contract to the selected Offeror(s) subject to successful negotiation of any negotiable provisions.

## 3.2 SUCCESSFUL PROPOSER SUBMISSION REQUIREMENTS

### 3.2.1 Insurance

Prior to execution of the Contract, the apparent successful Offeror shall secure and demonstrate to Agency proof of insurance coverage meeting the requirements identified in the solicitation or as otherwise negotiated.



Failure to demonstrate coverage may result in Agency terminating Negotiations and commencing Negotiations with the next highest ranking Offeror. Offeror is encouraged to consult its insurance agent about the insurance requirements contained in Insurance Requirements (Exhibit XX of Attachment A) prior to Offer submission.

### 3.2.2 Taxpayer Identification Number

The apparent successful Offeror shall provide its Taxpayer Identification Number (TIN) and backup withholding status on a completed [W-9 form](#) if either of the following applies:

- When requested by Agency (normally in an intent to award notice), or
- When the backup withholding status or any other information of Offeror has changed since the last submitted W-9 form, if any.

Agency will not make any payment until Agency has a properly completed W-9.

### 3.2.3 Business Registry

If selected for award, Offeror shall be duly authorized by the State of Oregon to transact business in the State of Oregon before executing the Contract. The selected Offeror shall submit a current Oregon Secretary of State Business Registry number, or an explanation if not applicable.

All Corporations and other business entities (domestic and foreign) must have a Registered Agent in Oregon. See requirements and exceptions regarding Registered Agents. For more information, see Oregon Business Guide, How to Start a Business in Oregon and Laws and Rules. The titles in this subsection are available at the following Internet site: <http://www.filinginoregon.com/index.htm>.

## 3.3 CONTRACT NEGOTIATION

### 3.3.1 Negotiation

By submitting an Offer, Offeror agrees to comply with the requirements of the solicitation, including the terms and conditions of the Sample Contract (Attachment A), with the exception of those terms reserved for negotiation. Offeror shall review the attached Sample Contract and note exceptions. Unless Offeror notes exceptions in its Offer, the State intends to enter into a Contract with the successful Offeror substantially in the form set forth in Sample Contract (Attachment A). It may be possible to negotiate some provisions of the final Contract; however, many provisions cannot be changed. Offeror is cautioned that the State of Oregon believes modifications to the standard provisions constitute increased risk and increased cost to the State. Therefore, Agency will consider the Scope of requested exceptions in the evaluation of Offers.

Any Offer that is conditioned upon Agency's acceptance of any other terms and conditions may be rejected. Any subsequent negotiated changes are subject to prior approval of the Oregon Department of Justice.

All items, except those listed below, may be negotiated between Agency and the apparent successful Offeror in compliance with Oregon State laws:

- Choice of law
- Choice of venue
- Constitutional requirements
- All applicable Federal and State requirements

In the event that the parties have not reached mutually agreeable terms within 30 calendar days, Agency may terminate Negotiations and commence Negotiations with the next highest ranking Offeror.

## **SECTION 4: ADDITIONAL INFORMATION**

### **4.1 CERTIFIED FIRM PARTICIPATION**

Pursuant to Oregon Revised Statute (ORS) Chapter 200, Agency encourages the participation of small businesses, certified by the Oregon Certification Office for Business Inclusion and Diversity ("COBID") in all contracting opportunities. This includes certified small businesses in the following categories: disadvantaged business enterprise, minority-owned business, woman-owned business, a business that a service-disabled veteran owns or an emerging small business. Agency also encourages joint ventures or subcontracting with certified small business enterprises. For more information, visit:

<https://oregon4biz.diversitysoftware.com/FrontEnd/VendorSearchPublic.asp?XID=6787&TN=oregon4biz>

If the Contract has potential subcontracting opportunities, the successful Offeror may be required to submit a completed Certified Disadvantaged Business Outreach Plan (Attachment F) prior to execution.

### **4.2 GOVERNING LAWS AND REGULATIONS**

This RFP is governed by the laws of the State of Oregon. Venue for any administrative or judicial action relating to this RFP, evaluation and award is the Circuit Court of Marion County for the State of Oregon; provided, however, if a proceeding must be brought in a federal forum, then it must be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this Section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, to or from any Claim or from the jurisdiction of any court.

### **4.3 OWNERSHIP/PERMISSION TO USE MATERIALS**

All Offers submitted in response to this RFP become the Property of Agency. By submitting an Offer in response to this RFP, Offeror grants the State a non-exclusive, perpetual, irrevocable, royalty-free license for the rights to copy, distribute, display, prepare derivative works of and transmit the Offer solely for the purpose of evaluating the Offer, negotiating an Agreement, if awarded to Offeror, or as otherwise needed to administer the RFP process, and to fulfill obligations under Oregon Public Records Law (ORS 192.311 through 192.478). Offers, including supporting materials, will not be returned to Offeror unless the Offer is submitted late.

#### **4.4 CANCELLATION OF RFP; REJECTION OF OFFERS; NO DAMAGES.**

Pursuant to ORS 279B.100, Agency may reject any or all Offers in-whole or in-part, or may cancel this solicitation at any time when the rejection or cancellation is in the best interest of the State or Agency, as determined by Agency. Neither the State nor Agency is liable to any Offeror for any loss or expense caused by or resulting from the delay, suspension, or cancellation of the solicitation, award, or rejection of any Offer.

#### **4.5 COST OF SUBMITTING A PROPOSAL**

Offeror shall pay all the costs in submitting its Offer, including, but not limited to, the costs to prepare and submit the Offer, costs of samples and other supporting materials, costs to participate in demonstrations, or costs associated with protests.

### **SECTION 5: LIST OF ATTACHMENTS**

ATTACHMENT A	SAMPLE CONTRACT
ATTACHMENT B	DISCLOSURE EXEMPTION AFFIDAVIT
ATTACHMENT C	PROPOSER INFORMATION AND CERTIFICATION SHEET
ATTACHMENT D	BIDDER SUBMITTAL LIST OF PROJECTS BY DISCIPLINE
ATTACHMENT E	COST SHEET
ATTACHMENT F	COBID CERTIFICATION / OUTREACH PLAN
ATTACHMENT G	RESPONSIBILITY INQUIRY

# Request for Quote

## EVALUATION OF THERMAL POWER PLANT DEMOLITION ESTIMATE

(Prod)



### Only Manual Bids Allowed

**Issued By**

PUC - Pol & Adm - Business  
Services  
201 high St SE, Ste 100  
Salem, Oregon  
97301-3398

**Contact** Richard Palmer (OAC)  
**Phone** 1 (503) 378-6619  
**Fax**  
**Email** rich.palmer@state.or.us

**Opportunity #****PUC-1028-20**

Addendum # 2

**Original Publish Date & Time**

03/18/2020 8:24 AM

**Publish Date & Time**

04/07/2020 4:12 PM

**Closing Date & Time**

04/09/2020 3:00 PM

**Time Zone**

Pacific Time

**Approx. Time Remaining**

All dates are mm/dd/yyyy

Attachments Exist

Privileged Attachments Do Not Exist

Documents for Purchase Do Not Exist

Questions and Answers

Geographic Matching Exists

Commodity Matching Exists

**Issued For**

PUC - Pol & Adm - Regulatory  
Operations  
201 high St SE, Ste 100  
Salem, Oregon  
97301-3398

Addendum #2 Under Section 2.6.2 "Costs" corrects reference to Costing form from Attachment "D" to Attachment "E". Addendum #2 also adds the Questions and answers section for this RFP.

Addendum #1 - Amends the closing date to 4/9/2020 and date for questions to be submitted to 4/6/2020.

**Opportunity Comments**

\*NOTE: THIS IS A REISSUE OF PUC-1026-20 WHICH CLOSED 3/17/2020

**Opportunity Summary**

\*NOTE: THIS IS A REISSUE OF PUC-1026-20 WHICH CLOSED 3/17/2020 - PLEASE SUBMIT PROPOSALS AND ALL REQUIRED ATTACHMENTS for PUC-1028-20 VIA EMAIL TO: [Rich.Palmer@state.or.us](mailto:Rich.Palmer@state.or.us)

The State of Oregon, acting by and through the Public Utility Commission, is issuing this





**ATTACHMENT A-1**

**RFP PUC-1028-20 / INDEPENDENT EVALUATION OF THERMAL POWER PLANT DEMOLITION ESTIMATES STUDY**

**STATE OF OREGON**



**COVER PAGE**

**OREGON PUBLIC UTILITY COMMISSION**

**INDEPENDENT EVALUATION OF THERMAL POWER PLANT  
DEMOLITION ESTIMATES STUDY**

Intermediate Request for Proposal (RFP)

**RFP PUC-1028-20**

Date of Issue: March 18, 2020

**Closing Date: April 09, 2020**

Single Point of Contact (SPC): **Rich Palmer – Procurement & Contract Specialist**

Address:	<b>201 High Street SE – Suite 100</b>
City, State, Zip	<b>Salem, OR 97301</b>
Phone (voice)	<b>503-378-6619</b>
E-mail:	<b><a href="mailto:Rich.Palmer@state.or.us">Rich.Palmer@state.or.us</a></b>

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## SECTION 1: GENERAL INFORMATION

### 1.1 INTRODUCTION

The State of Oregon, acting by and through the Public Utility Commission, (“Agency”), is issuing this Request for an Independent Review of Thermal Power Plant Demolition Estimates.

Additional details on the Scope of the goods or services or both are included in the Scope of Work section.

Agency anticipates the award of one Contract from this solicitation. The initial term of the Contract is anticipated to be one year.

### 1.2 SCHEDULE

The table below represents a tentative schedule of events. All times are listed in Pacific Time. All dates listed are subject to change. N/A denotes that event is not applicable to this solicitation.

Event	Date	Time
Questions / Requests for Clarification Due	April 6, 2020	3:00PM
Closing (Proposal Due)	See RFP cover page	
Issuance of Notice of Award (approx.)	April 10, 2020	

### 1.3 SINGLE POINT OF CONTACT (SPC)

The SPC for this solicitation is identified on the Cover Page, along with the SPC’s contact information. Offeror shall direct all communications related to any provision of the solicitation, whether about the technical requirements of the solicitation, contractual requirements, the solicitation process, or any other provision only to the SPC.

## SECTION 2: AUTHORITY, OVERVIEW, AND SCOPE

### 2.1 AUTHORITY AND METHOD

Agency is issuing this solicitation pursuant to its authority under ORS 279A.050.

Agency is using the solicitation method, pursuant to ORS 279B.070 and OAR 125-247.0270.

### 2.2 DEFINITION OF TERMS

For the purposes of this solicitation, capitalized words will refer to the following definitions.

### 2.2.1 General Definitions

Capitalized terms not specifically defined in this document are defined in OAR 125-246-0110.

“Oregon Public Utility Commission” – Agency or PUC.

## 2.3 OVERVIEW

PacifiCorp (“Company”), an indirect wholly-owned subsidiary of Berkshire Hathaway Energy Company<sup>1</sup> (“BHE”), is a United States regulated electric utility company headquartered in Oregon. PacifiCorp is principally engaged in the business of generating, transmitting, distributing and selling electricity and serves 1.9 million retail electric customers in portions of Utah, Oregon, Wyoming, Washington, Idaho, and California. PacifiCorp's combined service territory covers approximately 141,400 square miles and includes diverse regional economies across six states.

PacifiCorp operates 17 thermal electric facilities that generate electricity from coal, natural gas, or geothermal resources. The Company’s thermal plants are located in Wyoming, Utah, Arizona, Colorado, Oregon, Washington, and Montana. PacifiCorp’s thermal generating plants include several that are coal-fueled (“coal plants” and “coal plant units”), such as Dave Johnston (Units 1, 2, 3, 4), Hunter (Units 1, 2, 3), Huntington (Units 1, 2), Jim Bridger (Units 1, 2, 3, 4), Naughton (Units 1, 2, 3), and Wyodak (Unit 1). PacifiCorp co-owns several additional coal-fueled generating plants (or units of coal plants) the Company does not operate, including Colstrip (Units 3, 4) and Hayden (Units 1, 2).

PacifiCorp engaged Kiewit Engineering Group Inc. (“Kiewit”) to prepare and deliver a study of the total costs (Q4 2019 dollars) to decommission, decontaminate, and demolish several coal plants (or specific units of some coal plants) owned or partially owned by the Company (“PacifiCorp’s Study”). The costs include remediating and restoring each plant site at the end of all activities. Certain cost estimates in PacifiCorp’s Study were provided by the Company. PacifiCorp requested a design basis, current and reliable cost estimates, schedule estimates, and other relevant information for the decommissioning and demolition of certain of its thermal generating resources.

The intent of PacifiCorp’s Study was for Kiewit, with input from North American Dismantling Corporation (NADC), a PacifiCorp approved demolition contractor, to prepare AACE International (“AACE” and formerly known as the Association for the Advancement of Cost Engineering) Class 3 cost estimates, schedule estimates, and other relevant information for site investigation and project development, decommissioning, decontamination, demolition, remediation, and reclamation of the following coal-fired thermal plants in PacifiCorp's fleet:

- Hunter Power Plant (Hunter): Units 1, 2, and 3
- Huntington Power Plant (Huntington): Units 1 and 2
- Dave Johnston Power Plant (Dave Johnston): Units 1, 2, 3, and 4

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<sup>1</sup> All shares of outstanding common stock of BHE are privately held by a limited group of investors. Berkshire Hathaway, Inc. is the predominant investor in BHE.

- Jim Bridger Steam Plant (Jim Bridger): Units 1, 2, 3, and 4
- Naughton Power Plant (Naughton): Units 1, 2, and 3
- Wyodak Power Plant (Wyodak): Unit 1
- Hayden Generating Station (Hayden): Units 1 and 2 (operated by Xcel)

The Oregon Public Utility Commission (“OPUC” or “Commission”) regulates aspects of PacifiCorp’s operations related to providing electricity service to customers in the State of Oregon. The intended use of information in PacifiCorp’s Study is in the Company’s depreciation and other proceeding(s) for setting rates as well as in regulatory processes related to the retirement of multiple coal-fueled generating facilities. PacifiCorp made its Study<sup>2</sup> available to the Commission on January 17, 2020.<sup>3</sup>.

The purpose of this RFP is for OPUC to contract with a qualified organization to review and evaluate both methodologies employed and results obtained in PacifiCorp’s Study; to independently develop Class 3 estimates of costs to decommission, decontaminate, and demolish several coal plants (or specific units of some coal plants) owned<sup>4</sup> or operated by PacifiCorp, including remediating and restoring each plant site, at the end of all activities, to a condition that meets the requirements of all permits and regulation in place at the time of PacifiCorp’s Study; and to deliver to OPUC a report regarding its review and evaluation and its independent cost estimates, as well as all supporting documentation. OPUC refers to these and related activities collectively as “OPUC’s Review.” The information in OPUC’s Review will be used in PacifiCorp’s Oregon depreciation proceeding(s) for setting rates as well as in regulatory processes related to the retirement of multiple coal-fueled generating facilities.

### **PacifiCorp’s Study**

PacifiCorp engaged Kiewit to prepare, with input from NADC, a PacifiCorp-approved demolition contractor with which Kiewit has subcontracted, AACE Class 3 cost estimates, schedule estimates, and other relevant information for decommissioning and demolishing specific coal-fueled generation resources.

PacifiCorp’s Study was performed in two phases.

#### Phase 1 – Preparation of an Overall Decommissioning Scope Design Basis

- Preparation and submission of a draft Design Basis
- Adjustment of the Design Basis based on PacifiCorp’s comments
- Submission of the final Design Basis

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<sup>2</sup> PacifiCorp’s Study, as provided to OPUC on January 17, 2020, is confidential in its entirety.

<sup>3</sup> The version of PacifiCorp’s Study provided on January 17<sup>th</sup> did not include materials related to the Colstrip plant. PacifiCorp expects an updated version to include Colstrip to be available by March 31, 2020.

<sup>4</sup> PacifiCorp is a partial owner of several coal plants (or coal plant units).

Phase 2 – Preparation of Cost Spreadsheet and Reports

- Visits to plant sites to obtain information
- Preparation and submission of the draft spreadsheet reports
- Adjustments to the spreadsheets and reports based on PacifiCorp's comments
- Submission of the final spreadsheet reports

Plants and constituent units included in PacifiCorp's Study are:

- Dave Johnston Units 1, 2, 3 and 4
- Jim Bridger Units 1, 2, 3 and 4
- Hayden Units 1 and 2
- Hunter Units 1, 2 and 3
- Huntington Units 1 and 2
- Naughton Units 1, 2 and 3
- Wyodak Unit 1
- Colstrip Units 3 and 4<sup>5</sup>

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<sup>5</sup> PacifiCorp added the Colstrip units to its initial list and expects an updated version that includes cost estimates for Colstrip Units 3 and 4 to be available by March 31, 2020.

PacifiCorp is a co-owner of the Hayden and Colstrip plants, but does not operate either plant. PacifiCorp is the sole or a partial owner of the other plants included in PacifiCorp's Study, and is the operator of these plants.

Cost estimates for closure of coal combustion residuals (CCR) ponds and landfills have been prepared for PacifiCorp by other parties, and PacifiCorp provided these to Kiewit for inclusion in the Class 3 estimates. These include, but may not be limited to the following ponds and landfills:

- Dave Johnstone: Ash Pods 4A and 4B; Industrial Solid Waste Landfill Expansion Site
- Jim Bridger: Ash Landfill; Flue Gas Desulphurization (FGD) Ponds 1 and 2
- Hunter: CCR Landfill
- Huntington: CCR Landfill
- Naughton: North and South Ash Ponds; FGD Ponds 1, 2, 4, and 5
- Hayden: CCR Landfill and several ponds

The Scope of Work for PacifiCorp's Study stated that it did not define every detail of the Work and that the Company's expectation was that the Consultant would "use its expertise and experience to determine the full extent of the information gathering, inspection, investigation and analysis necessary to define the ultimate work."

### **Phase 1: Preparation of Overall Decommissioning Scope Design Basis**

Kiewit was to prepare one high-level design basis template for coal-fired thermal power plants in PacifiCorp's fleet, excluding switchyards and substations unless PacifiCorp provided the cost estimates for these. The purpose of the design basis was to:

- A. Serve as the basis for the cost and schedule estimates provided in Phase 2 of this PacifiCorp's study.
- B. Guide future PacifiCorp engineers' preparation of specifications for future PacifiCorp thermal power plant retirements and retirement studies.

The design basis was to include the following content at a minimum:

1. Site investigation and development: A description of the high level work requirements for investigation of site conditions and project development in preparation for retirement of the thermal power plant.
2. Decommissioning: A high level description of events, conditions, and requirements that must be met before demolition begins.
3. Pre-demolition decontamination: A high level description of decontamination requirements that must be met before demolition begins.
4. Demolition: A high level description, including means and methods, of the demolition and salvage work. Demolition is to include criteria for disposition of underground infrastructure, as well as removal of slabs and foundations.



5. Post-demolition remediation: A high level description of the site condition after demolition and completion of remediation. Post-demolition remediation will include bringing the site, including subsurface, to a condition that meets the requirements of all permits and regulations in place as of the time PacifiCorp's Study is conducted.
6. Reclamation: A high level description of site condition after site civil work is complete and the site is ready for the next phase of its life.

## **Phase 2: Preparation of Cost Spreadsheet and Reports**

Kiewit was to prepare narrative reports and working Excel-based spreadsheet reports for each plant in PacifiCorp's Study.

1. Each narrative report was to include the following:
  - 1.1. Names and roles of the parties involved in preparing the report
  - 1.2. Process used to prepare the report
  - 1.3. Scope and battery limits of the report
  - 1.4. Indices used in preparing the report
  - 1.5. Assumptions
  - 1.6. High level schedules
  - 1.7. Indicative cash flows
  - 1.8. Owner's (or owners,' where applicable) permitting requirements
  - 1.9. Summary of typical owner's responsibilities for demolition, salvage, and scrap
  - 1.10. Other relevant information
2. The spreadsheet reports were to be prepared to allow for future updates of inputs and assumptions. The cost estimates that were developed were to be consistent with AACE Class 3 cost estimate guidelines. The spreadsheet report was to include the following:
  - 2.1 Site investigation and development: The cost estimate for site investigation and development was to address items such as American Land Title Association (ALTA) surveys, environmental studies, inventory assessments, preparation of specifications, and Owner's Engineer effort.
  - 2.2 Decommissioning: The cost estimate for decommissioning was to be representative of items including equipment shutdown and safe condition, disconnection of the transmission system, removal of personal property, and closeout of operating permits. Decommissioning was to also address disposition of spares and inventory, consumables, chemicals and universal wastes. While there may not be individual entries for each of the above items, an overall estimate of expected staffing and labor hours for contractor services was to be included, and an area for owner's costs may have been completed by PacifiCorp.
  - 2.3 Pre-demolition decontamination: The cost estimate for decontamination was to address cleanup, removal and disposition of materials that require special handling or disposal prior to demolition. Two line items were anticipated, one for asbestos removal (asbestos-containing material, or ACM) and the other to include a proxy for lead, polychlorinated biphenyls (PCB), chlorofluorocarbons (CFC), radioisotopes, oils, fuels and miscellaneous hazardous materials.

- 2.4 Demolition, salvage and scrap: The cost estimate was to have line items for demolition costs, salvage credits, and scrap credits. The spreadsheet was to include allowances for asbestos and other hazardous materials discovered during demolition, removal of surplus fuel, and removal and disposal of ash.
- 2.5 Scrap value adjustments. The spreadsheet was to include one cell for a steel scrap index and one cell for a copper scrap index at the time the study was performed. It was to also include one cell for “current” steel scrap index and one cell for “current” copper scrap index. The spreadsheet was to incorporate the ability to update the cost estimates of steel scrap and copper scrap as a ratio of the respective scrap “current” and “at the time of study” indices. A reference to the source of steel and copper scrap indices was to be included.
- 2.6 Reclamation. This was expected to be the most expensive component of the steps required to prepare the sites for future use. The cost estimate for reclamation was to address site grading, erosion control, vegetative cover, access control, closing of landfills, closing raw water and evaporation ponds, and termination of environmental permits.
- 2.7 Plant total estimate. The spreadsheet was to include a subtotal for the above items. Estimates for project indirects and contingency were to be added and total project costs with and without credit for salvage and scrap were to be provided.

### **Phase 3: Review of Draft Report and Costs by Two Additional Contractors**

Kiewit obtained independent reviews from two demolition contractors of a draft of PacifiCorp’s Study and the cost estimates in the Study. The demolition contractors, listed below, are on PacifiCorp’s approved vendor list (AVL):

1. Bierlein Companies, Inc. (Midland, MI)
2. Brandenburg Industrial Service Company (Chicago, IL)

### **PacifiCorp’s Study: Kiewit’s Deliverables**

Kiewit was to provide PacifiCorp with the following:

1. One final demolition design basis template for coal-fired thermal power plants.
2. Working spreadsheets and narrative reports as described above for each plant in PacifiCorp’s Study.

### **PacifiCorp’s Study: Limitations Applicable to Kiewit’s Work**

Areas for each plant that were to have been included in Kiewit’s estimates are located inside each plant fence, with the following adjustments:

- a. Closure of ash ponds, FGD ponds, and ash/CCR landfills is excluded from the scope. Kiewit understands that PacifiCorp has the needed information for those facilities and will provide costs to be included in the spreadsheet. Kiewit will request from PacifiCorp, to be included in the cost estimate spreadsheet for closing of ash/FGD ponds and landfills, the costs of:

- (i) preparing sites for construction of final cover; (ii) final cover; (iii) erosion control; (iv) leachate collection system if required; (v) operations and inventory removal; (vi) demolition/removal site improvements; (vii) replace/rebuild site access controls as required; (viii) borrow area reclamation; (ix) professional services; and (x) administration and contingency.
- b. Substation and switchyard removal, i.e. fenced interconnection facilities, is excluded from the scope. PacifiCorp will be responsible for estimating the cost of any potential removal of substations and switchyards. Costs will be included in the spreadsheet if directed by PacifiCorp.
- c. Removal of transmission facilities, from the high side of the GSU to dead-end structures outside the switchyards, is included.
- d. Coal piles – cost estimates for removal of all coal from coal piles (including bedding coal) will be by PacifiCorp and included in the spreadsheet if directed by PacifiCorp. Cost of removal of mechanical equipment and above-ground and underground structures will be included in the estimate, with underground structures removal to depths established at the kick-off meeting.
- e. Roads, rail and bridges are assumed to be removed inside plant fencelines. Removal of such infrastructure outside plant fencelines is excluded. Costs for out of scope infrastructure will be included in the spreadsheet if provided by PacifiCorp.
- f. Jim Bridger – removal of the Evaporation Pond (non-CCR) is included. The “wetland” pond below FGD Pond 2 and outside the fence line is assumed to remain, and is therefore not included. Guidance is requested on whether removal of the Surge Pond south of 9 Mile Road should be included.
- g. Dave Johnston – parking lot and security station south of the river is assumed to remain. River intakes/outfalls are assumed to be abandoned in place upon removal of all mechanical equipment.
- h. Hunter Station – reservoir on the east (may be associated with the “Experimental Farm”), 2nd coal pile and pond are outside the property gates and are excluded. Kiewit understands the coal pile and coal handling structures west of the fence line may be related to a coal prep plant owned by others.
- i. Huntington Station – removal of two transmission structures outside the plant fence, across Deer Creek Road from the plant switchyard, are assumed to be included.
- j. Wyodak – all shared facilities with the adjacent plants, outside the fence line, are assumed to remain.
- k. Hayden Station – Closure of the ash/CCR landfill and ponds are included unless PacifiCorp has obtained the needed information for those facilities from others.

### **SCOPE OF IE WORK FOR OPUC’S REVIEW**

OPUC’s Review is to have multiple related parts. OPUC identifies the first of these as OPUC’s Independent Evaluation and the second as OPUC’s Independent Cost Estimates. Additionally, OPUC’s Review may require authoring and delivering to OPUC Staff OPUC’s IE’s written testimony regarding PacifiCorp’s Study and OPUC’s Review and may require a personal appearance at an OPUC hearing regarding PacifiCorp’s Study and OPUC’s Review.

Content included in OPUC's Review may be used by Commission Staff and Intervening Parties in testimony or other filings in one or more Commission proceedings related to the allocation of costs for PacifiCorp's system to the Company's Oregon customers. This may require the preparation of redacted as well as non-redacted versions of OPUC's Review and related testimony.

Information regarding the Scope of Work required for specific parts of OPUC's Review follows.

### **OPUC's Independent Evaluation**

OPUC needs a reliable and independent review and assessment of PacifiCorp's Study, performed by a qualified third party evaluator ("OPUC's IE"), including review and assessment of the methodologies employed and assumptions used of the cost estimates included in PacifiCorp's Study, and—potentially—of costs for which estimates were not included in PacifiCorp's Study, but should have been included given the scope of PacifiCorp's Study. OPUC's IE shall prepare and submit OPUC's Independent Evaluation, to include a narrative report and working spreadsheet reports.

OPUC's Independent Evaluation represents three deliverables. The first is a narrative report documenting OPUC's IE's review and assessment of PacifiCorp's Study and discussing its findings with reference to specific coal plants in PacifiCorp's Study. The second deliverable is a working electronic version of all spreadsheet reports OPUC's IE relied upon in developing and documenting OPUC's Independent Evaluation. The spreadsheet reports are to be created and developed using Microsoft Excel. The third deliverable is an electronic copy of all other materials OPUC's IE relied upon in developing OPUC's Independent Evaluation.

The narrative report prepared by OPUC's IE will include the following:

1. Names and roles of the individuals involved in preparing OPUC's Independent Evaluation.
2. Relevant professional certifications and training for each individual named.
3. Discussion documenting OPUC's IE's review and assessment of the process used to prepare PacifiCorp's Study.
4. Discussion documenting OPUC's IE's review and assessment of the scope and limitations of PacifiCorp's Study, specifically including but not limited to:
  - 4.1. The applicability and appropriateness of using a single design basis template for each coal plant included in PacifiCorp's Study.
  - 4.2. Completeness of the cost estimates included in PacifiCorp's Study, including those Kiewit understood to be provided by PacifiCorp (see "PacifiCorp's Study: Limitations Applicable to Kiewit's Work" above) as well as those that were actually provided by PacifiCorp, if and where different.
5. Discussion documenting OPUC's IE's review and assessment of any indices used and how they were used in preparing PacifiCorp's Study.
6. Discussion documenting OPUC's IE's review and assessment of any quantitative forecasts, including of indices, used in preparing PacifiCorp's Study.

7. Discussion documenting OPUC's IE's review and assessment of the assumptions used in preparing PacifiCorp's Study, distinguishing between those provided by PacifiCorp versus those provided by Kiewit.
8. Discussion documenting OPUC's IE's review and assessment of the methodologies used in preparing PacifiCorp's Study, distinguishing between those used by PacifiCorp versus those used by Kiewit.
9. Discussion documenting OPUC's IE's review and assessment of the high level schedules included in PacifiCorp's Study,
10. Discussion documenting OPUC's IE's review and assessment of cash flows included in PacifiCorp's Study.
11. Discussion documenting OPUC's IE's review and assessment of owner's (or, where applicable, owners') permitting requirements, as documented in PacifiCorp's Study.
12. Discussion documenting OPUC's IE's review and assessment of the summary of typical owner's responsibilities for demolition, salvage and scrap, as documented in PacifiCorp's Study.
13. Discussion documenting OPUC's IE's review and assessment of any other information relevant to the cost estimates included in PacifiCorp's Study.

The spreadsheet reports OPUC's IE delivers to OPUC as part of OPUC's Review will include clear identification of:

1. Each spreadsheet report file included
2. Each spreadsheet contained within each spreadsheet file
3. Each column and row heading within each spreadsheet, where the indicated cell(s) contain data or formulae.
4. Each parameter used in each spreadsheet

The electronic copy of all other materials OPUC's IE relied upon in developing OPUC's Independent Evaluation will include clear identification of each document, including its source (and hyperlink where applicable) and the date of OPUC's IE's retrieval of each document if from electronic sources such as websites. These materials are to be in spreadsheet or pdf format, as applicable, and be clearly labeled.

### **OPUC's Independent Cost Estimates**

As a part of OPUC's Review, OPUC's IE is to prepare and deliver an AACE Class 3 cost estimate for each item in PacifiCorp's Study where OPUC's IE does not concur with either the process employed; the assumptions, methodology, index, or forecast used; or with the cost estimate (or the range of cost estimates) obtained in PacifiCorp's Study.

Additionally, OPUC's IE is to prepare and deliver an AACE Class 3 cost estimate for those items that were not included in PacifiCorp's Study which OPUC's IE believes should have been included given the indicated scope of PacifiCorp's Study. Each individual cost estimate developed by

OPUC's IE is to be consistent with AACE Class 3 cost estimate guidelines and stated in Q4 2019 dollars.

The OPUC Independent Cost Estimate's narrative report prepared by OPUC's IE is to include the following:

1. Names and roles of the individuals involved in preparing OPUC's Independent Cost Estimates.
2. Relevant professional certifications and training for each individual named.
3. Discussion of the reason(s) an individual cost estimate or set of related cost estimates prepared by OPUC's IE represents a better or more appropriate basis for estimating the costs of decommissioning one or more of PacifiCorp's coal-fueled generating plant units than does the corresponding cost estimate in PacifiCorp's Study.
4. Discussion documenting any index OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the source and vintage of each such index.
5. Discussion documenting any forecast OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the source and vintage of each such forecast.
6. Discussion documenting each assumption OPUC's IE used in preparing OPUC's Independent Cost Estimates, including the reason(s) each such assumption was necessary and appropriate.
7. The individual cost estimates prepared by OPUC's IE, with each estimate clearly identified as to the task or component to which it applies, as well as the coal plant or coal plant unit(s) to which it applies. The individual cost estimates are to include the range of expected costs as well as the point estimate.
8. For each individual cost estimate prepared by OPUC's IE, the value of the corresponding (where applicable) individual cost estimate in PacifiCorp's Study for a basis of comparison. This is to include specifying the location within PacifiCorp's Study of each corresponding (where applicable) individual cost estimate.
9. The individual cost estimates prepared by OPUC's IE are to be organized and presented by coal plant or unit(s) of a coal plant, as appropriate.

OPUC's IE shall prepare and submit to OPUC OPUC's Independent Cost Estimates, to include a narrative report and working Excel spreadsheet reports.

### **Testimony Regarding PacifiCorp's Study and OPUC's Review**

OPUC's Review may include testimony authored by OPUC's IE regarding OPUC's Review. OPUC refers to this testimony as OPUC's IE's Testimony. This testimony will include discussion documenting OPUC's IE's review and assessment of PacifiCorp's Study and the methods and assumptions used and the results obtained in Oregon's Independent Cost Estimates.

1. Testimony will include an exhibit containing the witness qualifications for each author.
2. Testimony will include exhibits—such as tables and charts—that serve to reinforce key points of the testimony.
3. OPUC Staff will provide OPUC’s IE with a Word document template to be used for OPUC’s IE’s testimony.
4. OPUC’s IE will provide a draft version of its testimony within 10 calendar days of the date OPUC Staff receives the final version of other parts of OPUC’s Review.
5. OPUC Staff will provide written comments regarding the draft testimony to OPUC’s IE within 10 calendar days of receiving it.
6. The final version of the testimony will incorporate OPUC’s IE’s consideration of OPUC Staff’s written comments regarding the draft testimony and will be provided to OPUC Staff within 7 calendar days of OPUC’s IE receiving written comments from OPUC Staff.
7. Testimony, at OPUC Staff’s sole discretion, will be filed in an OPUC proceeding that includes consideration of PacifiCorp’s Study and its results.
8. OPUC Staff will provide OPUC’s IE with information regarding the mechanics and logistics of OPUC’s IE filing the final version of its testimony. This information will be provided via email no less than 3 calendar days prior to the date OPUC Staff requires the testimony to be filed.

#### **Appearance by OPUC’s IE as an Expert Witness**

OPUC’s IE may be required to appear as an expert witness regarding OPUC’s Review and PacifiCorp’s Study, OPUC’s IE’s findings regarding PacifiCorp’s Study and its results, and any alternative results obtained by OPUC’s IE. Such an appearance will be in a hearing in the context of an OPUC proceeding that includes consideration of the results of PacifiCorp’s Study.

1. OPUC Staff will provide OPUC’s IE with advance notice via email that such an appearance will be required, with such advance notice to be not less than 30 calendar days prior to the date for OPUC’s IE’s appearance.
2. Such an appearance will be at OPUC’s location in Salem, Oregon.

#### **Use of Content in OPUC’s Review by OPUC Staff**

Content or portions thereof in OPUC’s Independent Evaluation, OPUC’s Independent Cost Estimates, or OPUC’s IE’s Testimony may be used by OPUC Staff in testimony or other filings in one or more Commission proceedings related to the allocation of costs for PacifiCorp’s system to the Company’s Oregon customers. This content may also be presented or otherwise made available, in the context of a Commission proceeding, to third parties. In all such cases, the source will be appropriately cited.

#### **Other**

1. OPUC’s IE shall perform all aspects of its work in a safe manner. Any work performed at PacifiCorp’s facilities shall be performed in a manner consistent with the safety rules, processes and procedures in place at the individual facilities. OPUC’s IE’s personnel may be required to attend safety training or safety briefings specific to each facility. OPUC’s IE’s personnel will be required to use personal protective equipment at generating facilities.

2. OPUC's IE shall control and maintain documentation in a manner consistent with the confidentiality or non-disclosure agreement between PacifiCorp and OPUC's IE. This may require OPUC's IE to submit both redacted and unredacted versions of OPUC's Review.

## **2.4 MINIMUM OFFEROR REQUIREMENTS**

### **2.4.1 BUSINESS**

Offeror must submit each of the following with its Offer to be considered for evaluation:

1. Offeror's written acknowledgment of and consent to OPUC's IE's work product(s) being shared with third parties in regulatory proceedings.
2. Evidence the Offeror is a professionally licensed Engineer or Engineering firm in one or more of the States of Oregon, Washington, Utah, and Wyoming.
3. Documentation of relevant project experience by providing project details and reference contact information<sup>6</sup> for projects which involved one or more of six discipline areas of power generation. The six discipline areas as used here are: (1) Boiler/HRSG; (2) large electric apparatus; (3) balance of plant systems (pumps, valves, piping systems, fans, blowers, air cooled condensers, and cooling towers); (4) electrical systems (including switch gear and system protection); (5) control systems; and (6) water treatment systems. Offeror should include a sufficient number of projects so that each of the six discipline areas has three or more projects indicating experience in that discipline area. Offeror is to include no less than 10 projects in total. All projects listed on this document are to have been completed within the last 10 years.

Regarding this third requirement, Offeror is to use the separate document, Attachment "D", "Bidder Submittal List of Projects by Discipline.xlsx" that available in the bid documents to provide the requested documentation.

## **MINIMUM SUBMISSION REQUIREMENTS**

### **2.4.2 Offer Format and Quantity**

Offer should follow the format and reference the sections listed in the Offer Content Requirements section. Responses to each section and subsection should be labeled to indicate the item being addressed. Offer must describe in detail how requirements of this solicitation will be met and may provide additional related information.

#### **Work Product to be Shared with Third Parties**

Offer must include Offeror's written acknowledgment of and consent to OPUC's IE's work product being shared with third parties in regulatory proceedings. The Agency requires that a successful bid meet this requirement.

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<sup>6</sup> Reference contact information for each listed project is to include company name, contact person's name, and contact person's telephone number.



## **Professionally Licensed**

Offer must include evidence the Offeror is a professionally licensed Engineer or Engineering firm in one or more of the States of Oregon, Washington, Utah, and Wyoming.

Offeror shall submit one electronic copy of its Offer. In addition, if Offeror believes any of its Offer is exempt from disclosure under Oregon Public Records Law (ORS 192.311 through 192.478), Offeror shall complete and submit the Disclosure Exemption Affidavit (Attachment B) and a fully redacted version of its Offer, clearly identified as the redacted version.

### **2.4.3 Authorized Representative**

A representative authorized to bind the Offeror shall sign the Offer. Failure of the authorized representative to sign the Offer may subject the Offer to rejection by Agency.

## **2.5 PROCUREMENT PROCESS**

### **2.5.1 Public Notice**

The solicitation, including all Addenda and attachments, is published in the Oregon Procurement Information Network (ORPIN) at <http://orpin.oregon.gov>. Solicitation documents will not be mailed to prospective Offerors.

Agency shall advertise all Addenda on ORPIN. Prospective Offeror is solely responsible for checking ORPIN to determine whether or not any Addenda have been issued. Addenda are incorporated into the solicitation by this reference.

### **2.5.2 Questions / Requests for Clarification**

All inquiries, whether relating to the solicitation process, administration, deadline or method of award, or to the intent or technical aspects of the solicitation must:

- Be emailed to the SPC.
- Reference the RFP number.
- Identify Offeror's name and contact information.
- Be sent by an authorized representative.
- Refer to the specific area of the solicitation being questioned (i.e. page, section and paragraph number); and
- Be received by the due date and time for Questions/Requests for Clarification identified in the Schedule.

### **2.5.3 Offer Conference**

A pre-Proposal conference will not be held for this solicitation.

#### 2.5.4 Offer Submission

Offeror is solely responsible for ensuring its Offer is received by the SPC in accordance with the solicitation requirements before Closing. Agency is not responsible for any delays in mail or by common carriers or by transmission errors or delays or mistaken delivery. Offer submitted by any means not authorized may be rejected.

#### 2.5.5 Modification or Withdrawal of Proposals

Any Offeror who wishes to make modifications to an Offer already received by Agency shall submit its modification in one of the manners listed in the Offer Submission Options section and must denote the specific change(s) to the Offer submission.

If an Offeror wishes to withdraw a submitted Offer, it shall do so prior to Closing. The Offeror shall submit a Written notice Signed by an authorized representative of its intent to withdraw its Offer in accordance with OAR 125-247-0440. The notice must include the RFP number and be submitted to the SPC.

#### 2.5.6 Offer Due Date

**Offer and all required submittal items must be received by the SPC via email ([Rich.Palmer@state.or.us](mailto:Rich.Palmer@state.or.us)) on or before Closing.** Offer received after the Closing will not be accepted. All Offer modifications or withdrawals must be completed prior to Closing.

Offers received after Closing are considered LATE and will NOT be accepted for evaluation. Late Offers will be returned to the respective Offeror or destroyed.

#### 2.5.7 Offer Rejection

Agency may reject an Offer for any of the following reasons:

- Offeror fails to substantially comply with all prescribed solicitation procedures and requirements, including but not limited to the requirement that Offeror's authorized representative sign the Offer in ink.
- Offeror fails to meet the responsibility requirements of ORS 279B.110.
- Offeror makes any contact regarding this solicitation with State representatives such as State employees or officials other than the SPC or those the SPC authorizes, or inappropriate contact with the SPC.
- Offeror attempts to inappropriately influence a member of the Evaluation Committee.
- Offer is conditioned on Agency's acceptance of any other terms and conditions or rights to negotiate any alternative terms and conditions that are not reasonably related to those expressly authorized for negotiation in the RFP or Addenda.

#### 2.5.8 Opening of Offers

There will be no public Opening of Offers. Offers received will not be available for inspection until after the evaluation process has been completed and the Notice Award is issued. However, Agency will record and make available the identity of all Offerors after Opening.

## 2.6 OFFER CONTENT REQUIREMENTS

Offer must address each of the items listed in this section and all other requirements set forth in this solicitation. Offeror shall describe the Goods to be provided or the Services to be performed or both. An Offer that merely offers to provide the goods or services as stated in this solicitation will be considered non-Responsive to this solicitation and will not be considered further.

### 2.6.1 Offer Certification Sheet

The Offeror shall complete and submit the Offeror Information and Certification Sheet (Attachment C).

### 2.6.2 Costs

Submit a detailed Price Offer (**Attachment E**) that includes the following items:

- For each activity described in the Scope of Work, the costs must include identifiable costs, time estimates for completing each activity, and a summary of all proposed costs,
- The Price Proposal must include separate line items for personnel, travel, supplies, other costs, and administrative and overhead charges; and
- For all fully loaded personnel costs, the costs offered must include the name and title of all positions for each individual staff person who will perform the Work, and list the salary/wage and fringe rate separately for each such individual.

### Cost Subtotals

Costs must be subtotaled by the following components of OPUC's Review, as identified in the Scope of Work: 1) OPUC's Independent Evaluation; 2) OPUC's Independent Cost Estimates; 3) testimony regarding PacifiCorp's Study and OPUC's Review; and 4) appearance by OPUC's IE as an expert witness regarding PacifiCorp's Study and OPUC's Review.

### Format

Submission of a Price Offer should include submission as a separate electronic file.

### 2.6.3 Public Record/Confidential or Proprietary Information

All Offers are public record and are subject to public inspection after Agency issues the Notice of the Intent to Award. If an Offeror believes that any portion of its Offer contains any information that is a trade secret under ORS Chapter 192.345(2) or otherwise is exempt from disclosure under the Oregon Public Records Law (ORS 192.311 through 192.478), Offeror shall complete and submit the Disclosure Exemption Affidavit (Attachment B) and a fully redacted version of its Offer.

Offeror is cautioned that cost information generally is not considered a trade secret under Oregon Public Records Law (ORS 192.311 through 192.478) and identifying the Offer, in whole, as exempt from disclosure is not acceptable. Agency advises each Offeror to consult with its own legal counsel regarding disclosure issues.

If Offeror fails to identify the portions of the Offer that Offeror claims are exempt from disclosure, Offeror has waived any future claim of non-disclosure of that information.

## **2.7 EVALUATION PROCESS**

### **2.7.1 Responsiveness and Responsibility Determination**

Offers received prior to Closing will be reviewed for Responsiveness to all solicitation requirements including compliance with Minimum Requirements section and Offer Content Requirements section. If the Offer is unclear, the SPC may request clarification from Offeror. However, clarifications may not be used to rehabilitate a non-Responsive Offer. If the SPC finds the Offer non-Responsive, the Offer may be rejected, however, Agency may waive mistakes in accordance with OAR 125-247-0470.

At any time prior to award, Agency may reject an Offeror found to be not Responsible.

### **2.7.2 Evaluation Criteria**

Offers meeting the requirements outlined in the Offer Content Requirements section will be evaluated by an Evaluation Committee. Evaluators will assign a score of 0 to 10 for the evaluation criterion listed below in this section.

SPC may request further clarification to assist the Evaluation Committee in gaining additional understanding of Offers. A response to a clarification request must be to clarify or explain portions of the already submitted Offer and may not contain new information not included in the original Offer.

#### **2.7.2.1 Evaluation**

Proposal will be evaluated on the following criterion:

##### **Relevant Project Experience**

Provide relevant project experience utilizing the Attachment “D” Form by providing project details and reference contact information in each of six discipline areas of power generation. The six discipline areas as used here are (1) Boiler/HRSG; (2) large electric apparatus; (3) balance of plant systems (pumps, valves, piping systems, fans, blowers, air cooled condensers, and cooling towers); (4) electrical systems (including switch gear and system protection); (5) control systems; and (6) water treatment systems. Offeror should include a sufficient number of projects so that each of the six discipline areas has three or more projects indicating experience in that discipline area. Offeror is to include no less than 10 projects in total. All projects listed on this document are to have been completed within the last 10 years.

Regarding this third requirement, Offeror is to use the separate document (Attachment “D”) “Bidder Submittal List of Projects by Discipline.xlsx” that available in the bid documents to provide the requested documentation.

SCORE	EVALUATION OF RELEVANT PROJECT EXPERIENCE
60	OUTSTANDING – Response shows that each of the six areas has at least 12 projects indicating experience in that area and includes all requested information.
54	VERY GOOD – Response shows that each of the six areas has at least 10 projects indicating experience in that area and includes all requested information.
48	GOOD – Response shows that each of the six areas has at least 7 projects indicating experience in that area and includes all requested information.
42	ADEQUATE – Response shows that each of the six areas has at least 5 projects indicating experience in that area and includes all requested information.
30	FAIR – Response shows that each of the six areas has at least 3 projects indicating experience in that area and includes all requested information.
0	RESPONSE OF NO VALUE – Response does not meet Agency’s minimum requirement.

## 2.8 PRICE EVALUATION

The SPC will conduct the price evaluation. The SPC will award a price score to each Price Proposal based upon the percentage of the proposed price as compared to the lowest Offeror’s price using the following formula:

$$\frac{\text{lowest price of qualified Offerors}}{\text{price being scored}} \times \text{price points possible} = \text{price score}$$

## 2.9 NEXT STEP DETERMINATION

Agency may conduct additional rounds of competition if in the best interest of the State. Additional rounds of competition may consist of, but will not be limited to:

- Establishing a Competitive Range
- Presentations/Demonstrations/Additional Submittal Items
- Interviews
- Best and Final Offers

If Agency elects to conduct additional round(s), Agency shall provide written notice to all Offerors describing the next step. At any time, Agency may dispense with the selected additional round and: (1) issue a Notice of Intent to Award to the highest ranking Responsible Offeror; or (2) elect to conduct an alternative round of competition; or (3) cancel the solicitation.



## 2.10 PREFERENCES

### 2.10.1 Oregon Supplies and Services

Agency prefers Oregon goods and services, and for evaluation purposes, per ORS 279A.128, Agency shall subtract 5% from the price for any Offeror proposing all Goods fabricated or processed or all Services performed entirely in Oregon before calculating the price score.

## 2.11 POINT AND SCORE CALCULATIONS

Relevant Project Experience	XX Points	60 Points total
Cost Proposal	XX Points	40 points total
<b>Total</b>		<b>100 points</b>

## 2.12 RANKING OF OFFERORS

The SPC will total the final average score (calculated by totaling the points awarded by each Evaluation Committee member and dividing by the number of members), together with references, and final price. After each applicable preference has been applied, SPC will determine rank order for each respective Offer and Offeror, with the highest score receiving the highest rank, and successive rank order determined by the next highest score.

# SECTION 3: AWARD AND NEGOTIATION

## 3.1 AWARD NOTIFICATION PROCESS

### 3.1.1 Award Consideration

Agency, if it awards a Contract, shall award a Contract to the highest ranking Responsible Offeror(s) based upon the scoring methodology and process described in Section 3. Agency may award less than the full Scope defined in this solicitation.

### 3.1.2 Notice of Award

Agency will notify all Offerors in Writing that Agency is awarding a Contract to the selected Offeror(s) subject to successful negotiation of any negotiable provisions.

## 3.2 SUCCESSFUL PROPOSER SUBMISSION REQUIREMENTS

### 3.2.1 Insurance

Prior to execution of the Contract, the apparent successful Offeror shall secure and demonstrate to Agency proof of insurance coverage meeting the requirements identified in the solicitation or as otherwise negotiated.

Failure to demonstrate coverage may result in Agency terminating Negotiations and commencing Negotiations with the next highest ranking Offeror. Offeror is encouraged to consult its insurance agent about the insurance requirements contained in Insurance Requirements (Exhibit XX of Attachment A) prior to Offer submission.

### **3.2.2 Taxpayer Identification Number**

The apparent successful Offeror shall provide its Taxpayer Identification Number (TIN) and backup withholding status on a completed [W-9 form](#) if either of the following applies:

- When requested by Agency (normally in an intent to award notice), or
- When the backup withholding status or any other information of Offeror has changed since the last submitted W-9 form, if any.

Agency will not make any payment until Agency has a properly completed W-9.

### **3.2.3 Business Registry**

If selected for award, Offeror shall be duly authorized by the State of Oregon to transact business in the State of Oregon before executing the Contract. The selected Offeror shall submit a current Oregon Secretary of State Business Registry number, or an explanation if not applicable.

All Corporations and other business entities (domestic and foreign) must have a Registered Agent in Oregon. See requirements and exceptions regarding Registered Agents. For more information, see Oregon Business Guide, How to Start a Business in Oregon and Laws and Rules. The titles in this subsection are available at the following Internet site: <http://www.filinginoregon.com/index.htm>.

## **3.3 CONTRACT NEGOTIATION**

### **3.3.1 Negotiation**

By submitting an Offer, Offeror agrees to comply with the requirements of the solicitation, including the terms and conditions of the Sample Contract (Attachment A), with the exception of those terms reserved for negotiation. Offeror shall review the attached Sample Contract and note exceptions. Unless Offeror notes exceptions in its Offer, the State intends to enter into a Contract with the successful Offeror substantially in the form set forth in Sample Contract (Attachment A). It may be possible to negotiate some provisions of the final Contract; however, many provisions cannot be changed. Offeror is cautioned that the State of Oregon believes modifications to the standard provisions constitute increased risk and increased cost to the State. Therefore, Agency will consider the Scope of requested exceptions in the evaluation of Offers.

Any Offer that is conditioned upon Agency's acceptance of any other terms and conditions may be rejected. Any subsequent negotiated changes are subject to prior approval of the Oregon Department of Justice.

All items, except those listed below, may be negotiated between Agency and the apparent successful Offeror in compliance with Oregon State laws:

- Choice of law
- Choice of venue
- Constitutional requirements
- All applicable Federal and State requirements

In the event that the parties have not reached mutually agreeable terms within 30 calendar days, Agency may terminate Negotiations and commence Negotiations with the next highest ranking Offeror.

## **SECTION 4: ADDITIONAL INFORMATION**

### **4.1 CERTIFIED FIRM PARTICIPATION**

Pursuant to Oregon Revised Statute (ORS) Chapter 200, Agency encourages the participation of small businesses, certified by the Oregon Certification Office for Business Inclusion and Diversity ("COBID") in all contracting opportunities. This includes certified small businesses in the following categories: disadvantaged business enterprise, minority-owned business, woman-owned business, a business that a service-disabled veteran owns or an emerging small business. Agency also encourages joint ventures or subcontracting with certified small business enterprises. For more information, visit:

<https://oregon4biz.diversitysoftware.com/FrontEnd/VendorSearchPublic.asp?XID=6787&TN=oregon4biz>

If the Contract has potential subcontracting opportunities, the successful Offeror may be required to submit a completed Certified Disadvantaged Business Outreach Plan (Attachment F) prior to execution.

### **4.2 GOVERNING LAWS AND REGULATIONS**

This RFP is governed by the laws of the State of Oregon. Venue for any administrative or judicial action relating to this RFP, evaluation and award is the Circuit Court of Marion County for the State of Oregon; provided, however, if a proceeding must be brought in a federal forum, then it must be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this Section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, to or from any Claim or from the jurisdiction of any court.

### **4.3 OWNERSHIP/PERMISSION TO USE MATERIALS**

All Offers submitted in response to this RFP become the Property of Agency. By submitting an Offer in response to this RFP, Offeror grants the State a non-exclusive, perpetual, irrevocable, royalty-free license for the rights to copy, distribute, display, prepare derivative works of and transmit the Offer solely for the purpose of evaluating the Offer, negotiating an Agreement, if awarded to Offeror, or as otherwise needed to administer the RFP process, and to fulfill obligations under Oregon Public Records Law (ORS 192.311 through 192.478). Offers, including supporting materials, will not be returned to Offeror unless the Offer is submitted late.



#### **4.4 CANCELLATION OF RFP; REJECTION OF OFFERS; NO DAMAGES.**

Pursuant to ORS 279B.100, Agency may reject any or all Offers in-whole or in-part, or may cancel this solicitation at any time when the rejection or cancellation is in the best interest of the State or Agency, as determined by Agency. Neither the State nor Agency is liable to any Offeror for any loss or expense caused by or resulting from the delay, suspension, or cancellation of the solicitation, award, or rejection of any Offer.

#### **4.5 COST OF SUBMITTING A PROPOSAL**

Offeror shall pay all the costs in submitting its Offer, including, but not limited to, the costs to prepare and submit the Offer, costs of samples and other supporting materials, costs to participate in demonstrations, or costs associated with protests.

### **SECTION 5: LIST OF ATTACHMENTS**

ATTACHMENT A	SAMPLE CONTRACT
ATTACHMENT B	DISCLOSURE EXEMPTION AFFIDAVIT
ATTACHMENT C	PROPOSER INFORMATION AND CERTIFICATION SHEET
ATTACHMENT D	BIDDER SUBMITTAL LIST OF PROJECTS BY DISCIPLINE
ATTACHMENT E	COST SHEET
ATTACHMENT F	COBID CERTIFICATION / OUTREACH PLAN
ATTACHMENT G	RESPONSIBILITY INQUIRY

## **ATTACHMENT B**

**RANAJIT (RON) SAHU, Ph.D, QEP, CEM (Nevada)**

**CONSULTANT, ENVIRONMENTAL AND ENERGY ISSUES**

**311 North Story Place**

**Alhambra, CA 91801**

**Phone: 702.683.5466**

**e-mail (preferred): [ronsahu@gmail.com](mailto:ronsahu@gmail.com); [sahuron@earthlink.net](mailto:sahuron@earthlink.net)**

### **EXPERIENCE SUMMARY**

Dr. Sahu has over thirty years of experience in the fields of environmental, mechanical, and chemical engineering including: program and project management services; design and specification of pollution control equipment for a wide range of emissions sources including stationary and mobile sources; soils and groundwater remediation including landfills as remedy; combustion engineering evaluations; energy studies; multimedia environmental regulatory compliance (involving statutes and regulations such as the Federal CAA and its Amendments, Clean Water Act, TSCA, RCRA, CERCLA, SARA, OSHA, NEPA as well as various related state statutes); transportation air quality impact analysis; multimedia compliance audits; multimedia permitting (including air quality NSR/PSD permitting, Title V permitting, NPDES permitting for industrial and storm water discharges, RCRA permitting, etc.), multimedia/multi-pathway human health risk assessments for toxics; air dispersion modeling; and regulatory strategy development and support including negotiation of consent agreements and orders.

For roughly twelve years, Dr. Sahu worked at several industrial firms including Parsons, a large engineering firm, supporting projects worldwide in many industrial sectors. For the last twenty years Dr. Sahu has worked as an independent consultant. During this time he has worked on a number of industrial projects dealing with both commissioning and decommissioning of industrial sites or portions of sites (such as process areas and units). This includes sites at steel mills, chemical plants, aerospace plants, and power plants. His experience includes development of work packages, identifying contractors or craft labor to bid on work packages, bid evaluation and analysis (including cost and schedule assessment), safety performance analyses, and evaluations of environmental impacts at such sites.

He has over twenty seven years of project management experience and has successfully managed and executed numerous projects in this time period. This includes basic and applied research projects, design projects, regulatory compliance projects, permitting projects, energy studies, risk assessment projects, and projects involving the communication of environmental data and information to the public.

He has provided consulting services to numerous private sector, public sector and public interest group clients. His major clients over the past twenty five years include various trade associations as well as individual companies such as steel mills, petroleum refineries, cement manufacturers, aerospace companies, power generation facilities, lawn and garden equipment manufacturers, spa manufacturers, chemical distribution facilities, and various entities in the public sector including EPA, the US Dept. of Justice, several states, various agencies such as the California DTSC, various municipalities, etc.). Dr. Sahu has performed projects in all 50 states, numerous local jurisdictions and internationally.

In addition to consulting, for approximately twenty years, Dr. Sahu taught numerous courses in several Southern California universities including UCLA (air pollution), UC Riverside (air pollution, process hazard analysis), and Loyola Marymount University (air pollution, risk assessment, hazardous waste management). He also taught at Caltech, his alma mater (various engineering courses), at the University of

Southern California (air pollution controls) and at California State University, Fullerton (transportation and air quality).

Dr. Sahu has and continues to provide expert witness services in a number of environmental areas discussed above in both state and Federal courts as well as before administrative bodies (please see Annex A).

#### **EXPERIENCE RECORD**

- 2000-present **Independent Consultant.** Providing a variety of private sector (industrial companies, land development companies, law firms, etc.), public sector (such as the US Department of Justice), and public interest group clients with project management, environmental consulting, project management, as well as regulatory and engineering support consulting services.
- 1995-2000 Parsons ES, **Associate, Senior Project Manager and Department Manager for Air Quality/Geosciences/Hazardous Waste Groups**, Pasadena. Responsible for the management of a group of approximately 24 air quality and environmental professionals, 15 geoscience, and 10 hazardous waste professionals providing full-service consulting, project management, regulatory compliance and A/E design assistance in all areas.
- Parsons ES, **Manager for Air Source Testing Services.** Responsible for the management of 8 individuals in the area of air source testing and air regulatory permitting projects located in Bakersfield, California.
- 1992-1995 Engineering-Science, Inc. **Principal Engineer and Senior Project Manager** in the air quality department. Responsibilities included multimedia regulatory compliance and permitting (including hazardous and nuclear materials), air pollution engineering (emissions from stationary and mobile sources, control of criteria and air toxics, dispersion modeling, risk assessment, visibility analysis, odor analysis), supervisory functions and project management.
- 1990-1992 Engineering-Science, Inc. **Principal Engineer and Project Manager** in the air quality department. Responsibilities included permitting, tracking regulatory issues, technical analysis, and supervisory functions on numerous air, water, and hazardous waste projects. Responsibilities also include client and agency interfacing, project cost and schedule control, and reporting to internal and external upper management regarding project status.
- 1989-1990 Kinetics Technology International, Corp. **Development Engineer.** Involved in thermal engineering R&D and project work related to low-NOx ceramic radiant burners, fired heater NOx reduction, SCR design, and fired heater retrofitting.
- 1988-1989 Heat Transfer Research, Inc. **Research Engineer.** Involved in the design of fired heaters, heat exchangers, air coolers, and other non-fired equipment. Also did research in the area of heat exchanger tube vibrations.

#### **EDUCATION**

- 1984-1988 Ph.D., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.
- 1984 M. S., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.
- 1978-1983 B. Tech (Honors), Mechanical Engineering, Indian Institute of Technology (IIT) Kharagpur, India

**TEACHING EXPERIENCE**

Caltech

"Thermodynamics," Teaching Assistant, California Institute of Technology, 1983, 1987.

"Air Pollution Control," Teaching Assistant, California Institute of Technology, 1985.

"Caltech Secondary and High School Saturday Program," - taught various mathematics (algebra through calculus) and science (physics and chemistry) courses to high school students, 1983-1989.

"Heat Transfer," - taught this course in the Fall and Winter terms of 1994-1995 in the Division of Engineering and Applied Science.

"Thermodynamics and Heat Transfer," Fall and Winter Terms of 1996-1997.

U.C. Riverside, Extension

"Toxic and Hazardous Air Contaminants," University of California Extension Program, Riverside, California. Various years since 1992.

"Prevention and Management of Accidental Air Emissions," University of California Extension Program, Riverside, California. Various years since 1992.

"Air Pollution Control Systems and Strategies," University of California Extension Program, Riverside, California, Summer 1992-93, Summer 1993-1994.

"Air Pollution Calculations," University of California Extension Program, Riverside, California, Fall 1993-94, Winter 1993-94, Fall 1994-95.

"Process Safety Management," University of California Extension Program, Riverside, California. Various years since 1992-2010.

"Process Safety Management," University of California Extension Program, Riverside, California, at SCAQMD, Spring 1993-94.

"Advanced Hazard Analysis - A Special Course for LEPCs," University of California Extension Program, Riverside, California, taught at San Diego, California, Spring 1993-1994.

"Advanced Hazardous Waste Management" University of California Extension Program, Riverside, California. 2005.

Loyola Marymount University

"Fundamentals of Air Pollution - Regulations, Controls and Engineering," Loyola Marymount University, Dept. of Civil Engineering. Various years since 1993.

"Air Pollution Control," Loyola Marymount University, Dept. of Civil Engineering, Fall 1994.

"Environmental Risk Assessment," Loyola Marymount University, Dept. of Civil Engineering. Various years since 1998.

"Hazardous Waste Remediation" Loyola Marymount University, Dept. of Civil Engineering. Various years since 2006.

University of Southern California

"Air Pollution Controls," University of Southern California, Dept. of Civil Engineering, Fall 1993, Fall 1994.

"Air Pollution Fundamentals," University of Southern California, Dept. of Civil Engineering, Winter 1994.

University of California, Los Angeles

"Air Pollution Fundamentals," University of California, Los Angeles, Dept. of Civil and Environmental Engineering, Spring 1994, Spring 1999, Spring 2000, Spring 2003, Spring 2006, Spring 2007, Spring 2008, Spring 2009.

International Programs

"Environmental Planning and Management," 5 week program for visiting Chinese delegation, 1994.

"Environmental Planning and Management," 1 day program for visiting Russian delegation, 1995.

"Air Pollution Planning and Management," IEP, UCR, Spring 1996.

"Environmental Issues and Air Pollution," IEP, UCR, October 1996.

PROFESSIONAL AFFILIATIONS AND HONORS

President of India Gold Medal, IIT Kharagpur, India, 1983.

Member of the Alternatives Assessment Committee of the Grand Canyon Visibility Transport Commission, established by the Clean Air Act Amendments of 1990, 1992.

American Society of Mechanical Engineers: Los Angeles Section Executive Committee, Heat Transfer Division, and Fuels and Combustion Technology Division, 1987-mid-1990s.

Air and Waste Management Association, West Coast Section, 1989-mid-2000s.

PROFESSIONAL CERTIFICATIONS

EIT, California (#XE088305), 1993.

REA I, California (#07438), 2000.

Certified Permitting Professional, South Coast AQMD (#C8320), since 1993.

QEP, Institute of Professional Environmental Practice, since 2000.

CEM, State of Nevada (#EM-1699). Expiration 10/07/2021.

PUBLICATIONS (PARTIAL LIST)

"Physical Properties and Oxidation Rates of Chars from Bituminous Coals," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **67**, 275-283 (1988).

"Char Combustion: Measurement and Analysis of Particle Temperature Histories," with R.C. Flagan, G.R. Gavalas and P.S. Northrop, *Comb. Sci. Tech.* **60**, 215-230 (1988).

"On the Combustion of Bituminous Coal Chars," PhD Thesis, California Institute of Technology (1988).

"Optical Pyrometry: A Powerful Tool for Coal Combustion Diagnostics," *J. Coal Quality*, **8**, 17-22 (1989).

"Post-Ignition Transients in the Combustion of Single Char Particles," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **68**, 849-855 (1989).

"A Model for Single Particle Combustion of Bituminous Coal Char." Proc. ASME National Heat Transfer Conference, Philadelphia, **HTD-Vol. 106**, 505-513 (1989).

"Discrete Simulation of Cenospheric Coal-Char Combustion," with R.C. Flagan and G.R. Gavalas, *Combust. Flame*, **77**, 337-346 (1989).

"Particle Measurements in Coal Combustion," with R.C. Flagan, in "**Combustion Measurements**" (ed. N. Chigier), Hemisphere Publishing Corp. (1991).

"Cross Linking in Pore Structures and Its Effect on Reactivity," with G.R. Gavalas in preparation.

"Natural Frequencies and Mode Shapes of Straight Tubes," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Optimal Tube Layouts for Kamui SL-Series Exchangers," with K. Ishihara, Proprietary Report for Kamui Company Limited, Tokyo, Japan (1990).

"HTRI Process Heater Conceptual Design," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Asymptotic Theory of Transonic Wind Tunnel Wall Interference," with N.D. Malmuth and others, Arnold Engineering Development Center, Air Force Systems Command, USAF (1990).

"Gas Radiation in a Fired Heater Convection Section," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1990).

"Heat Transfer and Pressure Drop in NTIW Heat Exchangers," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1991).

"NO<sub>x</sub> Control and Thermal Design," Thermal Engineering Tech Briefs, (1994).

"From Purchase of Landmark Environmental Insurance to Remediation: Case Study in Henderson, Nevada," with Robin E. Bain and Jill Quillin, presented at the AQMA Annual Meeting, Florida, 2001.

"The Jones Act Contribution to Global Warming, Acid Rain and Toxic Air Contaminants," with Charles W. Botsford, presented at the AQMA Annual Meeting, Florida, 2001.

#### **PRESENTATIONS (PARTIAL LIST)**

"Pore Structure and Combustion Kinetics - Interpretation of Single Particle Temperature-Time Histories," with P.S. Northrop, R.C. Flagan and G.R. Gavalas, presented at the AIChE Annual Meeting, New York (1987).

"Measurement of Temperature-Time Histories of Burning Single Coal Char Particles," with R.C. Flagan, presented at the American Flame Research Committee Fall International Symposium, Pittsburgh, (1988).

"Physical Characterization of a Cenospheric Coal Char Burned at High Temperatures," with R.C. Flagan and G.R. Gavalas, presented at the Fall Meeting of the Western States Section of the Combustion Institute, Laguna Beach, California (1988).

"Control of Nitrogen Oxide Emissions in Gas Fired Heaters - The Retrofit Experience," with G. P. Croce and R. Patel, presented at the International Conference on Environmental Control of Combustion Processes (Jointly sponsored by the American Flame Research Committee and the Japan Flame Research Committee), Honolulu, Hawaii (1991).

"Air Toxics - Past, Present and the Future," presented at the Joint AIChE/AAEE Breakfast Meeting at the AIChE 1991 Annual Meeting, Los Angeles, California, November 17-22 (1991).

"Air Toxics Emissions and Risk Impacts from Automobiles Using Reformulated Gasolines," presented at the Third Annual Current Issues in Air Toxics Conference, Sacramento, California, November 9-10 (1992).

"Air Toxics from Mobile Sources," presented at the Environmental Health Sciences (ESE) Seminar Series, UCLA, Los Angeles, California, November 12, (1992).

"Kilns, Ovens, and Dryers - Present and Future," presented at the Gas Company Air Quality Permit Assistance Seminar, Industry Hills Sheraton, California, November 20, (1992).

"The Design and Implementation of Vehicle Scrapping Programs," presented at the 86th Annual Meeting of the Air and Waste Management Association, Denver, Colorado, June 12, 1993.

"Air Quality Planning and Control in Beijing, China," presented at the 87th Annual Meeting of the Air and Waste Management Association, Cincinnati, Ohio, June 19-24, 1994.

(Continued on next page)

## Annex A

### Expert Litigation Support

#### A. Occasions where Dr. Sahu has provided Written or Oral testimony before Congress:

1. In July 2012, provided expert written and oral testimony to the House Subcommittee on Energy and the Environment, Committee on Science, Space, and Technology at a Hearing entitled “Hitting the Ethanol Blend Wall – Examining the Science on E15.”

#### B. Matters for which Dr. Sahu has provided affidavits and expert reports include:

2. Affidavit for Rocky Mountain Steel Mills, Inc. located in Pueblo Colorado – dealing with the technical uncertainties associated with night-time opacity measurements in general and at this steel mini-mill.
3. Expert reports and depositions (2/28/2002 and 3/1/2002; 12/2/2003 and 12/3/2003; 5/24/2004) on behalf of the United States in connection with the Ohio Edison NSR Cases. *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).
4. Expert reports and depositions (5/23/2002 and 5/24/2002) on behalf of the United States in connection with the Illinois Power NSR Case. *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).
5. Expert reports and depositions (11/25/2002 and 11/26/2002) on behalf of the United States in connection with the Duke Power NSR Case. *United States, et al. v. Duke Energy Corp.*, 1:00-CV-1262 (Middle District of North Carolina).
6. Expert reports and depositions (10/6/2004 and 10/7/2004; 7/10/2006) on behalf of the United States in connection with the American Electric Power NSR Cases. *United States, et al. v. American Electric Power Service Corp., et al.*, C2-99-1182, C2-99-1250 (Southern District of Ohio).
7. Affidavit (March 2005) on behalf of the Minnesota Center for Environmental Advocacy and others in the matter of the Application of Heron Lake BioEnergy LLC to construct and operate an ethanol production facility – submitted to the Minnesota Pollution Control Agency.
8. Expert Report and Deposition (10/31/2005 and 11/1/2005) on behalf of the United States in connection with the East Kentucky Power Cooperative NSR Case. *United States v. East Kentucky Power Cooperative, Inc.*, 5:04-cv-00034-KSF (Eastern District of Kentucky).
9. Affidavits and deposition on behalf of Basic Management Inc. (BMI) Companies in connection with the BMI vs. USA remediation cost recovery Case.
10. Expert Report on behalf of Penn Future and others in the Cambria Coke plant permit challenge in Pennsylvania.



11. Expert Report on behalf of the Appalachian Center for the Economy and the Environment and others in the Western Greenbrier permit challenge in West Virginia.
12. Expert Report, deposition (via telephone on January 26, 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women's Voices for the Earth (WVE) and the Clark Fork Coalition (CFC)) in the Thompson River Cogeneration LLC Permit No. 3175-04 challenge.
13. Expert Report and deposition (2/2/07) on behalf of the Texas Clean Air Cities Coalition at the Texas State Office of Administrative Hearings (SOAH) in the matter of the permit challenges to TXU Project Apollo's eight new proposed PRB-fired PC boilers located at seven TX sites.
14. Expert Testimony (July 2007) on behalf of the Izaak Walton League of America and others in connection with the acquisition of power by Xcel Energy from the proposed Gascoyne Power Plant – at the State of Minnesota, Office of Administrative Hearings for the Minnesota PUC (MPUC No. E002/CN-06-1518; OAH No. 12-2500-17857-2).
15. Affidavit (July 2007) Comments on the Big Cajun I Draft Permit on behalf of the Sierra Club – submitted to the Louisiana DEQ.
16. Expert Report and Deposition (12/13/2007) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case. *Plaintiffs v. Allegheny Energy Inc., et al.*, 2:05cv0885 (Western District of Pennsylvania).
17. Expert Reports and Pre-filed Testimony before the Utah Air Quality Board on behalf of Sierra Club in the Sevier Power Plant permit challenge.
18. Expert Report and Deposition (October 2007) on behalf of MTD Products Inc., in connection with *General Power Products, LLC v MTD Products Inc.*, 1:06 CVA 0143 (Southern District of Ohio, Western Division) .
19. Expert Report and Deposition (June 2008) on behalf of Sierra Club and others in the matter of permit challenges (Title V: 28.0801-29 and PSD: 28.0803-PSD) for the Big Stone II unit, proposed to be located near Milbank, South Dakota.
20. Expert Reports, Affidavit, and Deposition (August 15, 2008) on behalf of Earthjustice in the matter of air permit challenge (CT-4631) for the Basin Electric Dry Fork station, under construction near Gillette, Wyoming before the Environmental Quality Council of the State of Wyoming.
21. Affidavits (May 2010/June 2010 in the Office of Administrative Hearings)/Declaration and Expert Report (November 2009 in the Office of Administrative Hearings) on behalf of NRDC and the Southern Environmental Law Center in the matter of the air permit challenge for Duke Cliffside Unit 6. Office of Administrative Hearing Matters 08 EHR 0771, 0835 and 0836 and 09 HER 3102, 3174, and 3176 (consolidated).

22. Declaration (August 2008), Expert Report (January 2009), and Declaration (May 2009) on behalf of Southern Alliance for Clean Energy in the matter of the air permit challenge for Duke Cliffside Unit 6. *Southern Alliance for Clean Energy et al., v. Duke Energy Carolinas, LLC*, Case No. 1:08-cv-00318-LHT-DLH (Western District of North Carolina, Asheville Division).
23. Declaration (August 2008) on behalf of the Sierra Club in the matter of Dominion Wise County plant MACT.us
24. Expert Report (June 2008) on behalf of Sierra Club for the Green Energy Resource Recovery Project, MACT Analysis.
25. Expert Report (February 2009) on behalf of Sierra Club and the Environmental Integrity Project in the matter of the air permit challenge for NRG Limestone's proposed Unit 3 in Texas.
26. Expert Report (June 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al.*
27. Expert Report (August 2009) on behalf of Sierra Club and the Southern Environmental Law Center in the matter of the air permit challenge for Santee Cooper's proposed Pee Dee plant in South Carolina).
28. Statements (May 2008 and September 2009) on behalf of the Minnesota Center for Environmental Advocacy to the Minnesota Pollution Control Agency in the matter of the Minnesota Haze State Implementation Plans.
29. Expert Report (August 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
30. Expert Report and Rebuttal Report (September 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.
31. Expert Report (December 2009) and Rebuttal reports (May 2010 and June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).
32. Pre-filed Testimony (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
33. Pre-filed Testimony (July 2010) and Written Rebuttal Testimony (August 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions*, No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.
34. Expert Report (August 2010) and Rebuttal Expert Report (October 2010) on behalf of the United States in connection with the Louisiana Generating NSR

- Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Liability Phase.
35. Declaration (August 2010), Reply Declaration (November 2010), Expert Report (April 2011), Supplemental and Rebuttal Expert Report (July 2011) on behalf of the United States in the matter of DTE Energy Company and Detroit Edison Company (Monroe Unit 2). *United States of America v. DTE Energy Company and Detroit Edison Company*, Civil Action No. 2:10-cv-13101-BAF-RSW (Eastern District of Michigan).
  36. Expert Report and Deposition (August 2010) as well as Affidavit (September 2010) on behalf of Kentucky Waterways Alliance, Sierra Club, and Valley Watch in the matter of challenges to the NPDES permit issued for the Trimble County power plant by the Kentucky Energy and Environment Cabinet to Louisville Gas and Electric, File No. DOW-41106-047.
  37. Expert Report (August 2010), Rebuttal Expert Report (September 2010), Supplemental Expert Report (September 2011), and Declaration (November 2011) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (District of Colorado).
  38. Written Direct Expert Testimony (August 2010) and Affidavit (February 2012) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).
  39. Deposition (August 2010) on behalf of Environmental Defense, in the matter of the remanded permit challenge to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
  40. Expert Report, Supplemental/Rebuttal Expert Report, and Declarations (October 2010, November 2010, September 2012) on behalf of New Mexico Environment Department (Plaintiff-Intervenor), Grand Canyon Trust and Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. Public Service Company of New Mexico* (PNM), Civil No. 1:02-CV-0552 BB/ATC (ACE) (District of New Mexico).
  41. Expert Report (October 2010) and Rebuttal Expert Report (November 2010) (BART Determinations for PSCo Hayden and CSU Martin Drake units) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.
  42. Expert Report (November 2010) (BART Determinations for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.
  43. Declaration (November 2010) on behalf of the Sierra Club in connection with the Martin Lake Station Units 1, 2, and 3. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Case No. 5:10-cv-00156-DF-CMC (Eastern District of Texas, Texarkana Division).

44. Pre-Filed Testimony (January 2011) and Declaration (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).
45. Declaration (February 2011) in the matter of the Draft Title V Permit for RRI Energy MidAtlantic Power Holdings LLC Shawville Generating Station (Pennsylvania), ID No. 17-00001 on behalf of the Sierra Club.
46. Expert Report (March 2011), Rebuttal Expert Report (June 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).
47. Declaration (April 2011) and Expert Report (July 16, 2012) in the matter of the Lower Colorado River Authority (LCRA)'s Fayette (Sam Seymour) Power Plant on behalf of the Texas Campaign for the Environment. *Texas Campaign for the Environment v. Lower Colorado River Authority*, Civil Action No. 4:11-cv-00791 (Southern District of Texas, Houston Division).
48. Declaration (June 2011) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.
49. Expert Report (June 2011) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).
50. Declaration (August 2011) in the matter of the Sandy Creek Energy Associates L.P. Sandy Creek Power Plant on behalf of Sierra Club and Public Citizen. *Sierra Club, Inc. and Public Citizen, Inc. v. Sandy Creek Energy Associates, L.P.*, Civil Action No. A-08-CA-648-LY (Western District of Texas, Austin Division).
51. Expert Report (October 2011) on behalf of the Defendants in the matter of *John Quiles and Jeanette Quiles et al. v. Bradford-White Corporation, MTD Products, Inc., Kohler Co., et al.*, Case No. 3:10-cv-747 (TJM/DEP) (Northern District of New York).
52. Declaration (October 2011) on behalf of the Plaintiffs in the matter of *American Nurses Association et. al. (Plaintiffs), v. US EPA (Defendant)*, Case No. 1:08-cv-02198-RMC (US District Court for the District of Columbia).
53. Declaration (February 2012) and Second Declaration (February 2012) in the matter of *Washington Environmental Council and Sierra Club Washington State Chapter v. Washington State Department of Ecology and Western States Petroleum Association*, Case No. 11-417-MJP (Western District of Washington).
54. Expert Report (March 2012) and Supplemental Expert Report (November 2013) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v.*

- ExxonMobil Corporation et al.*, Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).
55. Declaration (March 2012) in the matter of *Center for Biological Diversity, et al. v. United States Environmental Protection Agency*, Case No. 11-1101 (consolidated with 11-1285, 11-1328 and 11-1336) (US Court of Appeals for the District of Columbia Circuit).
  56. Declaration (March 2012) in the matter of *Sierra Club v. The Kansas Department of Health and Environment*, Case No. 11-105,493-AS (Holcomb power plant) (Supreme Court of the State of Kansas).
  57. Declaration (March 2012) in the matter of the Las Brisas Energy Center *Environmental Defense Fund et al., v. Texas Commission on Environmental Quality*, Cause No. D-1-GN-11-001364 (District Court of Travis County, Texas, 261<sup>st</sup> Judicial District).
  58. Expert Report (April 2012), Supplemental and Rebuttal Expert Report (July 2012), and Supplemental Rebuttal Expert Report (August 2012) on behalf of the states of New Jersey and Connecticut in the matter of the Portland Power plant *State of New Jersey and State of Connecticut (Intervenor-Plaintiff) v. RRI Energy Mid-Atlantic Power Holdings et al.*, Civil Action No. 07-CV-5298 (JKG) (Eastern District of Pennsylvania).
  59. Declaration (April 2012) in the matter of the EPA's EGU MATS Rule, on behalf of the Environmental Integrity Project.
  60. Expert Report (August 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Harm Phase.
  61. Declaration (September 2012) in the Matter of the Application of *Energy Answers Incinerator, Inc.* for a Certificate of Public Convenience and Necessity to Construct a 120 MW Generating Facility in Baltimore City, Maryland, before the Public Service Commission of Maryland, Case No. 9199.
  62. Expert Report (October 2012) on behalf of the Appellants (Robert Concilus and Leah Humes) in the matter of Robert Concilus and Leah Humes v. Commonwealth of Pennsylvania Department of Environmental Protection and Crawford Renewable Energy, before the Commonwealth of Pennsylvania Environmental Hearing Board, Docket No. 2011-167-R.
  63. Expert Report (October 2012), Supplemental Expert Report (January 2013), and Affidavit (June 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.
  64. Pre-filed Testimony (October 2012) on behalf of No-Sag in the matter of the North Springfield Sustainable Energy Project before the State of Vermont, Public Service Board.
  65. Pre-filed Testimony (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to

- Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.
66. Expert Report (February 2013) on behalf of Petitioners in the matter of Credence Crematory, Cause No. 12-A-J-4538 before the Indiana Office of Environmental Adjudication.
  67. Expert Report (April 2013), Rebuttal report (July 2013), and Declarations (October 2013, November 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
  68. Declaration (April 2013) on behalf of Petitioners in the matter of *Sierra Club, et al., (Petitioners) v Environmental Protection Agency et al. (Respondents)*, Case No., 13-1112, (Court of Appeals, District of Columbia Circuit).
  69. Expert Report (May 2013) and Rebuttal Expert Report (July 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).
  70. Declaration (August 2013) on behalf of A. J. Acosta Company, Inc., in the matter of *A. J. Acosta Company, Inc., v. County of San Bernardino*, Case No. CIVSS803651.
  71. Comments (October 2013) on behalf of the Washington Environmental Council and the Sierra Club in the matter of the Washington State Oil Refinery RACT (for Greenhouse Gases), submitted to the Washington State Department of Ecology, the Northwest Clean Air Agency, and the Puget Sound Clean Air Agency.
  72. Statement (November 2013) on behalf of various Environmental Organizations in the matter of the Boswell Energy Center (BEC) Unit 4 Environmental Retrofit Project, to the Minnesota Public Utilities Commission, Docket No. E-015/M-12-920.
  73. Expert Report (December 2013) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).
  74. Expert Testimony (December 2013) on behalf of the Sierra Club in the matter of Public Service Company of New Hampshire Merrimack Station Scrubber Project and Cost Recovery, Docket No. DE 11-250, to the State of New Hampshire Public Utilities Commission.
  75. Expert Report (January 2014) on behalf of Baja, Inc., in *Baja, Inc., v. Automotive Testing and Development Services, Inc. et. al*, Civil Action No. 8:13-CV-02057-GRA (District of South Carolina, Anderson/Greenwood Division).
  76. Declaration (March 2014) on behalf of the Center for International Environmental Law, Chesapeake Climate Action Network, Friends of the Earth, Pacific

- Environment, and the Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. the Export-Import Bank (Ex-Im Bank) of the United States*, Civil Action No. 13-1820 RC (District Court for the District of Columbia).
77. Declaration (April 2014) on behalf of Respondent-Intervenors in the matter of *Mexichem Specialty Resins Inc., et al., (Petitioners) v Environmental Protection Agency et al.*, Case No., 12-1260 (and Consolidated Case Nos. 12-1263, 12-1265, 12-1266, and 12-1267), (Court of Appeals, District of Columbia Circuit).
  78. Direct Prefiled Testimony (June 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17319 (Michigan Public Service Commission).
  79. Expert Report (June 2014) on behalf of ECM Biofilms in the matter of the US Federal Trade Commission (FTC) v. ECM Biofilms (FTC Docket #9358).
  80. Direct Prefiled Testimony (August 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of Consumers Energy Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17317 (Michigan Public Service Commission).
  81. Declaration (July 2014) on behalf of Public Health Intervenors in the matter of *EME Homer City Generation v. US EPA* (Case No. 11-1302 and consolidated cases) relating to the lifting of the stay entered by the Court on December 30, 2011 (US Court of Appeals for the District of Columbia).
  82. Expert Report (September 2014), Rebuttal Expert Report (December 2014) and Supplemental Expert Report (March 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and PacifiCorp (Defendants)*, Civil Action No. CV 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).
  83. Expert Report (November 2014) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).
  84. *Declaration (January 2015) relating to Startup/Shutdown in the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.*
  85. Pre-filed Direct Testimony (March 2015), Supplemental Testimony (May 2015), and Surrebuttal Testimony (December 2015) on behalf of Friends of the Columbia Gorge in the matter of the Application for a Site Certificate for the Troutdale Energy Center before the Oregon Energy Facility Siting Council.

86. Brief of Amici Curiae Experts in Air Pollution Control and Air Quality Regulation in Support of the Respondents, On Writs of Certiorari to the US Court of Appeals for the District of Columbia, No. 14-46, 47, 48. *Michigan et. al., (Petitioners) v. EPA et. al., Utility Air Regulatory Group (Petitioners) v. EPA et. al., National Mining Association et. al., (Petitioner) v. EPA et. al.*, (Supreme Court of the United States).
87. Expert Report (March 2015) and Rebuttal Expert Report (January 2016) on behalf of Plaintiffs in the matter of *Conservation Law Foundation v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).
88. Declaration (April 2015) relating to various Technical Corrections for the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.
89. Direct Prefiled Testimony (May 2015) on behalf of the Michigan Environmental Council, the Natural Resources Defense Council, and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy and for Miscellaneous Accounting Authority, Case No. U-17767 (Michigan Public Service Commission).
90. Expert Report (July 2015) and Rebuttal Expert Report (July 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).
91. Declaration (August 2015, Docket No. 1570376) in support of “Opposition of Respondent-Intervenors American Lung Association, et. al., to Tri-State Generation’s Emergency Motion;” Declaration (September 2015, Docket No. 1574820) in support of “Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors for Remand Without Vacatur;” Declaration (October 2015) in support of “Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors to State and Certain Industry Petitioners’ Motion to Govern, *White Stallion Energy Center, LLC v. US EPA*, Case No. 12-1100 (US Court of Appeals for the District of Columbia).
92. Declaration (September 2015) in support of the Draft Title V Permit for Dickerson Generating Station (Proposed Permit No 24-031-0019) on behalf of the Environmental Integrity Project.
93. Expert Report (Liability Phase) (December 2015) and Rebuttal Expert Report (February 2016) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., Environmental Law and Policy Center, and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).



94. Declaration (December 2015) in support of the Petition to Object to the Title V Permit for Morgantown Generating Station (Proposed Permit No 24-017-0014) on behalf of the Environmental Integrity Project.
95. Expert Report (November 2015) on behalf of Appellants in the matter of *Sierra Club, et al. v. Craig W. Butler, Director of Ohio Environmental Protection Agency et al.*, ERAC Case No. 14-256814.
96. Affidavit (January 2016) on behalf of Bridgewatch Detroit in the matter of *Bridgewatch Detroit v. Waterfront Petroleum Terminal Co., and Waterfront Terminal Holdings, LLC.*, in the Circuit Court for the County of Wayne, State of Michigan.
97. Expert Report (February 2016) and Rebuttal Expert Report (July 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.
98. Direct Testimony (May 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.
99. Declaration (June 2016) relating to deficiencies in air quality analysis for the proposed Millenium Bulk Terminal, Port of Longview, Washington.
100. Declaration (December 2016) relating to EPA's refusal to set limits on PM emissions from coal-fired power plants that reflect pollution reductions achievable with fabric filters on behalf of Environmental Integrity Project, Clean Air Council, Chesapeake Climate Action Network, Downwinders at Risk represented by Earthjustice in the matter of *ARIPPA v EPA, Case No. 15-1180*. (D.C. Circuit Court of Appeals).
101. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
102. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Backus Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
103. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Drakulic Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
104. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Deutsch Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.

105. Affidavit (February 2017) pertaining to deficiencies water discharge compliance issues at the Wood River Refinery in the matter of *People of the State of Illinois (Plaintiff) v. Phillips 66 Company, ConocoPhillips Company, WRB Refining LP (Defendants)*, Case No. 16-CH-656, (Circuit Court for the Third Judicial Circuit, Madison County, Illinois).
106. Expert Report (March 2017) on behalf of the Plaintiff pertaining to non-degradation analysis for waste water discharges from a power plant in the matter of *Sierra Club (Plaintiff) v. Pennsylvania Department of Environmental Protection (PADEP) and Lackawanna Energy Center*, Docket No. 2016-047-L (consolidated), (Pennsylvania Environmental Hearing Board).
107. Expert Report (March 2017) on behalf of the Plaintiff pertaining to air emissions from the Heritage incinerator in East Liverpool, Ohio in the matter of *Save our County (Plaintiff) v. Heritage Thermal Services, Inc. (Defendant)*, Case No. 4:16-CV-1544-BYP, (US District Court for the Northern District of Ohio, Eastern Division).
108. Rebuttal Expert Report (June 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight (Plaintiffs) v Coyote Creek Mining Company LLC (Defendant)*, Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).
109. Expert Affidavit (August 2017) and Penalty/Remedy Expert Affidavit (October 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant,)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).
110. Expert Report (August 2017) on behalf of Appellant in the matter of *Patricia Ann Troiano (Appellant) v. Upper Burrell Township Zoning Hearing Board (Appellee)*, Court of Common Pleas of Westmoreland County, Pennsylvania, Civil Division.
111. Expert Report (October 2017), Supplemental Expert Report (October 2017), and Rebuttal Expert Report (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).
112. Declaration (December 2017) on behalf of the Environmental Integrity Project in the matter of permit issuance for ATI Flat Rolled Products Holdings, Breckenridge, PA to the Allegheny County Health Department.
113. Expert Report (Harm Phase) (January 2018), Rebuttal Expert Report (Harm Phase) (May 2018) and Supplemental Expert Report (Harm Phase) (April 2019) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).
114. Declaration (February 2018) on behalf of the Chesapeake Bay Foundation, et. al., in the matter of the Section 126 Petition filed by the state of Maryland in *State of*

- Maryland v. Pruitt (Defendant)*, Civil Action No. JKB-17-2939 (Consolidated with No. JKB-17-2873) (US District Court for the District of Maryland).
115. Direct Pre-filed Testimony (March 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of *NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC*, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington).
  116. Expert Affidavit (April 2018) and Second Expert Affidavit (May 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.
  117. Direct Pre-filed Testimony and Affidavit (December 2018) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).
  118. Expert Report (February 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.
  119. Declaration (March 2019) on behalf of Earthjustice in the matter of comments on the renewal of the Title V Federal Operating Permit for Valero Houston refinery.
  120. Expert Report (March 2019) on behalf of Plaintiffs for Class Certification in the matter of *Resendez et al v Precision Castparts Corporation* in the Circuit Court for the State of Oregon, County of Multnomah, Case No. 16cv16164.
  121. Expert Report (June 2019), Affidavit (July 2019) and Rebuttal Expert Report (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellees) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.
  122. Affidavit/Expert Report (August 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.
  123. Expert Report (October 2019) relating to the appeal of air permit (Plan Approval) on behalf of Appellants in the matter of *Clean Air Council and Environmental Integrity Project (Appellants) v. Commonwealth of Pennsylvania Department of Environmental Protection and Sunoco Partners Marketing and Terminals L.P.,*

- before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-057-L.
124. Expert Report (December 2019) on behalf of Earthjustice in the matter of *Objection to the Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation*, Dale, Indiana, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.
  125. Affidavit (December 2019) on behalf of Plaintiff-Intervenor (Surfrider Foundation) in the matter of *United States and the State of Indiana (Plaintiffs), Surfrider Foundation (Plaintiff-Intervenor), and City of Chicago (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2:18-cv-00127 (US District Court for the Northern District of Indiana, Hammond Division).
  126. Declaration (February 2020) in support of Petitioner's Motion for Stay of PSCAA NOC Order of Approval No. 11386 in the matter of the *Puyallup Tribe of Indians v. Puget Sound Clean Air Agency (PSCAA) and Puget Sound Energy (PSE)*, before the *State of Washington Pollution Control Hearings Board*, PCHB No. P19-088.

C. Occasions where Dr. Sahu has provided oral testimony in depositions, at trial or in similar proceedings include the following:

127. Deposition on behalf of Rocky Mountain Steel Mills, Inc. located in Pueblo, Colorado – dealing with the manufacture of steel in mini-mills including methods of air pollution control and BACT in steel mini-mills and opacity issues at this steel mini-mill.
128. Trial Testimony (February 2002) on behalf of Rocky Mountain Steel Mills, Inc. in Denver District Court.
129. Trial Testimony (February 2003) on behalf of the United States in the Ohio Edison NSR Cases, *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).
130. Trial Testimony (June 2003) on behalf of the United States in the Illinois Power NSR Case, *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).
131. Deposition (10/20/2005) on behalf of the United States in connection with the Cinergy NSR Case. *United States, et al. v. Cinergy Corp., et al.*, IP 99-1693-C-M/S (Southern District of Indiana).
132. Oral Testimony (August 2006) on behalf of the Appalachian Center for the Economy and the Environment re. the Western Greenbrier plant, WV before the West Virginia DEP.
133. Oral Testimony (May 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women's Voices for the Earth (WVE) and the Clark

- Fork Coalition (CFC)) re. the Thompson River Cogeneration plant before the Montana Board of Environmental Review.
134. Oral Testimony (October 2007) on behalf of the Sierra Club re. the Sevier Power Plant before the Utah Air Quality Board.
  135. Oral Testimony (August 2008) on behalf of the Sierra Club and Clean Water re. Big Stone Unit II before the South Dakota Board of Minerals and the Environment.
  136. Oral Testimony (February 2009) on behalf of the Sierra Club and the Southern Environmental Law Center re. Santee Cooper Pee Dee units before the South Carolina Board of Health and Environmental Control.
  137. Oral Testimony (February 2009) on behalf of the Sierra Club and the Environmental Integrity Project re. NRG Limestone Unit 3 before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
  138. Deposition (July 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al.*
  139. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Coletto Creek coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
  140. Deposition (October 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
  141. Deposition (October 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.
  142. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Tenaska coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH). (April 2010).
  143. Oral Testimony (November 2009) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
  144. Deposition (December 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
  145. Oral Testimony (February 2010) on behalf of the Environmental Defense Fund re. the White Stallion Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
  146. Deposition (June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).

147. Trial Testimony (September 2010) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, State of Maryland, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case in US District Court in the Western District of Pennsylvania. *Plaintiffs v. Allegheny Energy Inc., et al.*, 2:05cv0885 (Western District of Pennsylvania).
148. Oral Direct and Rebuttal Testimony (September 2010) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).
149. Oral Testimony (September 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions*, No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.
150. Oral Testimony (October 2010) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
151. Oral Testimony (November 2010) regarding BART for PSCo Hayden, CSU Martin Drake units before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.
152. Oral Testimony (December 2010) regarding BART for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.
153. Deposition (December 2010) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).
154. Deposition (February 2011 and January 2012) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (D. Colo.).
155. Oral Testimony (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).
156. Deposition (August 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).
157. Deposition (July 2011) and Oral Testimony at Hearing (February 2012) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.

158. Oral Testimony at Hearing (March 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).
159. Oral Testimony at Hearing (April 2012) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).
160. Oral Testimony at Hearing (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.
161. Deposition (March 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.
162. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
163. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).
164. Deposition (February 2014) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).
165. Trial Testimony (February 2014) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v. ExxonMobil Corporation et al.*, Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).
166. Trial Testimony (February 2014) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
167. Deposition (June 2014) and Trial (August 2014) on behalf of ECM Biofilms in the matter of the *US Federal Trade Commission (FTC) v. ECM Biofilms* (FTC Docket #9358).
168. Deposition (February 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and PacifiCorp (Defendants)*, Civil Action No. CV

- 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).
169. Oral Testimony at Hearing (April 2015) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).
  170. Deposition (August 2015) on behalf of Plaintiff in the matter of *Conservation Law Foundation (Plaintiff) v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).
  171. Testimony at Hearing (August 2015) on behalf of the Sierra Club in the matter of *Amendments to 35 Illinois Administrative Code Parts 214, 217, and 225* before the Illinois Pollution Control Board, R15-21.
  172. Deposition (May 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).
  173. Trial Testimony (October 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).
  174. Deposition (April 2016) on behalf of the Plaintiffs in *UNatural Resources Defense Council, Respiratory Health Association, and Sierra Club (Plaintiffs) v. Illinois Power Resources LLC and Illinois Power Resources Generation LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (Central District of Illinois, Peoria Division).
  175. Trial Testimony at Hearing (July 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.
  176. Trial Testimony (December 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.
  177. Trial Testimony (July-August 2016) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).



178. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
179. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Backus Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
180. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Drakulic Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
181. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Deutsch Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
182. Deposition Testimony (July 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight v Coyote Creek Mining Company LLC (Defendant)* Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).
183. Deposition Testimony (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).
184. Deposition Testimony (December 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).
185. Deposition Testimony (January 2018) in the matter of National Parks Conservation Association (NPCA) v. State of Washington Department of Ecology and British Petroleum (BP) before the Washington Pollution Control Hearing Board, Case No. 17-055.
186. Trial Testimony (January 2018) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).
187. Trial Testimony (April 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington).
188. Deposition (June 2018) (harm Phase) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory*

- Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).
189. Trial Testimony (July 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.
  190. Deposition (January 2019) and Trial Testimony (January 2019) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).
  191. Deposition (February 2019) and Trial Testimony (March 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.
  192. Deposition (June 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.
  193. Deposition (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellees) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.
  194. Deposition (December 2019) on behalf of the Plaintiffs in the matter of David Kovac, individually and on behalf of wrongful death class of Irene Kovac v. Bp Corporation North America Inc., Circuit Court of Jackson County, Missouri (Independence), Case No. 1816-CV12417.
  195. Deposition (February 2020) on behalf of Earthjustice in the matter of *Objection to the Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation, Dale, Indiana*, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.
  - 196.



Work-in-Progress

- Orion v. Evonik
- NELC case with US Steel, Clairton
- Riverview trial
- Kovac trial
- PCC Class Action trial
-

ATTACHMENT C

State of Oregon  
Contract for Services

**Oregon Public Utility Commission  
201 High Street  
Salem, OR 97301**

This Contract for Services (this "Contract") is by and between the State of Oregon, acting through its Public Utility Commission, ("Agency") and Dr. Ranajit Sahu, a Sole Proprietor ("Contractor") and is effective as of the Effective Date.

Contractor's Contract Administrator for this  
Contract is:

**Dr. Ranajit Sahu**  
**311 North Story Place**  
**Alhambra, CA 91801**  
**Phone: (702) 683-5466**  
**[RONSAHU@GMAIL.COM](mailto:RONSAHU@GMAIL.COM)**  
**[SAHURON@EARTHLINK.NET](mailto:SAHURON@EARTHLINK.NET)**

Agency's Contract Administrator for this Contract  
is:

**John Crider**  
**Oregon Public Utility Commission**  
**201 High St SE**  
**Salem, OR 97301**  
**Phone: (503) 373-1536**  
**[john.crider@puc.state.or.us](mailto:john.crider@puc.state.or.us)**

Either party may change its Contract Administrator by providing the other notice in compliance with Section 17.6 of this Contract.

**1. Contract Term.**

The "Effective Date" of this Contract is date this Contract has been fully executed by each party and, approved as required by applicable law. Unless extended or terminated earlier in accordance with its terms, this Contract terminates on December 31, 2020. The termination of this Contract will not extinguish or prejudice Agency's right to enforce this Contract with respect to any default by Contractor that has not been cured.

**2. Contract Documents.** This Contract consists of the following documents, which are listed in descending order of precedence:

**2.1.** this Contract less all exhibits;

**2.2.** Exhibit A (Statement of Work);

**2.3.** Exhibit B (Required Insurance), and

**2.4. Exhibit C (Deliverables Schedule)**

**2.5. Exhibit D (PacifiCorp Study for reference)**

The foregoing documents and Exhibits are attached hereto and made a part of the Contract by this reference.

**3. Services.**

**3.1. Performance of Services.** Contractor shall perform the services (the "Services") and deliver to agency the deliverables ("Deliverables") set forth in Exhibit A, the Statement of Work (the "Statement of Work"). The Statement of Work includes the delivery schedule for the Deliverables and Services. Contractor shall perform the Services in accordance with the terms and conditions of this Contract.

**3.2. Submission and Acceptance of Deliverables.** When the Statement of Work requires Contractor to deliver Deliverables to Agency, then Contractor shall deliver Deliverables that comply with the requirements and acceptance criteria set forth in the Statement of Work. Contractor shall provide written notice to Agency upon delivery of a completed Deliverables to Agency.

**4. Compensation.**

**4.1. Payor.** Agency shall not pay Contractor for services provided. Contractor will be paid for services provided by PacifiCorp, subsequent to invoice review by Agency as set forth in Section 4.4.

**4.2. Not to Exceed Compensation.** The maximum, not-to-exceed compensation payable to Contractor under this Contract, which includes any allowable expenses, is \$58,225. Contractor will not be paid any amount in excess of the not-to-exceed compensation of this Contract, and will not be paid for Services performed before the Effective Date or after the expiration or termination of this Contract. If the maximum compensation is increased by amendment of this Contract, the amendment must be fully effective before Contractor performs Services subject to the amendment.

**4.3. Payments.** Payments, including interim payments, to Contractor will be made only for completed and accepted Deliverables and Services as set forth in Exhibit C.

**4.4. Invoices.** Contractor shall submit invoices for accepted Deliverables and Services no more frequently than once per month to Agency. Invoices shall be sent via email to the attention of Bradford Batchelor: [Bradford.Batchelor@puc.state.or.us](mailto:Bradford.Batchelor@puc.state.or.us). The invoices must describe all Services performed with particularity, including the dates Contractor performed the Services and hours utilized. *Each invoice must also include the total amount invoiced to date by Contractor prior to the current invoice. Contractor will specifically note in the appropriate invoice when it has requested payment for one-third and two-thirds of the maximum, not-to-exceed compensation.* Within 10 Business Days of Agency receipt of each invoice, Agency will review and ensure invoice charges are accurate and forward the invoice to PacifiCorp to facilitate payment to Contractor within 30 days of receipt.

**4.5. Expenses.** Contractor will not be paid or reimbursed for expenses incurred during the completion of the Services except as authorized in the Statement Work or elsewhere in this Contract. Any such authorized travel expenses must comply with the Oregon Travel Policy available on the Internet at: <http://www.oregon.gov/das/cfo/sars/policies/oam/40.10.00.pdf>

## **5. Independent Contractor; Responsibility For Taxes And Withholding**

**5.1. Independent Contractor.** Contractor shall perform all Services as an independent contractor. Agency reserves the right (i) to determine and modify the delivery schedule for the Services and (ii) to evaluate the quality of the Services; however, Agency may not and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Services.

**5.2. No Conflicts.** Contractor, by signature to this Contract, represents and warrants that Contractor's performance of the Services under this Contract creates no potential or actual conflict of interest as defined by ORS 244; and no statutes, rules or regulations of any State of Oregon or federal agency for which Contractor currently performs work would prohibit Contractor from performing the Services under this Contract.

**5.3. Affiliation.** Contractor understands and agrees that it is not an "officer," "employee," or "agent" of the State of Oregon, as those terms are used in ORS 30.265 or otherwise.

**5.4. Taxes and Benefits.** Contractor is responsible for all federal or state taxes applicable to compensation or payments paid to Contractor under this Contract and, unless required by applicable law, Agency will not withhold from such compensation or payments any amount to cover Contractor's federal or state tax obligations. Contractor is not eligible for any social security, unemployment insurance or workers' compensation benefits from compensation or payments paid to Contractor under this Contract, except as a self-employed individual.

## **6. Subcontracts, Successors, And Assignments**

**6.1. Subcontracts.** Contractor shall not enter into any subcontracts for any of the Services required by this Contract without Agency's prior written consent. In addition to any other provisions Agency may require, Contractor shall include in any permitted subcontract under this Contract provisions to ensure that Agency will receive the benefit of subcontractor's performance as if the subcontractor were Contractor. Agency's consent to any subcontract does not relieve Contractor of any of its duties or obligations under this Contract.

**6.2. Successors and Assigns.** The provisions of this Contract are binding upon and inure to the benefit of the parties to this Contract, their respective successors, and permitted assigns, if any.

**6.3. No Assignment.** Contractor shall not assign or transfer any of its rights or delegate its obligations under this Contract without Agency's prior written consent.

## **7. Representations and Warranties.**

**7.1. Contractor's General Representations and Warranties.** Contractor represents and warrants to Agency that:

7.1.1. Contractor has the power and authority to enter into and perform this Contract;

7.1.2. This Contract, when executed and delivered, is a valid and binding obligation of Contractor enforceable in accordance with its terms;

7.1.3. Contractor shall, at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Services;

7.1.4. Contractor prepared its proposal related to this Contract, if any, independently from all other proposers, and without collusion, fraud, or other dishonesty; and

7.1.5. Contractor (to the best of Contractor's knowledge, after due inquiry), for a period of no fewer than six calendar years preceding the Effective Date, faithfully has complied with:

7.1.5.1. All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318;

7.1.5.2. Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor;

7.1.5.3. Any tax provisions imposed by a political subdivision of this State that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor;

7.1.5.4. Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions; and

7.1.6. Contractor has no undisclosed liquidated and delinquent debt owed to the State or any department or agency of the State.

## **7.2. Contractor's Performance Warranties.**

7.2.1. Contractor has the skill and knowledge possessed by well-informed members of its industry, trade or profession and Contractor shall apply that skill and knowledge with care and diligence to perform the Services in a professional manner and in accordance with the highest standards prevalent in Contractor's industry, trade or profession;

7.2.2. The Services and each Deliverables delivered by Contractor pursuant to the Services will materially comply with any service descriptions, specifications, standards or requirements set forth in this Contract;

7.2.3. Except as otherwise provided in this Contract (including Section 8), Contractor shall transfer all Deliverables to Agency free and clear of any and all restrictions on or conditions of transfer, modification, licensing, sublicensing, direct or indirect distribution, or assignment, and free and clear of any and all liens, claims, mortgages, security interests, liabilities, and encumbrances of any kind; and

7.2.4. Except as otherwise set forth in this Contract, any subcontractors performing work for Contractor under this Contract have assigned all of their rights in the Deliverables to Contractor or Agency and no third party has any right, title or interest in any Deliverables supplied to Agency under this Contract.

**7.3. Warranties cumulative.** The warranties set forth in Section 7 are in addition to, and not in lieu of, any other warranties set forth elsewhere in this Contract.

## **8. Ownership of Work Product.**

**8.1. Definitions.** As used in this Section 8, and elsewhere in this Contract, the following terms have the meanings set forth below:



8.1.1. “Contractor Intellectual Property” means any intellectual property owned by Contractor and developed independently from the Services.

8.1.2. “Third Party Intellectual Property” means any intellectual property owned by parties other than Agency or Contractor.

8.1.3. “Work Product” means everything that is originally made, conceived, discovered, or reduced to practice by Contractor or Contractor’s subcontractors or agents (either alone or with others) pursuant to this Contract, including every invention, modification, discovery, design, development, customization, configuration, improvement, process, work of authorship, documentation, formula, datum, technique, know how, secret, or intellectual property right whatsoever or any interest therein (whether patentable or not patentable or registerable under copyright or similar statutes or subject to analogous protection).

**8.2. Original Works.** All Work Product created by Contractor pursuant to the Services, including derivative works and compilations of Work Product, and whether or not such Work Product is considered a work made for hire or an employment to invent, is the exclusive property of Agency. Agency and Contractor agree that such Work Product is “work made for hire” of which Agency is the author within the meaning of the United States Copyright Act. If for any reason the Work Product is not “work made for hire,” Contractor hereby irrevocably assigns to Agency any and all of its rights, title, and interest in all Work Product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrine. Upon Agency’s reasonable request, Contractor shall execute such further documents and instruments necessary to fully vest such rights in Agency. Contractor forever waives any and all rights relating to Work Product, including without limitation, any and all rights arising under 17 USC §106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.

**8.3. License in Contractor Intellectual Property.** In the event that a Deliverables delivered by Contractor under this Contract is or is a derivative work based on Contractor Intellectual Property, or is a compilation that includes Contractor Intellectual Property, Contractor hereby grants to Agency an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display the pre-existing elements of the Contractor Intellectual Property employed in the Deliverables, and to authorize others to do the same on Agency’s behalf.

**8.4. License in Third Party Intellectual Property.** In the event that a Deliverables delivered by Contractor under this Contract is or is a derivative work based on Third Party Intellectual Property, or is a compilation that includes Third Party Intellectual Property, Contractor shall secure on the Agency’s behalf and in the name of the Agency an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display the pre-existing elements of the Third Party Intellectual Property employed in the Deliverables, and to authorize others to do the same on Agency’s behalf.

**8.5. No Rights.** Except as expressly set forth in this Contract, nothing in this Contract may be construed as granting to or conferring upon Contractor any right, title, or interest in any intellectual property that is now owned or subsequently owned by Agency or PacifiCorp. Except as expressly set forth in this Contract, nothing in this Contract may be construed as granting to or conferring upon Agency any right, title, or interest in any Contractor Intellectual Property that is now owned or subsequently owned by Contractor.

**8.6. Marks.** Neither party grants the other the right to use its trademarks, trade names, service marks or other designations in any promotion or publication without prior written consent. Each party grants only the licenses and rights specified in this Contract.

**8.7. Competing Services.** Subject to the provisions of this Section 8, and Contractor's obligations with respect to Confidential Information, including as defined in Section 9, nothing in this Contract precludes or limits in any way the right of Contractor to: (i) provide services similar to those contemplated in this Contract, or consulting or other services of any kind or nature whatsoever to any individual or entity as Contractor in its sole discretion deems appropriate, or (ii) develop for Contractor or for others, Deliverables or other materials that are competitive with those produced as a result of the Services provided hereunder, irrespective of their similarity to the Deliverables delivered pursuant to this Contract. Each party is free to utilize any concepts, processes, know-how, techniques, improvements or other methods it may develop during the course of performance under this Contract free of any use restriction or payment obligation to the other.

## **9. Confidential Information.**

**9.1. Confidential Information.** Contractor acknowledges that it and its employees, officers, directors, agents or subcontractors (collectively, "Contractor Staff") may, in the course of performing the Services under this Contract, be exposed to or acquire information that is confidential to Agency or Agency's clients. Any and all information of any form (including but not limited to records, files, papers, materials, documents, and communications in written, verbal, oral and electronic form) that Contractor or any Contractor Staff may come into contact with or that is obtained by Contractor or Contractor Staff in the performance of this Contract shall be considered for the purposes of this Contract the confidential information of Agency ("Confidential Information"). Contractor shall, and shall cause Contractor Staff to treat any reports or other documents or items (including software) that result from the use of the Confidential Information in the same manner as the Confidential Information. Confidential Information does not include information that (i) is or becomes (other than by disclosure by Contractor or Contractor Staff acquiring such information) publicly known or is contained in a publicly available document except to the extent applicable law still restricts disclosure; (ii) is furnished by Agency to others without restrictions similar to those imposed by this Contract; (iii) is rightfully in Contractor's possession without the obligation of nondisclosure prior to the time of its disclosure under this Contract; (iv) is obtained from a source other than Agency without the obligation of confidentiality, (v) is disclosed with the written consent of Agency, or; (vi) is independently developed by Contractor or Contractor Staff who can be shown to have had no access to the Confidential Information.

**9.2. Non-Disclosure.** Contractor shall sign the applicable Protective Orders in the UE 374 and UM 1050 proceedings, which require Contractor to abide by the terms of such Protective Orders. Agency will provide Contractor with executable copies of both Protective Orders. Contractor further agrees to hold, and shall cause Contractor Staff to hold, all Confidential Information in confidence, using the highest standard of care applicable, and shall not copy, reproduce, sell, assign, license, market, transfer, distribute, or otherwise dispose of, give, make available or disclose, in whole or in part, directly or indirectly, Confidential Information to third parties (other than its authorized subcontractors), or use Confidential Information for any purposes whatsoever other than the provision of Services to Agency hereunder, and shall advise Contractor Staff of their obligations to keep Confidential Information confidential. Contractor shall assist Agency in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limiting the generality of the foregoing, Contractor shall advise Agency immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Contract, and Contractor will at its expense cooperate with Agency in seeking injunctive or other equitable relief in the name of Agency or Contractor against any such person. Contractor shall not at any time during or after the term of this Contract, except as directed by Agency, disclose, directly or indirectly, any Confidential Information to any person, except in accordance with this Contract. Upon expiration or termination of this Contract or at Agency's request, Contractor shall deliver to Agency all documents, papers, and other matter in Contractor's possession that embody

Confidential Information. Notwithstanding the foregoing and unless otherwise specified in this Contract, Contractor may keep one copy of such Confidential Information necessary for quality assurance, audits and evidence of performance of the Services.

**9.3. Confidentiality Policies.** Contractor shall, upon Agency's request, provide its policies and procedures for safeguarding Confidential Information to Agency for Agency's review and consent. Such policies must address information conveyed in oral, written, and electronic format and include procedures for how Contractor will respond when a violation or possible violation occurs.

**9.4. Injunctive Relief.** Contractor acknowledges that breach of this Section 9, including disclosure of any Confidential Information, will cause irreparable injury to Agency that is inadequately compensable in damages. Accordingly, Agency may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Contractor acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interests of Agency and are reasonable in scope and content.

**9.5. Publicity.** Contractor agrees that it will not disclose the form, content or existence of this Contract or any Deliverables in any advertising, press releases or other materials distributed to prospective customers, or otherwise attempt to obtain publicity from its association with Agency or the State of Oregon, whether or not such disclosure, publicity or association implies an endorsement by Agency or the State of Oregon of Contractor's services, without the prior written consent of Agency.

## **10. Indemnity by Contractor.**

**10.1. Claims.** Contractor shall defend, save, hold harmless, and indemnify the State of Oregon and Agency and their officers, employees and agents from and against all third party claims, suits, actions, losses, damages, liabilities, costs (including attorneys' fees) and expenses (collectively, "Claims") of any nature whatsoever resulting from, arising out of, or relating to the activities of Contractor or its officers, employees, subcontractors, or agents under this Contract, including but not limited to, unauthorized disclosure of Confidential Information, professional malfeasance, infringement of intellectual property rights, intentional, willful, or wanton wrongful acts, and acts outside the scope of Services set forth in this Contract.

**10.2. Legal Counsel.** If Contractor is required to defend the State of Oregon or Agency or their officers, employees or agents under Section 10.1, then Contractor shall select legal counsel reasonably acceptable to the Oregon Attorney General to act in the name of, or represent the interests of, the State of Oregon, Agency or their officers, employees and agents. Such legal counsel must accept appointment as a special assistant attorney general under ORS chapter 180 before such action or representation. Further, the State of Oregon, acting by and through its Department of Justice, may assume its own defense, including that of its officers, employees and agents, at any time when in the State of Oregon's sole discretion it determines that (i) proposed counsel is prohibited from the particular representation contemplated; (ii) counsel is not adequately defending the interests of the State of Oregon or its officers, employees and agents; (iii) important governmental interests are at stake; or (iv) the best interests of the State of Oregon are served thereby. Contractor's obligation to pay for all costs and expenses includes those incurred by the State of Oregon in assuming its own defense or that of its officers, employees, and agents under (i) and (ii) above.

**10.3. Damages to State Property and Employees.** Contractor is liable for all Claims for personal injury, including death, damage to real property and damage to tangible and intangible personal property of the State of Oregon or any of its employees, subcontractors or agents resulting from, arising out of, or relating to the intentional, reckless or negligent acts or omissions of Contractor or its officers, employees, subcontractors, or agents under this Contract

**10.4.** CONTRACTOR IS NOT AUTHORIZED TO SETTLE OR COMPROMISE ANY CLAIM REFERENCED IN THIS SECTION WITHOUT THE EXPRESS WRITTEN CONSENT OF AGENCY.

**11. Limitation of Liabilities.**

**11.1.** EXCEPT FOR LIABILITY ARISING OUT OF OR RELATED TO (i) SECTION 10, OR (ii) SECTION 11, CONTRACTOR'S LIABILITY FOR DAMAGES FOR ANY CAUSE WHATSOEVER SHALL BE LIMITED TO ONE AND ONE HALF TIMES THE MAXIMUM-NOT-TO-EXCEED AMOUNT OF THIS CONTRACT.

**11.2.** EXCEPT FOR LIABILITY TO THIRD PERSONS ARISING OUT OF OR RELATED TO (i) SECTION 10, OR (ii) SECTION 11, NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR ANY LOST PROFITS, LOST SAVINGS, OR PUNITIVE, INDIRECT, EXEMPLARY, CONSEQUENTIAL, OR INCIDENTAL DAMAGES.

**12. Insurance.** Contractor shall maintain insurance as set forth in Exhibit B.

**13. Default; Remedies; Termination.**

**13.1. Default by Contractor.** Contractor will be in default under this Contract if:

13.1.1. Contractor institutes or has instituted against it insolvency, receivership or bankruptcy proceedings, makes an assignment for the benefit of creditors, or ceases doing business on a regular basis; or

13.1.2. Contractor no longer holds a license or certificate that is required for Contractor to perform its obligations under the Contract and Contractor has not obtained such license or certificate within 14 calendar days after Agency's notice or such longer period as Agency may specify in such notice; or

13.1.3. Contractor commits any material breach or default of any covenant, warranty, obligation, certification, or agreement under this Contract, fails to perform the Services under this Contract within the time specified herein or any extension thereof, or so fails to pursue the Services as to endanger Contractor's performance under this Contract in accordance with its terms, and such breach, default or failure is not cured within 14 calendar days after Agency's notice, or such longer period as Agency may specify in such notice; or

13.1.4. Contractor has liquidated and delinquent debt owed to the State of Oregon or any department or agency of the State.

**13.2. Agency's Remedies for Contractor's Default.** In the event Contractor is in default under Section 14.1, Agency may, at its option, pursue any or all of the remedies available to it under this Contract and at law or in equity, including, but not limited to:

13.2.1. Termination of this Contract under Section 13.6.2; or

13.2.2. Initiation of an action or proceeding for damages, specific performance, or declaratory or injunctive relief.

**13.3. Remedies Cumulative.** The remedies set forth in Section 13.2 are cumulative to the extent the remedies are not inconsistent, and Agency may pursue any remedy or remedies singly, collectively, successively or in any order whatsoever. If a court determines that Contractor was not in default under Sections 13.1, then Contractor will be entitled to the same remedies as if this Contract was terminated pursuant to Section 13.6.1.

**13.4. Default by Agency.** Agency will be in default under this Contract if:

13.4.1. Agency fails to act in accordance with its obligations under Section 4 , and Agency fails to cure such failure within 30 calendar days after Contractor's notice or such longer period as Contractor may specify in such notice; or

13.4.2. Agency commits any material breach or default of any covenant, warranty, or obligation under this Contract, and such breach or default is not cured within 30 calendar days after Contractor's notice or such longer period as Contractor may specify in such notice.

**13.5. Contractor's Remedies.** In the event Agency terminates this Contract under Section 13.6.1, or is in default under Section 13.4, and whether or not Contractor elects to exercise its right to terminate the Contract under Section 13.6.3, Contractor's sole monetary remedy will be (i) with respect to Services compensable at a stated rate, a claim for facilitation of payment for unpaid invoices in accordance with Section 4, facilitation of payment for time worked within any limits set forth in this Contract but not yet invoiced and authorized expenses incurred and interest, in accordance with Section 4, and (ii) with respect to Deliverables-based Services, a claim for facilitation for payment of the sum designated for completing the Deliverables multiplied by the percentage of Services completed and accepted by Agency, less previous amounts paid and any claim(s) that Agency has against Contractor. In no event will Agency be liable to Contractor for any expenses related to termination of this Contract or for anticipated profits.

**13.6. Termination.**

**13.6.1. Agency's Right to Terminate at its Discretion.** Agency may terminate this Contract:

13.6.1.1. Upon 30 calendar days' prior written notice by Agency to Contractor; or

13.6.1.2. Immediately upon written notice by Agency to Contractor if federal or state laws, regulations, or guidelines are modified or interpreted in such a way that the Agency's purchase of the Services or Work Products under this Contract is prohibited or Agency is prohibited from facilitating payment for such Services or Work Products from the planned funding source.

13.6.2. **Agency's Right to Terminate for Cause.** In addition to any other rights and remedies Agency may have under this Contract, Agency may terminate this Contract immediately upon written notice by Agency to Contractor, or at such later date as Agency may establish in such notice, if Contractor is in default under Section 13.1.

13.6.3. **Contractor's Right to Terminate for Cause.** Contractor may terminate this Contract immediately upon written notice to Agency, or at such later date as Contractor may establish in such notice, if Agency is in default under Section 13.4.

**13.7. Return of Property.** Upon termination of this Contract for any reason whatsoever, Contractor shall deliver to Agency all of Agency's property (including without limitation any Services or Work Products for which Contractor has been paid in whole or in part) that is in the possession or under the control of Contractor in whatever stage of development and form of recordation such Agency property is expressed or embodied at that time. Contractor shall execute this section within 7 calendar days of the termination of the Contract.

**13.8. Effect of Termination.** Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract, unless Agency expressly directs otherwise in such notice of termination. Upon Agency's request, in accordance with paragraph 13.7, Contractor shall return to Agency all documents, research or objects or other tangible things needed to complete the Services and the Deliverables.

#### **14. Compliance with Law.**

**14.1. Compliance with Law Generally.** Contractor shall comply, and cause all subcontractors to comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to this Contract and the performance of the Services. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following laws, regulations and executive orders to the extent they are applicable to this Contract: (i) Titles VI and VII of the Civil Rights Act of 1964, as amended; (ii) Title V and Sections 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Americans with Disabilities Act of 1990 and ORS 659A.142, as amended; (iv) Executive Order 11246, as amended; (v) the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health (HITECH) Act portion of the American Recovery and Reinvestment Act of 2009 (ARRA), including the Privacy and Security Rules found at 45 CFR Parts 160 and 164, as the law and its implementing regulations may be updated from time to time; (vi) the Age Discrimination in Employment Act of 1967, as amended, and the Age Discrimination Act of 1975, as amended; (vii) the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended; (viii) Section 188 of the Workforce Investment Act (WIA) of 1998, as amended; (ix) ORS Chapter 659, as amended; (x) all regulations and administrative rules established pursuant to the foregoing laws; and (xi) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations. These laws, regulations and executive orders are incorporated by reference herein to the extent that they are applicable to the Contract and required by law to be so incorporated. Agency's performance under the Contract is conditioned upon Contractor's compliance with the provisions of ORS 279B.220, 279B.225, 279B.230, 279B.235 and 279B.270 which are incorporated by reference herein. Contractor shall, to the maximum extent economically feasible in the performance of this Contract, use recycled paper (as defined in ORS 279A.010(1)(gg)), recycled PETE products (as defined in ORS 279A.010(1)(hh)), and other recycled products (as "recycled product" is defined in ORS 279A.010(1)(ii)).

#### **14.2. Compliance with Oregon Tax Laws.**

14.2.1. Contractor shall, throughout the duration of this Contract, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. For the purposes of this section, "tax laws" includes the tax laws described in Section 7.1.5.1 through 7.1.5.4.

14.2.2. Any violation of Section 14.2.1 constitutes a material breach of this Contract. Further, any violation of Contractor's warranty in Section 7.1.5 of this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also constitutes a material breach of this Contract. Any violation entitles Agency to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to:

14.2.2.1. Termination of this Contract, in whole or in part;

14.2.2.2. Exercise of the right of setoff, or garnishment if applicable, and withholding of amounts otherwise due and owing to Contractor without penalty; and

14.2.2.3. Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. Agency is entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement Services.

14.2.3. These remedies are cumulative to the extent the remedies are not inconsistent, and Agency may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

**14.3. Pay Equity.** As required by ORS 279B.235, Contractor shall comply with ORS 652.220 and shall not unlawfully discriminate against any of Contractor's employees in the payment of wages or other compensation for work of comparable character on the basis of an employee's membership in a protected class. "Protected class" means a group of persons distinguished by race, color, religion, sex, sexual orientation, national origin, marital status, veteran status, disability or age. Contractor's compliance with this section constitutes a material element of this Contract and a failure to comply constitutes a breach that entitles Agency to terminate this Contract for cause.

Contractor may not prohibit any of Contractor's employees from discussing the employee's rate of wage, salary, benefits, or other compensation with another employee or another person. Contractor may not retaliate against an employee who discusses the employee's rate of wage, salary, benefits, or other compensation with another employee or another person.

## **15. Governing Law; Venue and Jurisdiction.**

**15.1. Governing Law.** This Contract is governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law.

**15.2. Venue and Jurisdiction.** Any claim, action, suit or proceeding between Agency (or any other agency or department of the State of Oregon) and Contractor that arises from or relates to this Contract must be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS. In no event may this section be construed as (i) a waiver by the State of Oregon of any form of defense or immunity, whether it is sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim, action, suit or proceeding, or (ii) consent by the State of Oregon to the jurisdiction of any court.

## **16. Miscellaneous Provisions.**

**16.1. Records Maintenance; Access.** Contractor shall maintain all financial records relating to this Contract in accordance with generally accepted accounting principles. In addition, Contractor shall maintain any other records, books, documents, papers, plans, records of shipments and payments and writings of Contractor, whether in paper, electronic or other form, that are pertinent to this Contract ("Records") in such a manner as to clearly document Contractor's performance. Contractor acknowledges and agrees that Agency and the Oregon Secretary of State's Office and the federal government and their duly authorized representatives will have access to such financial records and other Records that are pertinent to this Contract, whether in paper, electronic or other form, to perform examinations and audits and make excerpts and transcripts. Contractor shall retain and keep accessible all such financial records and other Records for a minimum of 6 years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later. Confidential records shall be maintained in accordance with the applicable Protective Orders executed by Contractor, as set forth in Section 9.

**16.2. Foreign Contractor.** If Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State Corporation Division all information required by those agencies relative to this Contract. Contractor shall demonstrate its legal capacity to perform the Services under this Contract in the State of Oregon prior to entering into this Contract.

- 16.3. Force Majeure.** Neither Agency nor Contractor may be held responsible for delay or default caused by fire, riot, acts of God, terrorist acts, or other acts of political sabotage, or war where such cause was beyond the reasonable control of Agency or Contractor, respectively. Contractor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.
- 16.4. Survival.** All rights and obligations cease upon termination or expiration of this Contract, except for the rights and obligations and declarations which expressly or by their nature survive termination of this Contract, including without limitation this Section 16.4, and provisions regarding Contract definitions, warranties and liabilities, independent Contractor status and taxes and withholding, maximum compensation, Contractor's duties of confidentiality, ownership and license of intellectual property and Deliverables, confidentiality and non-disclosure, Contractor's representations and warranties, control of defense and settlement, remedies, return of Agency property, dispute resolution, order of precedence, maintenance and access to records, notices, severability, successors and assigns, third party beneficiaries, waiver, headings, and integration.
- 16.5. Time is of the Essence.** Contractor agrees that time is of the essence under this Contract.
- 16.6. Notice.** Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder must be given in writing by email, personal delivery, facsimile, or mailing the same, postage prepaid, to Contractor or Agency at the email address, postal address or telephone number set forth in this Contract, or to such other addresses or numbers as either party may indicate pursuant to this Section 16.6. Any communication or notice so addressed and mailed is effective five business days after mailing. Any communication or notice delivered by facsimile is effective on the day the transmitting machine generates a receipt of the successful transmission, if transmission was during normal business hours, or on the next business day, if transmission was outside normal business hours of the recipient. To be effective against Agency, any notice transmitted by facsimile must be confirmed by telephone notice to Agency's Contract Administrator. Any communication or notice given by personal delivery is effective when actually delivered. Any notice given by email is effective when the sender receives confirmation of delivery, either by return email, or by demonstrating through other technological means that the email has been delivered to the intended email address.
- 16.7. No Third Party Beneficiaries.** Agency and Contractor are the only parties to this Contract and are the only parties entitled to enforce the terms of this Contract. Nothing in this Contract gives, is intended to give, or may be construed to give or provide any benefit or right not held by or made generally available to the public, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.
- 16.8. Severability.** The parties agree that if any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or otherwise invalid, the validity of the remaining terms and provisions will not be affected, and the rights and obligations of the parties will be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.
- 16.9. Merger Clause; Waiver.** This Contract and attached exhibits constitute the entire agreement between the parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Contract. No waiver, consent, modification or change of terms of this Contract will bind the parties unless in writing and signed by both parties and all necessary State approvals have been obtained. Such waiver, consent, modification or change, if made, will be effective only in the specific instance and for the specific purpose given. The failure



of Agency to enforce any provision of this Contract in one instance will not constitute a waiver by Agency of its right to enforce that or any other provision.

- 16.10. Amendments.** Agency may amend this Contract to the extent permitted by applicable statutes and administrative rules. No amendment to this Contract is effective unless it is in writing signed by the parties, and has been approved as required by applicable law.
- 16.11. Counterparts.** This Contract may be executed in several counterparts, all of which when taken together constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of the Contract so executed constitutes an original.
- 16.12. Oregon False Claims Act.** Contractor acknowledges the Oregon False Claims Act, ORS 180.750 to 180.785, applies to any action by Contractor pertaining to this Contract, including the procurement process relating to this Contract that constitutes a "claim" (as defined by ORS 180.750(1)). By its execution of this Contract, Contractor certifies the truthfulness, completeness, and accuracy of any statement or claim it has made, it makes, it may make, or causes to be made that pertains to this Contract. In addition to other penalties that may be applicable, Contractor further acknowledges that if it makes, or causes to be made, a false claim or performs a prohibited act under the Oregon False Claims Act, the Oregon Attorney General may enforce the liabilities and penalties provided by the Oregon False Claims Act against Contractor. Contractor understands and agrees that any remedy that may be available under the Oregon False Claims Act is in addition to any other remedy available to the State or Agency under this Contract or any other provision of law.
- 16.13. Certifications.** The individual signing on behalf of Contractor hereby:
- 16.13.1. Certifies and swears under penalty of perjury to the best of the individual's knowledge that: (a) Contractor is not subject to backup withholding because (i) Contractor is exempt from backup withholding, (ii) Contractor has not been notified by the IRS that Contractor is subject to backup withholding as a result of a failure to report all interest or dividends, or (iii) the IRS has notified Contractor that Contractor is no longer subject to backup withholding; (b) s/he is authorized to act on behalf of Contractor, s/he has authority and knowledge regarding Contractor's payment of taxes, and to the best of her/his knowledge, that Contractor is not in violation of any Oregon tax laws and that for a period of no fewer than six (6) calendar years preceding the Effective Date of this Contract, Contractor faithfully has complied with: (i) all tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (ii) any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (iii) any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (iv) any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions; (c) Contractor is an independent contractor as defined in ORS 670.600; and (d) the supplied Contractor tax identification numbers are true and accurate;
- 16.13.2. Certifies that, to the best of the undersigned's knowledge, Contractor has not discriminated against and will not discriminate against any disadvantaged business enterprise, minority-owned business, woman-owned business, business that service-disabled veteran owns or emerging small business certified under ORS 200.055 in obtaining any required subcontracts;
- 16.13.3. Certifies that Contractor has a written policy and practice that meets the requirements, described in ORS 279A.112, of preventing sexual harassment, sexual assault, and discrimination

against employees who are members of a protected class. Contractor agrees, as a material term of the Contract, to maintain the policy and practice in force during the entire Contract term.

16.13.4. Certifies that Contractor and Contractor’s employees and agents are not included on the list titled “Specially Designated Nationals and Blocked Persons” maintained by the Office of Foreign Assets Control of the United States Department of the Treasury and currently found at <https://www.treasury.gov/ofac/downloads/sdnlist.pdf>.

**Contractor**

**STATE OF OREGON, BY AND THROUGH ITS PUBLIC  
UTILITY COMMISSION**

Signature

Date

Signature

Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor

## **Exhibit A Statement of Work**

The Independent Evaluator Review is to have three related components associated with Contractor's review of PacifiCorp's Study. An outline of the Statement of Work associated with PacifiCorp's Study is included as Exhibit D.

OPUC identifies the first of these components as the Independent Evaluation and the second as the Independent Cost Estimates. Content included in the Independent Evaluation depends upon results included in the Independent Cost Estimates. The third component of the Independent Evaluator Review requires Contractor's authoring and timely filing in Agency proceeding Docket No. UE 374 a Written Report regarding the Independent Evaluation and the Independent Cost Estimates, the timely filing in Agency proceeding Docket No. UE 374 of any workpapers and other deliverables, as discussed below, associated with components of the Independent Evaluator Review. The Independent Evaluator Review may require one or more personal appearances at an OPUC hearing regarding materials, data, and methodologies Contractor used in preparing the Independent Evaluator Review, specifically including AACE Class 3 cost estimates for the future decommissioning and restoration of several coal-fueled generating plants (or specific units of some coal plants) owned or partially owned by the PacifiCorp

Content included in the Independent Evaluator Review may be used by Commission Staff, Intervening Parties, and PacifiCorp in testimony or other filings in one or more Commission proceedings related to the allocation of costs for PacifiCorp's system to the Company's Oregon customers. This may require the preparation of redacted as well as non-redacted versions of the Independent Evaluator Review and its components, including the Written Report, and also for associated workpapers and other deliverables. Information designated as Confidential by PacifiCorp should continue to be designated as confidential in any associated Contractor workproducts.

Information regarding the Scope of Work required for specific parts of the Independent Evaluator Review follows.

### **Independent Evaluation**

The Independent Evaluation represents two deliverables. The first deliverable is a working electronic version, with all cell references and formulae intact, of all spreadsheet reports Contractor relied upon in developing and documenting the Independent Evaluation. The spreadsheet reports are to be created and developed using productivity software commonly employed in U.S. business environments. The second deliverable is an electronic copy of all other materials the Contractor relied upon in developing the Independent Evaluation.

The spreadsheet reports to be filed by Contractor in the designated OPUC proceeding as part of the Independent Evaluator Review will include clear identification of:

1. Each spreadsheet report file included
2. Each spreadsheet contained within each spreadsheet file
3. Each column and row heading of every column and row used within each spreadsheet
4. Each parameter used in each spreadsheet

The electronic copy of all other materials Contractor relied upon in developing the Independent Evaluation will include clear identification of each document, including its source and the date of Contractor's retrieval of each document if from electronic sources such as websites. These materials are to be in either spreadsheet or pdf format, as applicable, and be clearly labeled.

### **Independent Cost Estimates**

As a component of the Independent Evaluator Review, Contractor is to prepare and deliver an AACE Class 3 cost estimate for each item in PacifiCorp's Study where Contractor does not concur with the methodology used or with the cost estimate (or the range of cost estimates) obtained in PacifiCorp's Study. Additionally, Contractor is to prepare and deliver an AACE Class 3 cost estimate for those items that were not included in PacifiCorp's Study which Contractor believes should have been included.

OPUC refers to the AACE Class 3 cost estimates prepared and delivered by Contractor—in the aggregate—as the Independent Cost Estimates. The Independent Cost Estimates may be used by Commission Staff and Intervening Parties in testimony or other filings in one or more Commission proceedings related to the allocation of costs of PacifiCorp's system to the Company's Oregon customers. Contractor shall prepare and submit the Independent Cost Estimates, to include working spreadsheet reports, with the latter to have been created and developed using productivity software commonly employed in U.S. business environments with cell references and formulae intact.

### **Written Report Regarding Independent Evaluator Review**

The Independent Evaluator Review is to include a Written Report authored by Contractor regarding the two other components of the Independent Evaluator Review, including Contractor findings regarding PacifiCorp's Study and its results as well as Contractor discussion regarding the methods and assumptions used and the results obtained in the Independent Cost Estimates. The Written Report is to be filed in Agency proceeding Docket No. UE 374. OPUC Staff will provide Contractor with additional information regarding the mechanics and logistics of Contractor filing the Written Report, workpapers and other deliverables. This information will be provided to Contractor by OPUC Staff via email no more than 10 calendar days following execution of this contract.

The Written Report is to include:

1. An exhibit containing the qualifications of the author(s).
2. Exhibits—such as tables and charts—that serve to reinforce key points of the Written Report.
3. Names and roles of the individuals other than the Written Report's author involved in preparing the Independent Evaluation and the Independent Cost Estimates, and an exhibit containing each such individual's qualifications.
4. A summary of key findings associated with the Independent Evaluator Review, the Independent Evaluation, and the Independent Cost Estimates.
5. Discussion documenting Contractor's review and assessment of the process used to prepare PacifiCorp's Study.
6. Discussion documenting Contractor's review and assessment of the scope and limitations of PacifiCorp's Study, specifically including but not limited to
  - 6.1.1.1. The applicability of a single design basis template for most or all coal plants included in PacifiCorp's Study.
  - 6.1.1.2. Completeness of the cost estimates included in PacifiCorp's Study, including those items either provided by or understood by Kiewit to be provided by PacifiCorp (see "PacifiCorp's Study: Limitations Applicable to Kiewit's Work" in Appendix E).
7. Discussion documenting Contractor's review and assessment of any indices used in preparing PacifiCorp's Study.

8. Discussion documenting Contractor's review and assessment of any quantitative forecasts used in preparing PacifiCorp's Study.
9. Discussion documenting Contractor's review and assessment of the assumptions used in preparing PacifiCorp's Study.
10. Discussion documenting Contractor's review and assessment of the high level schedules included in PacifiCorp's Study,
11. Discussion documenting Contractor's review and assessment of cash flows included in PacifiCorp's Study.
12. Discussion documenting Contractor's review and assessment of owner's (or owners' where applicable) permitting requirements, as documented in PacifiCorp's Study.
13. Discussion documenting Contractor's review and assessment of the summary of typical owner's responsibilities for demolition, salvage and scrap, as documented in PacifiCorp's Study.
14. Discussion documenting Contractor's review and assessment of any other information relevant to the cost estimates included in PacifiCorp's Study.
15. Discussion of the reasons individual cost estimates prepared by Contractor represent a better basis for estimating the future costs of decommissioning one or more of PacifiCorp's coal-fueled generating plants or plant units that cost estimates included in PacifiCorp's Study. Each such cost estimate should be accompanied by a reference to the specific corresponding cost estimate or estimates in PacifiCorp's Study.
16. Discussion documenting Contractor's use of any indices used in preparing the Independent Cost Estimates.
17. Discussion documenting Contractor's review and assessment of the assumptions used in preparing the Independent Cost Estimates.
18. Discussion documenting Contractor's review and assessment of any quantitative forecasts used in preparing the Independent Cost Estimates.
19. The individual AACE Class 3 cost estimates prepared by Contractor, with each estimate clearly identified as to the task or component to which it applies, the location of the comparable value or values in PacifiCorp's Study, as well as the coal plant(s) or coal plant unit(s) to which it applies. Each individual cost estimate prepared by Contractor is to include the range of expected costs as well as the point estimate.

#### **Contractor's Appearance regarding PacifiCorp's Study and Independent Evaluator Review**

Contractor may be required to appear as a witness regarding Independent Evaluator Review, its components, PacifiCorp's Study, Contractor findings regarding PacifiCorp's Study and its results, the alternative results obtained by Contractor, or a combination of these. Such an appearance will be in an OPUC proceeding that includes consideration of the results of PacifiCorp's study.

1. Contractor will be provided with advance notice via email that such an appearance will be required, with such advance notice to be not less than 15 calendar days prior to the date for Contractor's appearance.
2. Such an appearance will be at OPUC's location in Salem, Oregon or potentially by telephone or other electronic audio communication.
3. Contractor shall perform all aspects of its work in a safe manner. Work performed at PacifiCorp's facilities shall be performed in a manner consist

with the safety rules, processes and procedures in place at the individual facilities. Contractor's personnel may be required to attend safety training or safety briefings specific to each facility. Contractor's personnel will be required to use personal protective equipment at generating facilities.

4. Contractor shall control and maintain documentation in a manner consistent with the confidentiality or non-disclosure agreement between PacifiCorp and Contractor.

**Exhibit B**

**Required Insurance**

**INSURANCE REQUIREMENTS:**

Contractor shall obtain at Contractor's expense the insurance specified in this Exhibit B to performing under this Contract and shall maintain it in full force and at its own expense throughout the duration of this Contract, as required by any extended reporting period or tail coverage requirements, and all warranty periods that apply. Contractor shall obtain the following insurance from insurance companies or entities that are authorized to transact the business of insurance and issue coverage in the State of Oregon and that are acceptable to Agency. Coverage shall be primary and non-contributory with any other insurance and self-insurance, with the exception of Professional Liability and Workers' Compensation. Contractor shall pay for all deductibles, self-insured retention and self-insurance, if any.

**WORKERS' COMPENSATION & EMPLOYERS' LIABILITY**

All employers, including Contractor, that employ subject workers, as defined in ORS 656.027, shall comply with ORS 656.017 and provide workers' compensation insurance coverage for those workers, unless they meet the requirement for an exemption under ORS 656.126(2). Contractor shall require and ensure that each of its subcontractors complies with these requirements. If Contractor is a subject employer, as defined in ORS 656.023, Contractor shall also obtain employers' liability insurance coverage with limits not less than \$500,000 each accident. If Contractor is an employer subject to any other state's workers' compensation law, Contractor shall provide workers' compensation insurance coverage for its employees as required by applicable workers' compensation laws including employers' liability insurance coverage with limits not less than \$500,000 and shall require and ensure that each of its out-of-state subcontractors complies with these requirements.

**COMMERCIAL GENERAL LIABILITY:**

☒ **Required**

Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverage that are satisfactory to the State. This insurance shall include personal and advertising injury liability, products and completed operations, contractual liability coverage for the indemnity provided under this contract, and have no limitation of coverage to designated premises, project or operation. Coverage shall be written on an occurrence basis in an amount of not less than \$1,000,000 per occurrence. Annual aggregate limit shall not be less than \$2,000,000.

**PROFESSIONAL LIABILITY:**

☒ **Required**      ☐ **Not required**

**Professional Liability insurance** covering any damages caused by an error, omission or any negligent acts related to the services to be provided under this Contract by the Contractor and Contractor's subcontractors, agents, officers or employees in an amount not less than \$100,000 per claim. Annual aggregate limit shall not be less than \$200,000. If coverage is on a claims made basis, then either an extended reporting period of not less than 24

months shall be included in the Professional Liability insurance coverage, or the Contractor shall provide Tail Coverage as stated below.

**EXCESS/UMBRELLA INSURANCE:**

A combination of primary and excess/umbrella insurance may be used to meet the required limits of insurance.

**ADDITIONAL INSURED:**

All liability insurance, except for Workers' Compensation, Professional Liability, and Network Security and Privacy Liability (if applicable), required under this Contract must include an additional insured endorsement specifying the State of Oregon, its officers, employees and agents as Additional Insureds, including additional insured status with respect to liability arising out of ongoing operations and completed operations, but only with respect to Contractor's activities to be performed under this Contract. Coverage shall be primary and non-contributory with any other insurance and self-insurance. The Additional Insured endorsement with respect to liability arising out of your ongoing operations must be on ISO Form CG 20 10 07 04 or equivalent and the Additional Insured endorsement with respect to completed operations must be on ISO form CG 20 37 07 04 or equivalent.

**WAIVER OF SUBROGATION:**

Contractor shall waive rights of subrogation which Contractor or any insurer of Contractor may acquire against the Agency or State of Oregon by virtue of the payment of any loss. Contractor will obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the Agency has received a waiver of subrogation endorsement from the Contractor or the Contractor's insurer(s).

**TAIL COVERAGE:**

If any of the required insurance is on a claims made basis and does not include an extended reporting period of at least 24 months, Contractor shall maintain either tail coverage or continuous claims made liability coverage, provided the effective date of the continuous claims made coverage is on or before the effective date of this Contract, for a minimum of 24 months following the later of (i) Contractor's completion and Agency's acceptance of all Services required under this Contract, or, (ii) Agency or Contractor termination of this Contract, or, iii) The expiration of all warranty periods provided under this Contract.

**CERTIFICATE(S) AND PROOF OF INSURANCE:**

Contractor shall provide to Agency Certificate(s) of Insurance for all required insurance before delivering any Goods and performing any Services required under this Contract. The Certificate(s) shall list the State of Oregon, its officers, employees and agents as a Certificate holder and as an endorsed Additional Insured. The Certificate(s) shall also include all required endorsements or copies of the applicable policy language effecting coverage required by this Contract. If excess/umbrella insurance is used to meet the minimum insurance requirement, the Certificate of Insurance must include a list of all policies that fall under the excess/umbrella insurance. As proof of insurance Agency has the right to request copies of insurance policies and endorsements relating to the insurance requirements in this Contract.

**NOTICE OF CHANGE OR CANCELLATION:**

The Contractor or its insurer must provide at least 30 days' written notice to Agency before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s).



**INSURANCE REQUIREMENT REVIEW:**

Contractor agrees to periodic review of insurance requirements by Agency under this Contract and to provide updated requirements as mutually agreed upon by Contractor and Agency.

**STATE ACCEPTANCE:**

All insurance providers are subject to Agency acceptance. If requested by Agency, Contractor shall provide complete copies of insurance policies, endorsements, self-insurance documents and related insurance documents to Agency's representatives responsible for verification of the insurance coverages required under this Exhibit B.

**Exhibit C**

**Independent Evaluator Review  
Deliverables Schedule**

Travel expenses will be reimbursed in accordance with the [Oregon's Statewide Travel Policy](#).

Deliverables	Due Date	Cost
• Independent Evaluation	Not Applicable	
- Preparation of Narrative Report		45 hrs x \$275 = \$12,375
- Working electronic Spreadsheets		30 hrs x \$275 = \$8,250
- Compilation of all Materials relied upon		5 hrs x \$275 = \$1,375
• Independent Cost Estimates	Not Applicable	
- Preparation of Narrative Report		40 hrs x \$275 = \$11,000
- Preparation of electronic spreadsheets, including "does not concur" and "items that were not included"		45 hrs x \$275 = \$12,375
• Written Report regarding PacifiCorp's Study and Independent Evaluator Review	To be filed June 22, 2020 by no later than 5:00 p.m. PDT	30 hrs x \$275 = \$8,250
• If required, appearance by Contractor as a witness regarding PacifiCorp's Study and Independent Evaluator Review.	TBD	
- Travel associated with appearance		12 hrs x \$275 = \$3,300
- Appearance at Hearing		4 hrs x \$325 = \$1,300
<b>Total:</b>		<b>\$58,225</b>

**Exhibit D**  
**PacifiCorp Study (Reference)**

**PacifiCorp's Study**

PacifiCorp engaged Kiewit to prepare, with input from NADC, a PacifiCorp-approved demolition contractor with which Kiewit has subcontracted, AACE Class 3 cost estimates, schedule estimates, and other relevant information for decommissioning and demolishing specific coal-fueled generation resources.

PacifiCorp's Study was performed in two phases.

Phase 1 – Preparation of an Overall Decommissioning Scope Design Basis

- Preparation and submission of a draft Design Basis
- Adjustment of the Design Basis based on PacifiCorp's comments
- Submission of the final Design Basis

Phase 2 – Preparation of Cost Spreadsheet and Reports

- Visits to plant sites to obtain information
- Preparation and submission of the draft spreadsheet reports
- Adjustments to the spreadsheets and reports based on PacifiCorp's comments
- Submission of the final spreadsheet reports

Plants and constituent units included in PacifiCorp's Study are:

- Dave Johnston Units 1, 2, 3 and 4
- Jim Bridger Units 1, 2, 3 and 4
- Hayden Units 1 and 2
- Hunter Units 1, 2 and 3
- Huntington Units 1 and 2
- Naughton Units 1, 2 and 3
- Wyodak Unit 1
- Colstrip Units 3 and 4<sup>1</sup>

<sup>1</sup> PacifiCorp added the Colstrip units to its initial list and expects an updated version that includes cost estimates for Colstrip Units 3 and 4 to be available by March 31, 2020.

PacifiCorp is a co-owner of the Hayden and Colstrip plants, but does not operate either plant. PacifiCorp is the sole or a partial owner of the other plants included in PacifiCorp's Study, and is the operator of these plants.

Cost estimates for closure of coal combustion residuals (CCR) ponds and landfills have been prepared for PacifiCorp by other parties, and PacifiCorp provided these to Kiewit for inclusion in the Class 3 estimates. These include, but may not be limited to the following ponds and landfills:

- Dave Johnstone: Ash Pods 4A and 4B; Industrial Solid Waste Landfill Expansion Site
- Jim Bridger: Ash Landfill; Flue Gas Desulfurization (FGD) Ponds 1 and 2
- Hunter: CCR Landfill
- Huntington: CCR Landfill
- Naughton: North and South Ash Ponds; FGD Ponds 1, 2, 4, and 5
- Hayden: CCR Landfill and several ponds

The Scope of Work for PacifiCorp's Study stated that it did not define every detail of the Work and that the Company's expectation was that the Consultant would "use its expertise and experience to determine the full extent of the information gathering, inspection, investigation and analysis necessary to define the ultimate work."

#### **Phase 1: Preparation of Overall Decommissioning Scope Design Basis**

Kiewit was to prepare one high-level design basis template for coal-fired thermal power plants in PacifiCorp's fleet, excluding switchyards and substations unless PacifiCorp provided the cost estimates for these. The purpose of the design basis was to:

- A. Serve as the basis for the cost and schedule estimates provided in Phase 2 of this PacifiCorp's study.
- B. Guide future PacifiCorp engineers' preparation of specifications for future PacifiCorp thermal power plant retirements and retirement studies.

The design basis was to include the following content at a minimum:

1. Site investigation and development: A description of the high level work requirements for investigation of site conditions and project development in preparation for retirement of the thermal power plant.
2. Decommissioning: A high level description of events, conditions, and requirements that must be met before demolition begins.
3. Pre-demolition decontamination: A high level description of decontamination requirements that must be met before demolition begins.
4. Demolition: A high level description, including means and methods, of the demolition and salvage work. Demolition is to include criteria for disposition of underground infrastructure, as well as removal of slabs and foundations.
5. Post-demolition remediation: A high level description of the site condition after demolition and completion of remediation. Post-demolition remediation will include bringing the site, including subsurface, to a condition that meets the requirements of all permits and regulations in place as of the time PacifiCorp's Study is conducted.
6. Reclamation: A high level description of site condition after site civil work is complete and the site is ready for the next phase of its life.

## Phase 2: Preparation of Cost Spreadsheet and Reports

Kiewit was to prepare narrative reports and working Excel-based spreadsheet reports for each plant in PacifiCorp's Study.

1. Each narrative report was to include the following:
  - 1.1. Names and roles of the parties involved in preparing the report
  - 1.2. Process used to prepare the report
  - 1.3. Scope and battery limits of the report
  - 1.4. Indices used in preparing the report
  - 1.5. Assumptions
  - 1.6. High level schedules
  - 1.7. Indicative cash flows
  - 1.8. Owner's (or owners,' where applicable) permitting requirements
  - 1.9. Summary of typical owner's responsibilities for demolition, salvage, and scrap
  - 1.10. Other relevant information
2. The spreadsheet reports were to be prepared to allow for future updates of inputs and assumptions. The cost estimates that were developed were to be consistent with AACE Class 3 cost estimate guidelines. The spreadsheet report was to include the following:
  - 2.1 Site investigation and development: The cost estimate for site investigation and development was to address items such as American Land Title Association (ALTA) surveys, environmental studies, inventory assessments, preparation of specifications, and Owner's Engineer effort.
  - 2.2 Decommissioning: The cost estimate for decommissioning was to be representative of items including equipment shutdown and safe condition, disconnection of the transmission system, removal of personal property, and closeout of operating permits. Decommissioning was to also address disposition of spares and inventory, consumables, chemicals and universal wastes. While there may not be individual entries for each of the above items, an overall estimate of expected staffing and labor hours for contractor services was to be included, and an area for owner's costs may have been completed by PacifiCorp.
  - 2.3 Pre-demolition decontamination: The cost estimate for decontamination was to address cleanup, removal and disposition of materials that require special handling or disposal prior to demolition. Two line items were anticipated, one for asbestos removal (asbestos-containing material, or ACM) and the other to include a proxy for lead, polychlorinated biphenyls (PCB), chlorofluorocarbons (CFC), radioisotopes, oils, fuels and miscellaneous hazardous materials.
  - 2.4 Demolition, salvage and scrap: The cost estimate was to have line items for demolition costs, salvage credits, and scrap credits. The spreadsheet was to include allowances for asbestos and other hazardous materials discovered during demolition, removal of surplus fuel, and removal and disposal of ash.
  - 2.5 Scrap value adjustments. The spreadsheet was to include one cell for a steel scrap index and one cell for a copper scrap index at the time the study was performed. It was to also include one cell for "current" steel scrap index and one cell for "current" copper scrap index. The spreadsheet was to incorporate the ability to update the cost estimates of steel scrap and copper scrap as a ratio of the respective scrap "current" and "at the time of study" indices. A reference to the source of steel and copper scrap indices was to be included.
  - 2.6 Reclamation. This was expected to be the most expensive component of the steps required to prepare the sites for future use. The cost estimate for reclamation was to address site grading, erosion control, vegetative cover, access control, closing of landfills, closing raw water and evaporation ponds, and termination of environmental permits.

- 2.7 Plant total estimate. The spreadsheet was to include a subtotal for the above items. Estimates for project indirects and contingency were to be added and total project costs with and without credit for salvage and scrap were to be provided.

### **Phase 3: Review of Draft Report and Costs by Two Additional Contractors**

Kiewit obtained independent reviews from two demolition contractors of a draft of PacifiCorp's Study and the cost estimates in the Study. The demolition contractors, listed below, are on PacifiCorp's approved vendor list (AVL):

1. Bierlein Companies, Inc. (Midland, MI)
2. Brandenburg Industrial Service Company (Chicago, IL)

### **PacifiCorp's Study: Kiewit's Deliverables**

Kiewit was to provide PacifiCorp with the following:

1. One final demolition design basis template for coal-fired thermal power plants.
2. Working spreadsheets and narrative reports as described above for each plant in PacifiCorp's Study.

### **PacifiCorp's Study: Limitations Applicable to Kiewit's Work**

Areas for each plant that were to have been included in Kiewit's estimates are located inside each plant fence, with the following adjustments:

- a. Closure of ash ponds, FGD ponds, and ash/CCR landfills is excluded from the scope. Kiewit understands that PacifiCorp has the needed information for those facilities and will provide costs to be included in the spreadsheet. Kiewit will request from PacifiCorp, to be included in the cost estimate spreadsheet for closing of ash/FGD ponds and landfills, the costs of: (i) preparing sites for construction of final cover; (ii) final cover; (iii) erosion control; (iv) leachate collection system if required; (v) operations and inventory removal; (vi) demolition/removal site improvements; (vii) replace/rebuild site access controls as required; (viii) borrow area reclamation; (ix) professional services; and (x) administration and contingency.
- b. Substation and switchyard removal, i.e. fenced interconnection facilities, is excluded from the scope. PacifiCorp will be responsible for estimating the cost of any potential removal of substations and switchyards. Costs will be included in the spreadsheet if directed by PacifiCorp.
- c. Removal of transmission facilities, from the high side of the GSU to dead-end structures outside the switchyards, is included.
- d. Coal piles – cost estimates for removal of all coal from coal piles (including bedding coal) will be by PacifiCorp and included in the spreadsheet if directed by PacifiCorp. Cost of removal of mechanical equipment and above-ground and underground structures will be included in the estimate, with underground structures removal to depths established at the kick-off meeting.
- e. Roads, rail and bridges are assumed to be removed inside plant fencelines. Removal of such infrastructure outside plant fencelines is excluded. Costs for out of scope infrastructure will be included in the spreadsheet if provided by PacifiCorp.
- f. Jim Bridger – removal of the Evaporation Pond (non-CCR) is included. The "wetland" pond below FGD Pond 2 and outside the fence line is assumed to remain, and is therefore not included. Guidance is requested on whether removal of the Surge Pond south of 9 Mile Road should be included.

- g. Dave Johnston – parking lot and security station south of the river is assumed to remain. River intakes/outfalls are assumed to be abandoned in place upon removal of all mechanical equipment.
- h. Hunter Station – reservoir on the east (may be associated with the “Experimental Farm”), 2nd coal pile and pond are outside the property gates and are excluded. Kiewit understands the coal pile and coal handling structures west of the fence line may be related to a coal prep plant owned by others.
- i. Huntington Station – removal of two transmission structures outside the plant fence, across Deer Creek Road from the plant switchyard, are assumed to be included.
- j. Wyodak – all shared facilities with the adjacent plants, outside the fence line, are assumed to remain.
- k. Hayden Station – Closure of the ash/CCR landfill and ponds are included unless PacifiCorp has obtained the needed information for those facilities from others.