

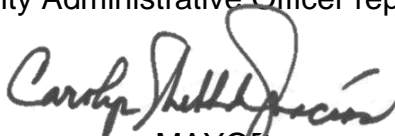
0150-12717-0000

TRANSMITTAL

TO Janisse Quinones, General Manager Los Angeles Department of Water and Power	DATE 8/30/2024	COUNCIL FILE
FROM The Mayor	COUNCIL DISTRICT ALL	

**LOS ANGELES DEPARTMENT OF WATER AND POWER PROPOSED BOARD
RESOLUTION AUTHORIZING A SECOND AMENDMENT TO AGREEMENT NO. 47573
WITH POWER COSTS INC. FOR ENERGY IMBALANCE MARKET METER DATA
MANAGEMENT SYSTEM SUPPORT**

Transmitted for further processing and Council consideration.
See the City Administrative Officer report attached.


MAYOR
(Carolyn Webb de Macias for)

Attachment
MWS:PJH:JVW:IR:JFH:10250033t

REPORT FROM

OFFICE OF THE CITY ADMINISTRATIVE OFFICER


Date: August 9, 2024

CAO File No.: 0150-12717-0000

Council File No.:

Council District: ALL

To: The Mayor

From: Matthew W. Szabo, City Administrative Officer 

Reference: Correspondence from the Department of Water and Power dated June 13, 2024; received and referred by the Mayor for a report on July 1, 2024

Subject: **LOS ANGELES DEPARTMENT OF WATER AND POWER PROPOSED RESOLUTION AUTHORIZING A SECOND AMENDMENT TO AGREEMENT NO. 47573 WITH POWER COSTS, INC. FOR ENERGY IMBALANCE MARKET METER DATA MANAGEMENT SYSTEM SUPPORT**

RECOMMENDATIONS

That the Mayor:

1. Approve the Los Angeles Department of Water and Power's proposed Board Resolution authorizing a Second Amendment to Agreement No. 47573 with Power Costs, Inc. to extend the existing five-year term for an additional three years, with two one-year extension options, from November 18, 2024 through November 17, 2029, for a total term of 10 years, with an increase in the not-to-exceed contract amount of \$2,061,982 from \$2,317,089 to \$4,379,071, including a 15 percent contingency, for continued technical support services, hosting, and maintenance of the Meter Data Management System required for continued participation in the Western Energy Imbalance Market;
2. Authorize and direct, upon proper certification, the Chief Accounting Employee to draw demands on the Power Revenue Fund over the term of this Amendment to the Agreement and accompanying Resolution; and,
3. Return the proposed Resolution to the Los Angeles Department of Water and Power for further processing, including Council consideration.

SUMMARY

The Los Angeles Department of Water and Power (LADWP, Department) requests authority to execute a Second Amendment to Agreement No. 47573 with Power Costs, Inc. (Power Costs) for continued Meter Data Management System software configuration, hosting, maintenance, and technical support services.

Approval of the proposed Second Amendment will extend the agreement's current five-year term for an additional three years with two one-year extension options, from November 18, 2024 through November 17, 2029, for a potential total term of 10 years. The proposed Amendment also increases the total not-to-exceed amount of the Agreement by \$2,061,982 from \$2,317,089 to \$4,379,071, including 15 percent for contingencies. Additional changes are made to the Agreement as described in a revised Exhibit C, Fee Schedule and an updated Exhibit H, Statement of Work. All other contract terms and conditions remain unchanged.

In 2017, the Board of Water and Power Commissioners (Board) and the Los Angeles City Council approved the Energy Imbalance Market Implementation Agreement with the California Independent System Operator (CAISO) in an effort to attain the lowest-cost energy to serve real-time customer demand, while sharing resources with participating entities in the western United States. The Western Energy Imbalance Market, operated by CAISO, is a real-time wholesale energy trading market that enables participants anywhere in the western United States to buy and sell energy when needed. The Power Costs Meter Data Management System (MDMS) software is used as the official LADWP source of records for meter and meter-related information as well as custom calculations (e.g. system load) and is essential for participation in CAISO and the Western Energy Imbalance Market.

Power Costs is the sole provider of the expanded functionality of this proprietary software previously purchased by the LADWP under competitive solicitation and, therefore, all functional upgrades and updates must be provided by the firm.

In accordance with Charter Section 373 and the Los Angeles Administrative Code Section 10.5(e), the Second Amendment requires City Council approval because the total term of the agreement is greater than five years. This Office has reviewed the request and recommends approval.

BACKGROUND

In 2017, the Board and the City Council approved the LADWP's Energy Imbalance Market Implementation Agreement with CAISO in an effort to attain the lowest-cost energy to serve real-time customer demand, while sharing resources with participating entities in the western United States (C.F. 17-0312).

Initial Contract and First Amendment – On November 5, 2019, as a result of a competitive procurement, the Board approved Resolution No. 020 074, awarding an initial contract to Power Costs under Request for Proposals 90493. The Agreement provided for LADWP's acquisition of the Meter Data Management System which was required for entrance into the CAISO in April 2021. Agreement Change Orders 1, 2 and 3, totaling \$108,240, increased the Agreement not-to-exceed amount from \$1,606,985 to \$1,715,225 funded by the \$241,048 contingency provided in the Agreement. On May 24, 2022, the Board adopted Resolution No. 022 198, authorizing a First Amendment to the Agreement increasing the not-to-exceed amount by \$407,875, from \$1,715,225 to \$2,123,100. The Amendment also included two one-year extension options.

Western Energy Imbalance Market - The Western Energy Imbalance Market, operated by CAISO, is a real-time wholesale energy trading market that enables participants anywhere in the western United States to buy and sell energy when needed. Participating utilities use the Western Energy Imbalance Market to balance supply and demand within their respective service areas in real time

by scheduling power deliveries every 15 minutes with five-minute resource dispatching. The Western Energy Imbalance Market's advanced market systems automatically find the lowest-cost energy to serve real-time customer demand across a wide geographic area.

A key advantage of the pooling of resources through the Western Energy Imbalance Market is that it allows renewables such as wind and solar in a broad market area to be operated with less volatility. The result is less curtailment of the operation of renewable energy which, in turn, correlates with reduced greenhouse gas emissions.

The Power Costs MDMS software automates LADWP's processes for system transactions and interfaces with CAISO and Western Energy Imbalance Market related systems, including system load, Variable Energy Resources (VER) generation, and other information systems that affect base schedule optimization.

Meter Data Management Software (MDMS) - The Power Costs MDMS software also provides Meter Data Management services to Load Serving Entities (LSEs) within LADWP's Balancing Authority Area. This allows LSEs to participate in the Western Energy Imbalance Market with opportunities for future market expansion. The MDMS is used as the official LADWP source of records for meter and meter-related information as well as custom calculations (e.g., system load) and is essential for participation in CAISO and the Western Energy Imbalance Market.

The contracts for three other LADWP information systems which are equally critical for continued participation in CAISO and the Energy Imbalance Market (EIM) are also expiring soon, and their extension or replacement is being addressed by the Department in separate requests to the Board and Council. The other information systems and agreement numbers are:

1. EIM Settlements and Transmission Billing Systems (Agreement No. 47565)
2. EIM Merchant Bidding and Scheduling System (Agreement No. 47577)
3. EIM Variable Energy Resources Forecasting System (Agreement No. 47595)

Second Amendment Changes and Costs – The proposed Amendment will provide continued technical support services, including software updates and upgrades, hosting, and maintenance required for continuous participation in the Energy Imbalance Market during the term of this proposed Amendment.

The proposed Amendment extends the terms of the agreement by three years, from five to eight years, with two one-year extension options, from November 18, 2024 through November 17, 2029, for a potential total of 10 years. The proposed Amendment also increases the not-to-exceed contract maximum amount by \$2,061,982 from \$2,317,089 to \$4,379,071, including the \$49,200 cost of Change Orders 4 and 5 as well as an updated 15 percent amount for contingencies.

The proposed Amendment revises Exhibit C to account for changes in the Consumer Price Index and updates Fee Schedule Exhibit H, Statement of Work, to include software configuration and hosting storage as well as a continuation of hosting, maintenance, and support services. All other contract terms and conditions remain unchanged.

Power Costs has performed satisfactorily under the current agreements.

Alternatives Considered – There are no viable alternatives. Power Costs is the sole provider of the expanded functionality of its proprietary software previously purchased under a competitive procurement. All functional upgrades and updates for the MDMS must come from Power Costs. A new competitive solicitation to replace the existing software would not be practical or cost effective as a new system design would be required before system integration and implementation which would involve costly and time-consuming testing and training of LADWP staff and is, therefore, not a viable solution.

As a substantial participant in the Western Energy Imbalance Market supporting nearly 80 percent of California's total energy consumption, LADWP's assets are vital to this market. During the 2022–2023 fiscal year, the LADWP's Power Costs software system contributed to a net ratepayer savings of approximately \$50 million. Lack of availability of this software package would force LADWP's withdrawal from the Western Energy Imbalance Market as required by the CAISO Tariff and result in significant financial losses.

CITY COMPLIANCE

California Environmental Quality Act (CEQA) – The LADWP has determined, subject to Board approval, that this action is exempt from CEQA pursuant to Section 15060(c)(3) that states that an activity is not subject to CEQA if it does not meet the definition of a project. Section 15378(b) (4) states that the creation of government funding mechanisms or other government fiscal activities which do not involve commitment to any specific project which may result in a potentially significant physical impact on the environment do not meet that definition. Therefore, the award of a contract amendment for technical support services to Power Costs is not subject to CEQA.

Charter Section 1022 – Pursuant to Charter Section 1022, the Department determined that it is more feasible to have the work performed by an independent contractor than by City employees.

The City Attorney has approved the proposed Second Amendment as to form. In accordance with Charter Section 373 and the Los Angeles Administrative Code Section 10.5(e), the Amendment requires City Council approval because the total term of the agreement is greater than five years. Our Office has reviewed the request and recommends approval.

FISCAL IMPACT STATEMENT

Approval of the proposed Second Amendment to Agreement No. 47573 with Power Costs, Inc. for software configuration, hosting, maintenance, and technical support services for the LADWP's Meter Data Management System will not have an impact on the General Fund. Approval of the proposed Second Amendment increases the maximum not-to-exceed contract amount by \$2,061,982, including a 15 percent contingency, from \$2,317,089 to \$4,379,071, and extends the term by an additional three years, with two one-year extension options, for a total of 10 years, all of which is funded by LADWP's Power Revenue Fund.

Attachment – June 13, 2024 Correspondence from LADWP, Proposed Resolution, and Amendment

MWS:PJH:BC:JVW:IR/JFH:10250033



BUILDING A STRONGER L.A.

Karen Bass, Mayor

Board of Commissioners

Richard Katz, President

George S. McGraw, Vice President

Nurit D. Katz

Mia Lehrer

Wilma J. Pinder

Chante L. Mitchell, Secretary

Janisse Quiñones, Chief Executive Officer and Chief Engineer

June 13, 2024

The Honorable Karen Bass
Mayor, City of Los Angeles
Room 303, City Hall
Mail Stop 370

Attention: Ms. Heleen Ramirez, Legislative Coordinator

Dear Mayor Bass:

Subject: Amendment No. 2 to Agreement No. 47573 for Energy Imbalance Market Meter
Data Management System with Power Costs, Inc.

In accordance with Executive Directive No. 4, enclosed is a copy of a Board letter and supporting documents recommending approval and transmittal to the Los Angeles City Council of Amendment No. 2 to Agreement No. 47573 between LADWP and Power Costs, Inc. for Energy Imbalance Market Meter Data Management System (Amendment). This Amendment is for continued software configuration, hosting, maintenance, and technical support services for the Energy Imbalance Market Meter Data Management System.

It is respectfully requested that your office complete its review as soon as possible. Once the required City Administrative Officer report has been received, the matter will be scheduled for action by the Los Angeles Board of Water and Power Commissioners and forwarded to the Los Angeles City Council for final consideration.

Please contact Mr. Paul Habib, Interim Director of Legislative and Intergovernmental Affairs, at (213) 367-3846 upon completion of the review, if the review will take longer than 30 days, or if there are any questions regarding this item.

Sincerely,

A handwritten signature in red ink, appearing to read "Quiñones", is written over a faint, larger signature.

Janisse Quiñones
Chief Executive Officer and Chief Engineer

EG: eg/mr

Enclosures

c/enc: Mr. Luis Guitierrez, Office of the Mayor
Dr. Frederick H. Pickel, Office of Public Accountability
Board of Water and Power Commissioners
Mr. Paul Habib



Los Angeles
Department of
Water & Power

RESOLUTION NO. _____

BOARD LETTER APPROVAL

SIMON ZEWDU

Senior Assistant General Manager
Power System

ARAM BENYAMIN

Chief Operating Officer

JANISSE QUIÑONES

Chief Executive Officer and Chief Engineer

DATE: June 5, 2024

SUBJECT: Amendment No. 2 to Agreement No. 47573 for Energy Imbalance
Market Meter Data Management System Solution and Support
Services with Power Costs, Inc.

SUMMARY

The proposed Amendment No. 2 (Amendment) to Agreement No. 47573 (Agreement) with Power Costs, Inc (PCI) is to add scope, extend the term of the Agreement by three years with two one-year extension options for a total term of up to ten years, and increase the not-to-exceed amount by \$2,061,982, including 15 percent contingency, from \$2,317,089 to \$4,379,071 (budgeted). All other terms and conditions remain the same.

The Amendment will provide continued technical support services, including software updates and upgrades, hosting, and maintenance required for continuous participation in the Energy Imbalance Market (EIM). The Amendment will also include hosting service storage and additional software options for Meter Data Management System (MDMS) services to load serving entities (LSE) within LADWP's Balancing Authority Area. This will allow LSEs to participate in EIM with opportunities for future market expansion. MDMS is used as the official LADWP source of records for meter and meter-related information as well as custom calculations (e.g. system load). Providing these services to our LSE will help automate and modernize participation in EIM offering a practical route to explore the possibility of engaging in other California Independent System Operator (CAISO) market initiatives and enhancements.

City Council approval is required in accordance with Charter Section 373.

RECOMMENDATION

It is requested that the Board of Water and Power Commissioners (Board) adopt the attached Resolution recommending the City Council's approval of the Amendment to the Agreement with PCI as required in Charter Section 373.

ALTERNATIVES CONSIDERED

There are no viable alternatives, as PCI is the sole provider of the expanded functionality for its proprietary software previously purchased under a competitive solicitation. All functional EIM upgrades and updates for MDMS must come from PCI. Procuring a new software with a new Request for Proposal (RFP) is not cost effective and feasible, as a new system design would need to be created before integrating and implementing the new software, which also require testing and training LADWP staff to use the new software.

FINANCIAL INFORMATION

The Amendment will extend the term of the Agreement by three years with two one-year extension options, for a total term of 10 years, and increase the not-to-exceed amount by \$2,061,982, from \$2,317,089 to \$4,379,071 (budgeted). A breakdown of the Agreement amount and contingency for the Agreement, also including use of contingency through Change Orders, is provided below.

	Original Maximum Expenditure	Change Order Nos. 1, 2, and 3	Amendment No. 1	Change Order Nos. 4 and 5	Requested Amendment No. 2	Amended Maximum Expenditure
Agreement Amount	\$1,606,985	\$108,240	\$407,875	\$49,200	\$1,793,027	\$3,965,327
Contingency (~15%)	\$241,048	-\$108,240	\$61,181	-\$49,200	\$268,955	\$413,744
Not-to- Exceed Amount	\$1,848,033	--	\$469,056	--	\$2,061,982	\$4,379,071

BACKGROUND

The EIM MDMS is used to perform many tasks that are essential to EIM participation, including automating LADWP's processes for system transactions and interfaces with CAISO systems. The MDMS system is capable of exchanging information with other EIM related systems, including system load, Variable Energy Resources (VER) generation estimates, and other information that affect base schedule optimization.

EIM is a regional operating model by which balancing authorities in the western states can voluntarily participate in CAISO's five-minute real-time wholesale energy market. EIM's advanced market systems automatically find the lowest cost energy to serve real-time customer demand across a wide geographic area. LADWP will maintain control over their assets and remain responsible for balancing load with generation and all other balancing authority requirements while sharing resources with other EIM participants.

A key advantage from pooling resources allows VER or renewables such as wind and solar in the broader market to have less volatility. This results in less VER curtailments, which in turn correlates with less greenhouse gas emission through the diversity of energy resources over the larger geographical market footprint.

In 2017, the Board and the City Council approved the EIM Implementation Agreement with CAISO. On November 5, 2019, the Board approved Resolution No. 020 074, authorizing award of the Agreement to PCI for a term of three years, as a result of a competitive solicitation process, under RFP No. 90493. The Agreement allowed LADWP to procure the EIM MDMS, which is the third EIM software procurement among the following list of EIM software procurements required for entrance into CAISO EIM.

- Agreement No. 47565: EIM Merchant and Entity Settlement and Transmission Billing Systems
- Agreement No. 47577: EIM Merchant Bidding and Scheduling System
- Agreement No. 47573: EIM Meter Data Management System Solution and Support Services
- Agreement No. 47595: EIM Variable Energy Resource Forecasting Services

In April 2021, LADWP, operating as a Balancing Authority, successfully joined EIM. On May 24, 2022, the Board adopted Resolution No. 022 198, authorizing Amendment No. 1 to the Agreement for additional fund and two one-year extension options. MDMS collects data from LADWP meters, relational databases, and files, where the data will be imported, validated, and cleansed.

PCI has performed satisfactorily under the current agreement.

In accordance with the Mayor's Executive Directive No. 4, the City Administrative Officer's Report has been requested.

ENVIRONMENTAL DETERMINATION

Determine item is exempt pursuant to CEQA guidelines 15060 (c)(3). In accordance with this section, an activity is not subject to CEQA if it does not meet the definition of a project. Section 15378 (b)(4) states the creation of government funding mechanisms or other government fiscal activities which do not involve commitment to any specific project which may result in a potentially significant physical impact on the environment

do not meet that definition. Therefore, the amendment of an agreement for technical support services for EIM MDMS is not subject to CEQA.

CITY ATTORNEY

The Office of the City Attorney reviewed and approved the Amendment and Resolution as to form and legality.

ATTACHMENTS

- Procurement Summary
- Resolution
- Amendment

PROCUREMENT SUMMARY

1.	Recommended Vendor(s): Power Costs Inc. (PCI)
2.	Procurement Type: Amendment
3.	Procurement Details: A. Contract Status: Amendment No. 2 B. Bid Advertisement Date: N/A C. Pre-Bid Conference Date: N/A D. Bid/Proposal Due Date: N/A E. Number of Downloads of Solicitation: N/A F. Number of Proposals Received: N/A G. Protest Received: N/A
4.	Buyer Assigned: Carlos Aguilar
5.	Contract Administrator: Erick Gallegos
6.	LADWP System/Division: Power System / Fuel and Purchased Power
7.	Contact Person for Item: Erick Gallegos

A. Evaluation Rating Summary of Proposals

Not applicable to the Amendment.

B. Evaluation of Amendment

Prices for Years 6 to 10 with a five percent per year escalation are determined fair and reasonable based on prices established about five years ago and input from LADWP subject matter experts and the United States Bureau of Labor Statistics Consumer Price Index.

C. Procurement History

Service/Item History – Number of Times Item or Service has been Procured					
Contract/ PO No.	Contractor	Term of Contract	Start Date	Ending Date	Contract Amount
47577	Power Costs, Inc.	5 years	11/19/19	11/19/24	\$2,317,089

Vendor Experience – Number of Contracts PCI had with LADWP During the Past 10 Years					
Contract/ PO No.	Contract Description	Term of Contract	Start Date	Ending Date	Contract Amount
47577	Merchant Bidding and Scheduling System	5 years	11/18/19	11/18/24	\$8,541,860
47573	Meter Data Management System	5 years	11/19/19	11/19/24	\$2,317,089
49488	Enhancement of Generation Economic Modeling Software	1 year	11/26/18	11/25/19	\$150,000
47284	Maintenance, Support, Training and Consulting Services for PCI Software	3 year	12/10/14	12/09/17	\$2,134,290

D. Local Business Preference Program (LBPP)

Not applicable to Amendment.

E. Additional Outreach Efforts Taken

Not applicable to Amendment.

F. Small Business Enterprises (SBE)/Disabled Veterans Business Enterprises (DVBE)/Minority Business Enterprises (MBE)/Women Business Enterprises (WBE)/Other Business Enterprises (OBE) Subcontracting Participation

There were no subcontracting opportunities identified under this Agreement; however, PCI was encouraged to utilize SBE, DVBE, MBE, and WBE, and other firms where feasible.

Resolution No. _____

WHEREAS, Power Costs, Inc. was awarded Agreement No. 47573 (Agreement) by the Los Angeles Department of Water and Power (LADWP) Board of Water and Power Commissioners (Board) on November 18, 2019, to provide software, configuration, maintenance, support and training services for the Energy Imbalance Market (EIM) Meter Data Management System (MDMS), as a result of a competitive solicitation process, under Request for Proposal (RFP) No. 90493; and

WHEREAS, the Agreement was awarded for a term of three years and an amount not to exceed \$1,848,033, including 15 percent contingency; and

WHEREAS, on May 24, 2022, under Resolution No. 020 074, the Board adopted Amendment No. 1 to the Agreement to add two one-year extension options, from November 18, 2022 to November 17, 2024, and increase the not-to-exceed amount by \$469,056, including 15 percent contingency, from \$1,848,033 to \$2,317,089; and

WHEREAS, LADWP has determined that Amendment No. 2 (Amendment) is necessary for additional software, configuration, continued hosting and storage, and software maintenance and support services for the EIM MDMS; and

WHEREAS, LADWP recommends approval of the Amendment to the Agreement with Power Costs, Inc. to add new system functionalities to the scope; extend the term of the Agreement by three years and add two one-year extension options, from November 18, 2024 to November 17, 2029, for a total term of up to ten years; and increase the not-to-exceed amount by \$2,061,982, including 15 percent contingency, to a new not-to-exceed amount of \$4,379,071; and

WHEREAS, the term of the Agreement No. 47573 exceeds the total contract time period set by ordinance, and in accordance with City Charter Section 373, City Council approval is required.

NOW, THEREFORE, BE IT RESOLVED that the Amendment to the Agreement, approved as to form and legality by the City Attorney, and filed with the Secretary of the Board, is hereby approved.

BE IT FURTHER RESOLVED that pursuant to City Charter Section 1022, the Board finds that it is more feasible to have the work performed by an independent contractor.

BE IT FURTHER RESOLVED that the Chief Accounting Employee of LADWP, upon proper certification, is authorized and directed to draw demands on the Power Revenue Fund, in accordance with the terms of this Amendment to the Agreement and this Resolution.

BE IT FURTHER RESOLVED that the President or Vice President of the Board, or the General Manager, or such person as the General Manager shall designate in writing, and the Secretary, Assistant Secretary, or the Acting Secretary of the Board are hereby

authorized and directed to execute said Amendment for and on behalf of LADWP upon approval by the City Council pursuant to City Charter Section 373.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of the Resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held

Secretary

**AMENDMENT NO. 2 TO AGREEMENT NO. 47573
BETWEEN
LOS ANGELES DEPARTMENT OF WATER AND POWER
AND
POWER COSTS, INC**

THIS AMENDMENT NO. 2 to Agreement No. 47573 is made and entered into by and between the City of Los Angeles, acting by and through the Los Angeles Department of Water and Power, a municipal corporation (hereinafter referred to as LADWP) and Power Costs, Inc. (hereinafter referred to as "Consultant"), collectively the "Parties"; and

WHEREAS, the Parties have entered into Agreement No. 47573 (Agreement) wherein Consultant agreed to provide Meter Data Management System (MDMS) software, configuration, maintenance, support, and training services for the Energy Imbalance Market for the Agreement Total of \$1,848,033, including 15 percent contingency, effective November 18, 2019; and

WHEREAS, Change Order Nos. 1, 2, and 3 increased the Agreement Total by \$108,240 and Amendment No. 1 to the Agreement added two one-year extension options to the Agreement term for a maximum of five years and increased the not-to-exceed amount by \$407,875, to a new Agreement Total of \$2,123,100; and

WHEREAS, Change Order No. 4 increased the Agreement Total by \$24,600 and Change Order No. 5 increased the Agreement Total by \$24,600, for a total of \$49,200; and

WHEREAS, the Parties are amending the Agreement for the purpose of adding three years with two one-year extension options to the Agreement term, for a total term of up to ten years; updating the Statement of Work by adding software configuration and hosting storage, continuing hosting, maintenance, and support services; and increasing the Agreement Total by \$2,061,982, including 15 percent contingency, to a new not-to-exceed amount of \$4,379,071.

NOW, THEREFORE, BE IT RESOLVED that for good value and consideration including mutual exchange of promises, the Parties agree to amend Agreement No. 47573 as follows:

1. Subsection 13(a)(1) Extension Options as previously added with Amendment No. 1 and read as:

"At LADWP'S sole option, the term of this Agreement may be extended for up to an additional two years, exercisable in one-year increments, or any portion thereof.

Subsection 13(a)(1) Extension Options is changed and now read as:

"At LADWP'S sole option, the term of this Agreement may be extended for

an additional two years, exercisable in one-year increments, or any portion thereof. Thereafter, the term of this Agreement may be extended for up to an additional five years, exercisable in one three-year and two one-year increments, or any portion thereof.

2. "Add the following new Subsection 12(i) Labor Rate Adjustments to Section 12, Fees, Invoices and Payment:

i) Labor Rate Adjustments

The Hourly Rate of only the Direct Labor rate table in Exhibit C, Fee Schedule, shall be firm for the first year following the effective date of Amendment No. 2. The Consultant may submit a written request to LADWP for only the Direct Labor rate adjustment per annum thereafter, at least 30 days before the anniversary of the effective date of this Agreement. If the request is not received 30 calendar days prior to the anniversary date, if approved, the request will be effective 30 calendar days after LADWP receives Consultant's written request. LADWP will review the rate adjustment request and may change it, upward or downward, by written mutual agreement between the Consultant and LADWP. Rate adjustments shall not exceed the change in the prior year's average Consumer Price Index calculated by using the "annual" averages column data for the United States (U.S.) Department of Labor, Bureau of Labor Statistics Chained Consumer Price Index for All Urban Consumers, U.S. city average (C-CPI-U).

3. Exhibit C – Fee Schedule and as amended with Amendment No. 1 is replaced in its entirety with the attached Exhibit C – Fee Schedule (Revision No. 1).
4. Add the following new item to the end of the table of Attachment C, Cloud Hosted Technical Best Practices, to Exhibit H – Statement of Work.

ID	Requirement Description
N/A	Cloud Hosting Compute & Storage Limits Contractor shall provide Hosting Service Storage (the "Hosting Services") for the cloud environments supporting MDMS system shall be subject to the compute and storage limit as defined in Attachment D.

5. Add the attached new Attachment D, Hosted Service Storage and Compute Limit, to Exhibit H – Statement of Work.

Except as amended herein, all terms and conditions of Agreement No. 47573 shall remain in full force and effect.

This Amendment No. 2 may be executed in one or more counterparts, and by the

parties in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same. The parties further agree that signatures scanned into .pdf (or signatures in another electronic format designated by LADWP) and sent by e-mail shall be deemed original signatures.

This Amendment No. 2 consists of four (4) pages, Exhibit C – Fee Schedule (Revision No. 1), and Attachment D, Hosted Services Storage and Compute Limit, to Exhibit H – Statement of Work.

[Signature Page follows.]

SIGNATURE PAGE

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment No. 2 to Agreement No. 47573 to be executed by their authorized representatives on the date written below.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES BY
BOARD OF WATER AND POWER COMMISSIONERS

By signing below, the signatories of the Department
of Water and Power attest that they have no
personal, financial, beneficial, or familial interest in
this contract.

Date: _____

By: _____

JANISSE QUIÑONES
Chief Executive Officer and Chief Engineer

And: _____

CHANTE L. MITCHELL
Board Secretary

POWER COSTS, INC

Date: _____

By: _____

FRED N. LEE
Chief Executive officer

And: _____

SANDY B. HO
Chief Financial Officer

EXHIBIT C
Fee Schedule
(Revision No. 1)

Agreement No./ Title:	47573 / EIM Meter Data Management System
Firm Name:	Power Costs Inc.
Firm Address:	301 David L. Boren Blvd., Suite 2000, Norman, OK 73072

Item No.	Milestone Description	Amount Due by Delivery	Percentage of Total
1	Notice to Proceed (NTP) issuance by LADWP, Standard Docs Delivered & Design Initiated and contractor will mobilize in 2 weeks	\$16,500	2.7%
2	Deliver Base Functional and Technical Design Documents	\$33,000	5.5%
3	Deliver EA OOTB w/ sample data on Hosted Server	\$33,000	5.5%
4	Functional PI Interface for OOTB	\$20,000	3.3%
5	LADWP Functional Design sign-off Phase 1	\$16,000	2.6%
6	LADWP Technical Design sign-off Phase 1	\$16,000	2.6%
7	Deliver PCI EA Interfaces. This task is now moved to Phase I	\$48,000	7.9%
8	Perform meter data validation using additional schedule and meter data sources. This task is now moved to Phase I	\$16,500	2.7%
9	Deliver FAT/SAT plans for Phase I	\$16,500	2.7%
10	FAT Successfully Complete for Phase I and LADWP sign-off & User Training (\$20,000)	\$99,000	16.40%
11	Deliver User Documents	16,500	2.70%
12	SAT Successfully Complete and LADWP sign-off for Phase I	\$66,000	10.90%
13	Conduct User Training	\$40,000	6.60%
14	LADWP Approval for Functional and Technical Design docs Phase II	\$12,000	2.00%
15	Successful Connectivity Testing	\$5,000	0.80%
16	Day-in-the-Life Testing Successfully Complete	\$5,000	0.80%
17	Market Simulation Testing Successfully Completed	\$10,000	1.70%
18	User Acceptance Testing Complete Phase I	\$10,000	1.70%

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19	Performance Testing Complete Phase I	\$10,000	1.70%
20	Parallel Operations Complete	\$10,000	1.70%
21	Go-Live Phase I	\$10,000	1.70%
22	Configure and test for irradiance and month end data	\$16,500	2.70%
23	Configure Business Reports	\$16,500	2.70%
24	Successful Completion of FAT Phase II	\$8,000	1.30%
25	Successful Completion of SAT Phase II	\$12,000	2.00%
26	User Acceptance Testing Complete Phase II	\$20,000	3.30%
27	Phase II deployed to Production, Performance Testing Complete & Final Documentation	\$22,000	3.60%
Total		\$604,000	100.0%

Milestone Option		
Item No.	Description	Amount Due by Delivery
28	Configure EA to support Meter Interrogation Milestone Option (To be exercised in writing at the discretion of LADWP)	\$66,000

Standard Documents	
Item Description and Purpose	Amount Due Upon Delivery
PCI User Guide, PCI Functional Specifications, PCI API Documentation, and PCI Hardware Document 2 weeks after contract signature	No Charge
As built documents no later than 2 weeks after delivery of code	No Charge
PCI Design Document (Functional & Technical) no later than 2 weeks after the completion of the design phase	No Charge
PCI SAT document 2 weeks before FAT, UAT and SAT	No Charge
PCI Release Notes with each new software release	No Charge
PCI User Guide, PCI Functional Specifications, PCI API Documentation, and PCI Hardware Document will be updated accordingly with the current software version.	No Charge

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Other Direct Costs		
Item Description and Purpose	Billing Unit	Amount
Perpetual License Fee	NET	\$353,572
Hosting Fee for Year 1	Annually	\$100,000
Hosting Fee for Year 2	Annually	\$100,000
Hosting Fee for Year 3	Annually	\$100,000
Hosting Fee for Year 4	Annually	\$100,000
Hosting Fee for Year 5	Annually	\$100,000
Hosting Fee for Year 6	Annually	\$105,000
Hosting Fee for Year 7	Annually	\$110,250
Hosting Fee for Year 8	Annually	\$115,763
Hosting Fee for Year 9	Annually	\$121,551
Hosting Fee for Year 10	Annually	\$127,628
Software Maintenance & Support for Year 1 (5x12)	Annually	\$ 70,714
Software Maintenance & Support for Year 2	Annually	\$ 72,128
Software Maintenance & Support for Year 3	Annually	\$ 73,571
Software Maintenance & Support for Year 3 (increase in annual support fee for 24/7 service; prorated monthly as appropriate)	Annually	\$ 18,393
Software Maintenance & Support for Year 4 (24/7 Service)	Annually	\$93,803
Software Maintenance & Support for Year 5 (24/7 Service)	Annually	\$95,679
Software Maintenance & Support for Year 6 (24/7 Service)	Annually	\$100,463
Software Maintenance & Support for Year 7 (24/7 Service)	Annually	\$105,486
Software Maintenance & Support for Year 8 (24/7 Service)	Annually	\$110,760
Software Maintenance & Support for Year 9 (24/7 Service)	Annually	\$116,298
Software Maintenance & Support for Year 10 (24/7 Service)	Annually	\$122,113

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Travel & Expense, in accordance with Exhibit D, Allowable Travel Expense (Not-to-Exceed Amount)	NET	\$67,000
Other Direct Costs (Commenced Only with LADWP's Written Approval)		
Item Description and Purpose	Billing Unit	Amount
Implementation of Maintenance, Hosting & Support Services for Load Serving Entities (LSE) the addition of two LSE's	One Time	\$107,715
LSE Software Maintenance Support & Hosted Fee Year 6	Annually	\$30,000
LSE Software Maintenance Support & Hosted Fee Year 7	Annually	\$30,000
LSE Software Maintenance Support & Hosted Fee Year 8	Annually	\$30,000
LSE Software Maintenance Support & Hosted Fee Year 9	Annually	\$30,000
LSE Software Maintenance Support & Hosted Fee Year 10	Annually	\$30,000
System Access Fee 40k/LSE Year 6	Annually	\$80,000
System Access Fee 40k/LSE Year 7	Annually	\$80,000
System Access Fee 40k/LSE Year 8	Annually	\$80,000
System Access Fee 40k/LSE Year 9	Annually	\$80,000
System Access Fee 40k/LSE Year 10	Annually	\$80,000
Total		\$3,137,887
Complimentary Professional Services		
PCI will provide a complimentary professional services package of 125 hours. Consulting Services, System Enhancements, and Training.	No Charge	

Approved Change Orders	
Description (the following amounts were moved from contingency to agreement total)	Amount
Change Order No. 01 – Change Order No. 03 (Amendment # 1)	\$108,240
Change Order No. 04 – Change Order No. 05 (Post Amendment # 1)	\$49,200

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Total	\$157,440
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Agreement Total	\$3,965,327
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Notes:

1. PCI to invoice the perpetual license fees for PCI EA after successful delivery of PCI's EA system out of the box with limited data on PCI hosted servers.
2. PCI will invoice the initial hosted fee for PCI EA after successful delivery of PCI's EA system out of the box with limited data on PCI hosted servers. A monthly prorated fee will be payable if the hosted period is less than a full year. The hosting servers will hold data for past three years, any subsequent data will be held at LADWP.
3. The annual support fee is payable upon successful SAT completion for the PCI EA system. A monthly prorated fee will be payable if the support period is the less than a full year.
4. The PCI software suite will be sized to handle the LADWP BA portfolio of more than 70 resources with approximately 10 GW capacity and will accommodate normal growth (i.e. – additions to the generation portfolio other than via acquisitions). The numbers for the LA portfolio are estimates and if the portfolio is larger at go-live there shall be no impact on price and PCI will accommodate normal growth based on the Go-live BA portfolio.
5. The Agreement is firm fixed price. All necessary interfaces to meet requirements shall be included in fixed fee.
6. PCI will deliver the requirements at the agreed upon fixed fee.
7. LADWP portfolio will have approximately:
 - 70-100 resources
 - 30-40 tie lines, tie lines may have base and dynamic ETSRs
 - 3-4 load zones"
 The numbers for the LA portfolio are estimates and if the portfolio would require additional hardware in excess of the limits set forth in Attachment D, Hosted Service Storage and Compute Limit, additional fees for hosting will be required.

DIRECT LABOR	
Labor Classification	Hourly Rate
Project Manager / Technical Lead / Developer / Tester / Architect	\$235

Rates for incremental environment usage for Attachment D, Hosted Service Storage and Compute Limit from Exhibit H	
Usage Type	Rates
RDS Base Storage	\$0.4603 per GB per availability zone per month
File Share Storage	\$0.834 per GB per availability zone per month
RDS Compute (db.m5.large single AZ)	\$225.16 per 2 vCPUs & 8 GB RAM per availability zone per month
Fees for Application Compute (r5.xlarge)	\$595.11 per 4 vCPUs & 32 GB RAM per month
Fees for Application Compute (t3.2xlarge)	\$653.04 per 8 vCPUs & 32 GB RAM per month
Fees for Application Compute (t3.xlarge)	\$337.03 per 4 vCPUs & 16 GB RAM per month
Fees for Application Compute (t3.large)	\$167.17 per 2 vCPUs & 8 GB RAM per month
Fees for Compute Processes for GenTrader Grid Servers (C5 Class)	\$953.26 per 4 CPU cores per month
Fees for Compute Processes for GenTrader Grid Servers (T2 Class)	\$319.91 per 4 CPU cores per month
Fees for QlikView Compute (r5.large)	\$308.06 per 2 vCPUs & 16 GB RAM per month

**EXHIBIT C
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Fees for QlikView Compute (r5.xlarge)	\$595.11 per 4 vCPUs & 32 GB RAM per month
Fees for QlikView Compute (r5.2xlarge)	\$1169.20 per 8 vCPUs & 64 GB RAM per month
Fees for QlikView Compute (r5.4xlarge)	\$2317.38 per 16 vCPUs & 128 GB RAM per month
Fees for QlikView Compute (r5.8xlarge)	\$3981.73 per 32 vCPUs & 256 GB RAM per month
Thinfinity Remote Desktop	\$120 per user license per year

Notes:

1. All services subject to the Hourly Rates and fees charged for incremental environment usage in accordance with the above table and Attachment D to Exhibit H will be subject to issuance of a Change Order or Amendment adding additional funds to the Agreement Total.

END OF FEE SCHEDULE

EXHIBIT H STATEMENT OF WORK

Attachment D Hosted Service Storage and Compute Limit

1. Base Storage Threshold. The Hosting Services shall include the allocation of database storage described herein (the "**Base Storage Threshold**"). PCI shall notify an authorized Client Representative in writing when the Client has reached eighty-five percent (85%) of the Client's then-current Base Storage Threshold. Within five (5) business days of receiving PCI's notice, Client Representative may request in writing that PCI increase the Base Storage Threshold. If PCI does not receive Client's written request to increase the Base Storage Threshold within five (5) business days of its receipt of the notice, to support the continuity of Client's Hosted Services operations, when the storage reaches 100% of the Base Storage Threshold, PCI may overwrite existing storage. If Client Representative requests that PCI increase the Base Storage Threshold the additional storage will be added by PCI and Client will be charged for the incremental storage at the rates described herein. Storage is incremented in 500 GB units and billed annually beginning in the year in which the increment is added.
2. File Share Storage. The Hosting Services shall include the allocation of File Share Storage described herein (the "**File Share Storage**"). PCI shall notify an authorized Client Representative in writing when Client has reached ninety percent (90%) of Client's then-current File Share Storage setting. Within five (5) business days of receiving PCI's notice, Client Representative may request in writing that PCI increase the File Share Storage. If PCI does not receive Client's written request to increase the File Share Storage threshold within five (5) business days of its receipt of the notice, to support the continuity of Client's Hosted Services operations, when the storage reaches 100% of the File Share Storage threshold, PCI may overwrite existing storage. If Client Representative requests that PCI increase the File Share Storage threshold the additional storage will be added and Client will be charged for the incremental storage at the rates described herein. Storage is incremented in 500 GB units and billed annually beginning in the year in which the increment is added.
3. Application Compute. The Hosting Services shall include the allocation of Application Compute Servers described herein (the "**Application Compute**"). Application compute servers are used to run clients' workflows using PCI products in PCI GSMS & PCI Kube Platforms. The vCPUs and RAM allocated are used by all implemented workflows. The client can request additional Application Compute by submitting a request through the issue tracking system. PCI shall complete the request and bill the Client at the listed rate. The minimum increment size is 2vCPUs with 8 GB of RAM. The default duration is yearly.
4. Grid Compute. The Hosting Services shall include the allocation of Grid Compute described below:
 - PCI GSMS (LADWP-MT)

EXHIBIT H STATEMENT OF WORK

- Production Environment
 - "GSMS & GT" RDS Base Storage Threshold 1,000 GB
 - RDS Compute (Multiple Availability Zone): 4 vCPUs & 16 GB of RAM
 - File Share Storage 2,000 GB
 - QlikView Server with 32 GB of RAM
 - Application Compute (Application Servers):
 - Task Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
 - User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
 - GenTrader Compute (Grid Servers) Maximum Number of CPUs 24 of T2 (burstable)
- Dev Environment
 - "GSMS & GT" RDS Base Storage Threshold 1,000 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - QlikView Server with 32 GB of RAM
 - Application Compute (Application Servers):
 - Task/User Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
 - GenTrader Compute (Grid Servers) Maximum Number of CPUs 4 of T2 (burstable)
- Test Environment
 - "GSMS & GT" RDS Base Storage Threshold 1,000 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 1,000 GB
 - QlikView Server with 32 GB of RAM
 - Application Compute (Application Servers):
 - Task Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
 - User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
 - GenTrader Compute (Grid Servers) Maximum Number of CPUs 8 of T2 (burstable)
- PCI GSMS (LADWP-TO)
 - Production Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Multiple Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):
 - Task Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
 - User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
 - Dev Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):

EXHIBIT H STATEMENT OF WORK

- Task/User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
- Test Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):
 - Task Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
 - User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
- PCI GSMS (LADWP-ET)
 - Production Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Multiple Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):
 - Task/User Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
 - Dev Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):
 - Task/User Servers: 2 servers, with 2 vCPUs & 8 GB of RAM each
 - Test Environment
 - "GSMS" RDS Base Storage Threshold 500 GB
 - RDS Compute (Single Availability Zone): 2 vCPUs & 8 GB of RAM
 - File Share Storage 500 GB
 - Application Compute (Application Servers):
 - Task/User Servers: 2 servers, with 4 vCPUs & 16 GB of RAM each
- Data Transfer Fees: The base pricing includes data transfer fees to support normal workflows. The data transfers should not exceed \$100 per month for each of the 3 eco- systems (LADWP-MT, LADWP-TO, LADWP-ET). Any excess will be billed at cost.
- Client will have PCI GSMS: Production, Dev, and Test environments.
- QlikView: Existing QlikView licenses will be in use and no new ones will be purchased.

Rates for incremental environment usage are listed in Exhibit C, Fee Schedule.

End of Attachment D

END OF STATEMENT OF WORK