

CONTRACT RESULTING FROM REQUEST FOR PROPOSAL NUMBER 10089958-23-E, Energy Consultant Services

This Contract (Contract) is entered into by and between the City of San Diego, a municipal corporation (City), and the successful proposer to Request for Proposal (RFP) # 10089958-23-E, Energy Consultant Services (Contractor).

RECITALS

On or about 9/1/2022, City issued an RFP to prospective proposers on services to be provided to the City. The RFP and any addenda and exhibits thereto are collectively referred to as the "RFP." The RFP is attached hereto as Exhibit A.

City has determined that Contractor has the expertise, experience, and personnel necessary to provide the services.

City wishes to retain Contractor to provide consultant services as further described in the Scope of Work, attached hereto as Exhibit B. (Services).

For good and valuable consideration, the sufficiency of which is acknowledged, City and Contractor agree as follows:

**ARTICLE I
CONTRACTOR SERVICES**

1.1 Scope of Work. Contractor shall provide the Services to City as described in Exhibit B which is incorporated herein by reference. Contractor will submit all required forms and information described in Exhibit A to the Purchasing Agent before providing Services.

1.2 General Contract Terms and Provisions. This Contract incorporates by reference the General Contract Terms and Provisions, attached hereto as Exhibit C.

**ARTICLE II
DURATION OF CONTRACT**

2.1 Term. This Contract shall be for a period of one (1) year beginning on the Effective Date. City may, in its sole discretion, extend this Contract for four (4) additional one (1) year period(s) beginning on the Effective Date . The term of this Contract shall not exceed five years unless approved by the City Council by ordinance.

2.2 Effective Date. This Contract shall be effective on the date it is executed by the last Party to sign the Contract, and approved by the City Attorney in accordance with San Diego Charter Section 40.

**ARTICLE III
COMPENSATION**

3.1 Amount of Compensation. City shall pay Contractor for performance of all Services rendered in accordance with this Contract in an amount not to exceed \$500,000.00.

**ARTICLE IV
WAGE REQUIREMENTS**

4.1 Reserved.

**ARTICLE V
CONTRACT DOCUMENTS**

5.1 Contract Documents. The following documents comprise the Contract between the City and Contractor: this Contract and all exhibits thereto, the RFP; the Notice to Proceed; and the City's written acceptance of exceptions or clarifications to the RFP, if any.

5.2 Contract Interpretation. The Contract Documents completely describe the Services to be provided. Contractor will provide any Services that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result whether or not specifically called for or identified in the Contract Documents. Words or phrases which have a well-known technical or construction industry or trade meaning and are used to describe Services will be interpreted in accordance with that meaning unless a definition has been provided in the Contract Documents.

5.3 Precedence. In resolving conflicts resulting from errors or discrepancies in any of the Contract Documents, the Parties will use the order of precedence as set forth below. The 1st document has the highest priority. Inconsistent provisions in the Contract Documents that address the same subject, are consistent, and have different degrees of specificity, are not in conflict and the more specific language will control. The order of precedence from highest to lowest is as follows:

1st Any properly executed written amendment to the Contract

2nd The Contract

3rd The RFP and the City's written acceptance of any exceptions or clarifications to the RFP, if any

4th Contractor's Pricing

5.4 Counterparts. This Contract may be executed in counterparts which, when taken together, shall constitute a single signed original as though all Parties had executed the same page.

5.5 Public Agencies. Other public agencies, as defined by California Government Code section 6500, may choose to use the terms of this Contract, subject to Contractor's acceptance. The City is not liable or responsible for any obligations related to a subsequent Contract between Contractor and another public agency.

IN WITNESS WHEREOF, this Contract is executed by City and Contractor acting by and through their authorized officers.

CONTRACTOR

MRW & Associates, LLC

Proposer

1736 Franklin Street, Suite 700

Street Address

Oakland, CA 94612

City

510-834-1999

Telephone No.

bkp@mrwassoc.com

E-Mail

BY:

Signature of
Proposer's Authorized
Representative

David Howarth

Print Name

Principal/CFO

Title

9/16/2022

Date

CITY OF SAN DIEGO
A Municipal Corporation

BY:

Print Name:

Claudia C. Abarca

Director, Purchasing & Contracting
Department

February 21, 2023

Date Signed

Approved as to form this 22nd day of

FEBRUARY, 2023.
MARA W. ELLIOTT, City Attorney

BY:

Frederick M. Orlieb
Deputy City Attorney

EXHIBIT A
PROPOSAL SUBMISSION AND REQUIREMENTS

A. PROPOSAL SUBMISSION

1. Timely Proposal Submittal. Proposals must be submitted as described herein to the Purchasing & Contracting Department (P&C).

1.1 Reserved.

1.2 Paper Proposals. The City will accept paper proposals in lieu of eProposals. Paper proposals must be submitted in a sealed envelope to the Purchasing & Contracting Department (P&C) located at 1200 Third Avenue, Suite 200, San Diego, CA 92101. The Solicitation Number and Closing Date must be referenced in the lower left-hand corner of the outside of the envelope. Faxed proposals will not be accepted.

1.3 Proposal Due Date. Proposals must be submitted prior to the Closing Date indicated on the eBidding System. E-mailed and/or faxed proposals will not be accepted.

1.4 Pre-Proposal Conference. No pre-proposal conference will be held for RFP.

1.4.1 Reserved.

1.5 Questions and Comments. Written questions and comments must be submitted electronically via the eBidding System no later than the date specified on the eBidding System. Only written communications relative to the procurement shall be considered. The City's eBidding System is the only acceptable method for submission of questions. All questions will be answered in writing. The City will distribute questions and answers without identification of the inquirer(s) to all proposers who are on record as having received this RFP, via its eBidding System. No oral communications can be relied upon for this RFP. Addenda will be issued addressing questions or comments that are determined by the City to cause a change to any part of this RFP.

1.6 Contact with City Staff. Unless otherwise authorized herein, proposers who are considering submitting a proposal in response to this RFP, or who submit a proposal in response to this RFP, are prohibited from communicating with City staff about this RFP from the date this RFP is issued until a contract is awarded.

2. Proposal Format and Organization. Unless electronically submitted, all proposals should be securely bound and must include the following completed and executed forms and information presented in the manner indicated below:

Tab A - Submission of Information and Forms.

2.1 Completed and signed Contract Signature Page. If any addenda are issued, the latest Addendum Contract Signature Page is required.

2.2 Exceptions requested by proposer, if any. The proposer must present written factual or legal justification for any exception requested to the Scope of Work, the Contract, or the Exhibits thereto. Any exceptions to the Contract that have not been accepted

by the City in writing are deemed rejected. The City, in its sole discretion, may accept some or all of proposer's exceptions, reject proposer's exceptions, and deem the proposal non-responsive, or award the Contract without proposer's proposed exceptions. The City will not consider exceptions addressed elsewhere in the proposal.

2.3 The Contractor Standards Pledge of Compliance Form.

2.4 Equal Opportunity Contracting forms including the Work Force Report and Contractors Certification of Pending Actions.

2.5 Reserved.

2.6 Reserved.

2.7 Reserved.

2.8 Additional Information as required in Exhibit B.

2.9 Reserved.

Tab B - Executive Summary and Responses to Specifications.

2.10 A title page.

2.11 A table of contents.

2.12 An executive summary, limited to one typewritten page, that provides a high-level description of the proposer's ability to meet the requirements of the RFP and the reasons the proposer believes itself to be best qualified to provide the identified services.

2.13 Proposer's response to the RFP.

Tab C - Cost/Price Proposal (if applicable). Proposers shall submit a cost proposal in the form and format described herein. Failure to provide cost(s) in the form and format requested may result in proposal being declared non-responsive and rejected.

3. Proposal Review. Proposers are responsible for carefully examining the RFP, the Specifications, this Contract, and all documents incorporated into the Contract by reference before submitting a proposal. If selected for award of contract, proposer shall be bound by same unless the City has accepted proposer's exceptions, if any, in writing.

4. Addenda. The City may issue addenda to this RFP as necessary. All addenda are incorporated into the Contract. The proposer is responsible for determining whether addenda were issued prior to a proposal submission. Failure to respond to or properly address addenda may result in rejection of a proposal.

5. Quantities. The estimated quantities provided by the City are not guaranteed. These quantities are listed for informational purposes only. Quantities vary depending on the demands of the City. Any variations from the estimated quantities shall not entitle the proposer to an adjustment in the unit price or any additional compensation.

6. Quality. Unless otherwise required, all goods furnished shall be new and the best of their kind.

6.1 Items Offered. Proposer shall state the applicable trade name, brand, catalog, manufacturer, and/or product number of the required good, if any, in the proposal.

6.2 Brand Names. Any reference to a specific brand name in a solicitation is illustrative only and describes a component best meeting the specific operational, design, performance, maintenance, quality, or reliability standards and requirements of the City. Proposer may offer an equivalent or equal in response to a brand name referenced (Proposed Equivalent). The City may consider the Proposed Equivalent after it is subjected to testing and evaluation which must be completed prior to the award of contract. If the proposer offers an item of a manufacturer or vendor other than that specified, the proposer must identify the maker, brand, quality, manufacturer number, product number, catalog number, or other trade designation. The City has complete discretion in determining if a Proposed Equivalent will satisfy its requirements. It is the proposer's responsibility to provide, at their expense, any product information, test data, or other information or documents the City requests to properly evaluate or demonstrate the acceptability of the Proposed Equivalent, including independent testing, evaluation at qualified test facilities, or destructive testing.

7. Modifications, Withdrawals, or Mistakes. Proposer is responsible for verifying all prices and extensions before submitting a proposal.

7.1 Modification or Withdrawal of Proposal Before Proposal Opening. Prior to the Closing Date, the proposer or proposer's authorized representative may modify or withdraw the proposal by providing written notice of the proposal modification or withdrawal to the City Contact via the eBidding System. E-mail or telephonic withdrawals or modifications are not permissible.

7.2 Proposal Modification or Withdrawal of Proposal After Proposal Opening. Any proposer who seeks to modify or withdraw a proposal because of the proposer's inadvertent computational error affecting the proposal price shall notify the City Contact identified on the eBidding System no later than three working days following the Closing Date. The proposer shall provide worksheets and such other information as may be required by the City to substantiate the claim of inadvertent error. Failure to do so may bar relief and allow the City recourse from the bid surety. The burden is upon the proposer to prove the inadvertent error. If, as a result of a proposal modification, the proposer is no longer the apparent successful proposer, the City will award to the newly established apparent successful proposer. The City's decision is final.

8. Incurred Expenses. The City is not responsible for any expenses incurred by proposers in participating in this solicitation process.

9. Public Records. By submitting a proposal, the proposer acknowledges that any information submitted in response to this RFP is a public record subject to disclosure unless the City determines that a specific exemption in the California Public Records Act (CPRA) applies. If the proposer submits information clearly marked confidential or proprietary, the City may protect such information and treat it with confidentiality to the extent permitted by law. However, it will be the responsibility of the proposer to provide to the City the specific legal grounds on which the City can rely in withholding information requested under the CPRA should the City choose to withhold such information. General references to sections of

the CPRA will not suffice. Rather, the proposer must provide a specific and detailed legal basis, including applicable case law, that clearly establishes the requested information is exempt from the disclosure under the CPRA. If the proposer does not provide a specific and detailed legal basis for requesting the City to withhold proposer's confidential or proprietary information at the time of proposal submittal, City will release the information as required by the CPRA and proposer will hold the City, its elected officials, officers, and employees harmless for release of this information. It will be the proposer's obligation to defend, at proposer's expense, any legal actions or challenges seeking to obtain from the City any information requested under the CPRA withheld by the City at the proposer's request. Furthermore, the proposer shall indemnify and hold harmless the City, its elected officials, officers, and employees from and against any claim or liability, and defend any action brought against the City, resulting from the City's refusal to release information requested under the CPRA which was withheld at proposer's request. Nothing in the Contract resulting from this proposal creates any obligation on the part of the City to notify the proposer or obtain the proposer's approval or consent before releasing information subject to disclosure under the CPRA.

10. Right to Audit. The City Auditor may access proposer's records as described in San Diego Charter section 39.2 to confirm contract compliance.

B. PRICING

1. Fixed Price. All prices shall be firm, fixed, fully burdened, FOB destination, and include any applicable delivery or freight charges, and any other costs required to provide the requirements as specified in this RFP. The lowest total estimated contract price of all the proposals that meet the requirements of this RFP will receive the maximum assigned points to this category as set forth in this RFP. The other price schedules will be scored based on how much higher their total estimated contract prices compare with the lowest:

$$(1 - \frac{\text{contract price} - \text{lowest price}}{\text{lowest price}}) \times \text{maximum points} = \text{points received}$$

For example, if the lowest total estimated contract price of all proposals is \$100, that proposal would receive the maximum allowable points for the price category. If the total estimated contract price of another proposal is \$105 and the maximum allowable points is 60 points, then that proposal would receive $(1 - ((105 - 100) / 100) \times 60 = 57$ points, or 95% of the maximum points. The lowest score a proposal can receive for this category is zero points (the score cannot be a negative number). The City will perform this calculation for each Proposal.

2. Taxes and Fees. Taxes and applicable local, state, and federal regulatory fees should not be included in the price proposal. Applicable taxes and regulatory fees will be added to the net amount invoiced. The City is liable for state, city, and county sales taxes but is exempt from Federal Excise Tax and will furnish exemption certificates upon request. All or any portion of the City sales tax returned to the City will be considered in the evaluation of proposals.

3. Escalation. An escalation factor is not allowed unless called for in this RFP. If escalation is allowed, proposer must notify the City in writing in the event of a decline in

market price(s) below the proposal price. At that time, the City will make an adjustment in the Contract or may elect to re-solicit.

4. Unit Price. Unless the proposer clearly indicates that the price is based on consideration of being awarded the entire lot and that an adjustment to the price was made based on receiving the entire proposal, any difference between the unit price correctly extended and the total price shown for all items shall be offered shall be resolved in favor of the unit price.

C. EVALUATION OF PROPOSALS

1. Award. The City shall evaluate each responsive proposal to determine which proposal offers the City the best value consistent with the evaluation criteria set forth herein. The proposer offering the lowest overall price will not necessarily be awarded a contract.

2. Sustainable Materials. Consistent with Council Policy 100-14, the City encourages use of readily recyclable submittal materials that contain post-consumer recycled content.

3. Evaluation Process.

3.1 Process for Award. A City-designated evaluation committee (Evaluation Committee) will evaluate and score all responsive proposals. The Evaluation Committee may require proposer to provide additional written or oral information to clarify responses. Upon completion of the evaluation process, the Evaluation Committee will recommend to the Purchasing Agent that award be made to the proposer with the highest scoring proposal.

3.2 Reserved.

3.3 Reserved.

3.4 Discussions/Negotiations. The City has the right to accept the proposal that serves the best interest of the City, as submitted, without discussion or negotiation. Contractors should, therefore, not rely on having a chance to discuss, negotiate, and adjust their proposals. The City may negotiate the terms of a contract with the winning proposer based on the RFP and the proposer's proposal, or award the contract without further negotiation.

3.5 Inspection. The City reserves the right to inspect the proposer's equipment and facilities to determine if the proposer is capable of fulfilling this Contract. Inspection will include, but not limited to, survey of proposer's physical assets and financial capability. Proposer, by signing the proposal agrees to the City's right of access to physical assets and financial records for the sole purpose of determining proposer's capability to perform the Contract. Should the City conduct this inspection, the City reserves the right to disqualify a proposer who does not, in the City's judgment, exhibit the sufficient physical and financial resources to perform this Contract.

3.6 Evaluation Criteria. The following elements represent the evaluation criteria that will be considered during the evaluation process:

	MAXIMUM EVALUATION POINTS
A. Responsiveness to the RFP.	30
1. Requested information included and thoroughness of response	
2. Understanding of the project and ability to deliver as exhibited in the Executive Summary.	
3. Technical Aspects	
B. Staffing Plan.	20
1. Qualifications of personnel adequate for requirement	
2. Availability/Geographical location of personnel for required tasks	
3. Clearly defined Roles/Responsibilities of personnel	
C. Firm's Capability to provide the services and expertise and Past Performance.	40
1. Relevant experience of the Firm and subcontractors	
2. Previous relationship of firm and subcontractors on similar projects	
3. Other pertinent experience	
4. Location in the general geographical area of the project and knowledge of the locality of the Project	
5. Past/Prior Performance	
6. Capacity/Capability to meet The City of San Diego needs in a timely manner	
7. Reference checks	
D. Price.	10
SUB TOTAL MAXIMUM EVALUATION POINTS:	100
E. Participation by Small Local Business Enterprise (SLBE) or Emerging Local Business Enterprise (ELBE) Firms*	12
FINAL MAXIMUM EVALUATION POINTS INCLUDING SLBE/ELBE:	112

*The City shall apply a maximum of an additional 12 percentage points to the proposer's final score for SLBE OR ELBE participation. Refer to Equal Opportunity Contracting Form, Section V.

D. ANNOUNCEMENT OF AWARD

1. Award of Contract. The City will inform all proposers of its intent to award a Contract in writing.

2. Obtaining Proposal Results. No solicitation results can be obtained until the City announces the proposal or proposals best meeting the City's requirements. Proposal results may be obtained by: (1) e-mailing a request to the City Contact identified on the eBidding System or (2) visiting the P&C eBidding System to review the proposal results. To ensure an accurate response, requests should reference the Solicitation Number. Proposal results will not be released over the phone.

3. Multiple Awards. City may award more than one contract by awarding separate items or groups of items to various proposers. Awards will be made for items, or combinations of items, which result in the lowest aggregate price and/or best meet the City's requirements. The additional administrative costs associated with awarding more than one Contract will be considered in the determination.

E. PROTESTS. The City's protest procedures are codified in Chapter 2, Article 2, Division 30 of the San Diego Municipal Code (SDMC). These procedures provide unsuccessful proposers with the opportunity to challenge the City's determination on legal and factual grounds. The City will not consider or otherwise act upon an untimely protest.

F. SUBMITTALS REQUIRED UPON NOTICE TO PROCEED. The successful proposer is required to submit the following documents to P&C **within ten (10) business days** from the date on the Notice to Proceed letter:

1. Insurance Documents. Evidence of all required insurance, including all required endorsements, as specified in Article VII of the General Contract Terms and Provisions.

2. Taxpayer Identification Number. Internal Revenue Service (IRS) regulations require the City to have the correct name, address, and Taxpayer Identification Number (TIN) or Social Security Number (SSN) on file for businesses or persons who provide goods or services to the City. This information is necessary to complete Form 1099 at the end of each tax year. To comply with IRS regulations, the City requires each Contractor to provide a Form W-9 prior to the award of a Contract.

3. Business Tax Certificate. Unless the City Treasurer determines a business is exempt, all businesses that contract with the City must have a current business tax certificate.

4. Reserved.

5. Reserved.

The City may find the proposer to be non-responsive and award the Contract to the next highest scoring responsible and responsive proposer if the apparent successful proposer fails to timely provide the required information or documents.

EXHIBIT B
SCOPE OF WORK

A. SCOPE OF WORK.

The City of San Diego Department of Sustainability and Mobility (“SuMo”) is requesting proposals for a selection process to enter into an agreement with a consulting firm to provide as-needed professional energy consulting services supporting critical, time-sensitive City energy programs and initiatives. Specifically, services are required to support the City of San Diego’s interests in California Public Utilities Commission (CPUC) proceedings that may significantly impact municipal operations, as well as San Diego’s residents and businesses. Services shall include, but not be limited to, preparing and presenting testimony for the City in San Diego Gas and Electric (SDG&E) General Rate Case applications at CPUC and other CPUC proceedings which affect the City’s energy efficiency and distributed generation initiatives. These regulatory activities will also include analysis of the incumbent utility provider’s reporting and compliance with the Electrical and Natural Gas Franchise requirements including the Electrical Franchise Fee Surcharge, the Municipal Undergrounding surcharge, and other costs which may be recoverable or non-recoverable via energy tariff rates passed on to consumers.

In addition to regulatory support and analysis, the City requires energy cost evaluation services to support its commitment to Climate Action goals and greenhouse gas reduction. These initiatives may include analyses and determinations of financially beneficial long-term strategies for managing landfill gas and cogeneration operations at the Miramar Landfill and the North City Water Reclamation Plant, where the City anticipates major new electric loads in conjunction with its wastewater recycling Pure Water program. Services shall also include supporting the City’s existing solar installations through advocacy before the CPUC and advising the City regarding economic feasibility of additional solar development. Services shall also include advising the City in its management regarding the tariff rate schedules for its electric and gas accounts, as well as market analysis and economic forecasts to support the City’s energy budget planning. Finally, the scope of work shall include as-needed support for any emerging energy-related issues that need immediate attention, such as support for public power feasibility actions. The vendor will be expected to work with SuMo as well as the City’s Department of Public Utilities, the Office of the City Attorney, and other City departments as necessary.

Please provide at least three (3) specific examples of relevant experience in which your firm represented the interests of a client before the CPUC in matters relating to a General Rate Case, rates & tariffs analysis including demand charges, and utility franchise oversight. Please include work product examples that are publicly available, such as CPUC filings.

The following information shall be provided in Tab B in the proposal for evaluation:

- Proposer company/corporation organization chart and staffing profile, including education and years of tenure for staff and resumes for key personnel. Define the responsibilities and task areas these individuals will be charged with relative to this contract.
- Proposer’s experience working with the City of San Diego or municipalities of similar size as it relates to the scope of work for this contract. Provide examples of key personnel’s work similar in form and function to the scope of work in this contract.

- Proposer’s knowledge of the City of San Diego’s own electric and gas accounts, account tariffs, and energy program.
- Proposer’s experience with preparing testimonies at California Public Utilities Commission.
- Proposer’s understanding of the City’s energy and climate action goals.
- Proposer’s understanding of past and current California law and policy as it relates to energy and climate action goals.
- Three (3) publicly available work-product samples.

B. TASK ORDERS.

Professional services provided will be authorized via a written Task Order signed by both parties, the City and the successful proposer(s). The work defined in each Task Order will constitute a “Project”. The cost for services may vary depending upon the amount of work estimated for a particular Project. A Statement of Work (SOW) will be provided to successful proposer(s) when the need for a new Project is identified. The successful proposer(s) will use the SOW as a tool for providing an estimate to the City for the required Task Order. If the City awarded contracts to multiple successful proposers that could potentially perform the services described in a Task order, then before authorizing a successful proposer to perform the services described in a Task Order, the City will first send each such successful proposer’s authorized representative, via e-mail, facsimile, U.S. mail or an express mail service, a Task Order information request. The successful proposer will provide to the City, in its response to the Task Order information request, the scope, schedule, deliverables, compensation, and proposed staff for each task. The successful proposer’s response to the Task Order information request will be evaluated based upon expertise, experience, capability of personnel, subcontractors on the Project, and the ability to complete the Project within the required timeframe and budget, taking into account the potential need for staff changes during the performance of the Project. The successful proposer will be notified of Task Order acceptance or rejection via e-mail. The e-mail acceptance will be the authorization to perform the work. Any changes to the scope, schedule, deliverables or compensation must be agreed to, in advance, by written amendment to the Task Order.

Each contract awarded as a result of this RFP will have a total not to exceed amount for each term of the contract. In no case will the value of an individual Task Order or the cumulative total for all Task Orders on a given contract exceed the total not to exceed amount.

Projects often include work with short deadlines. Successful proposer(s) must be able to start the work per the Task Order no later than 14 calendar days from notice from City.

C. KEY PERSONNEL

Contractor shall not change key personnel assigned to this contract without prior written approval from the Technical Representative.

D. TECHNICAL REPRESENTATIVE

The Technical Representative for this Contract is identified in the notice of award and is responsible for overseeing and monitoring this Contract.

E. REFERENCES.

Proposer is required to provide a minimum of three (3) references to demonstrate successful performance for work of similar size and scope as specified in this contract during the past five (5) years. References shall be submitted on the Contractor Standards Pledge of Compliance form attached to this RFP. Proposer cannot provide a current City of San Diego staff member as a reference. If a City staff member is provided, the Proposer will be required to provide an additional reference. The City reserves the right to contact references not provided by the Proposer.

The City shall rely on references as part of the evaluation process. If the City does not receive a reference from contact provided, the reference may be classified as unsatisfactory. Alternative contacts may be provided, as determined solely by the City.

F. PRICE SCHEDULE

Provide a list of key personnel, their classification(s), and applicable hourly rates. If additional space is required, a separate sheet may be attached.

Item No.	Classification Description	Hourly Rate Inclusive of All Associated Fees for Work Described in the RFP
1.		\$
2.		\$
3.		\$
4.		\$
5.		\$
Average Hourly Rate		\$

4. Tab C: Cost/Price Proposal

4.1 Price Schedule

The following table presents the proposed full, fixed hourly billing rates for the key members of the MRW Team. These billing rates will be in effect for the initial term of the contract.

Table 4: Price Schedule for MRW Team

MRW & Associates (Prime Contractor)			
Staff Member	Classification/Expertise**	Task Area	Hourly Rate*
William A. Monsen	Principal Consultant	Expert Witness on Rates, Resource Planning, and Policy	\$340
David N. Howarth	Principal	Economic Analysis of Resource Options	\$315
Mark E. Fulmer	Principal	Rates and Policy, Community Choice Aggregation, Exit Fees	\$315
Mary Neal	Senior Project Manager	Rates and Policy	\$270
Benjamin Kern	Technical Analyst	Technical support	\$145
Energy Dynamix (Subcontractor)			
Staff Member	Classification/Expertise**	Task Area	Hourly Rate*
Bob Hoffman	Principal	Bill and Tariff Monitoring, Project Feasibility and Implementation	\$250
RMS Energy Consulting (Subcontractor)			
Staff Member	Classification/Expertise**	Task Area	Hourly Rate
Martin Vu	Principal	Bill and Tariff Monitoring, Project Feasibility and Implementation	\$200
David Wylie, P.E.	Engineering Manager	Bill and Tariff Monitoring, Project Feasibility and Implementation	\$180
Angela Crowely	Engineer III	Bill and Tariff Monitoring, Project Feasibility and Implementation	\$150
Steven Apodaca	Engineer II	Bill and Tariff Monitoring, Project Feasibility and Implementation	\$140
Tierra Resource Consultants (Subcontractor)			
Staff Member	Classification/Expertise**	Task Area	Hourly Rate
Floyd Keneipp	Principal	Energy Project Funding and Regulatory Support	\$195
Nicholas Snyder	Managing Consultant	Energy Project Funding and Regulatory Support	\$160
Gabriela Limon	Principal	Energy Project Funding and Regulatory Support	\$90
* Hourly rates for MRW are discounted by 10% relative to our normal billing rates.			
** See Tab B for Resumes			

4.2 Upper Bound Estimate of Fees and Expenses

As discussed in Tab B, MRW has identified a range of possible tasks that the City might request under this contract. Based on that assumed level of effort, we developed an estimate of the upper bound for fees and expenses for this project (Table 5). Please note that the estimate of fees and expenses by task area are very uncertain. The MRW Team’s proposed upper bound on estimated fees is based on the total fees shown at the bottom of the table.⁹

Note that pursuant to the RFP, the City will determine the proceedings and activities it wishes to pursue under the Energy Consulting contract. As stated in the RFP, the maximum compensation allowed in accordance with the Contract is \$500,000, which effectively puts a cap on our cost proposal and will necessitate the City being selective in assigning tasks.

Table 5: Upper Bound Estimate of Fees for Project

Contract Year	1	2*	3*	4*	5*	Total
Regulatory						
GRC	50,000	25,000	100,000	-	50,000	200,000
NEM Issues	25,000	-	-	25,000	-	50,000
RTP and Fleet EV	30,000	30,000	-	-	-	60,000
EVs & Electrification	25,000	50,000	75,000	75,000	25,000	325,000
EE	30,000	-	30,000	-	30,000	90,000
REN Application	30,000	30,000	30,000	30,000	30,000	150,000
SGIP	-	30,000	-	-	30,000	60,000
Bill Review						
Monthly Bill Review	90,000	90,000	90,000	90,000	90,000	450,000
Bill Review Model	50,000	-	-	-	-	50,000
Semi-Annual Tariff Review	30,000	30,000	30,000	30,000	30,000	150,000
Subtotal	360,000	285,000	355,000	250,000	285,000	1,535,000
Contingency (20%)	72,000	57,000	71,000	50,000	57,000	307,000
Subtotal	432,000	342,000	426,000	300,000	342,000	1,842,000
Expenses (5% of fees)	21,600	17,100	21,300	15,000	17,100	92,100
Total	453,600	359,100	447,300	315,000	359,100	1,934,100

⁹ It is not possible to precisely identify all potential activities in which the City may need to participate. For example, the CPUC may open a rulemaking that is not anticipated in the above table. For that reason, MRW has added a contingency amount in its budget estimate.

EXHIBIT C



THE CITY OF SAN DIEGO
GENERAL CONTRACT TERMS AND PROVISIONS
APPLICABLE TO GOODS, SERVICES, AND CONSULTANT CONTRACTS

ARTICLE I SCOPE AND TERM OF CONTRACT

1.1 Scope of Contract. The scope of contract between the City and a provider of goods and/or services (Contractor) is described in the Contract Documents. The Contract Documents are comprised of the Request for Proposal, Invitation to Bid, or other solicitation document (Solicitation); the successful bid or proposal; the letter awarding the contract to Contractor; the City's written acceptance of exceptions or clarifications to the Solicitation, if any; and these General Contract Terms and Provisions.

1.2 Effective Date. A contract between the City and Contractor (Contract) is effective on the last date that the contract is signed by the parties and approved by the City Attorney in accordance with Charter section 40. Unless otherwise terminated, this Contract is effective until it is completed or as otherwise agreed upon in writing by the parties, whichever is the earliest. A Contract term cannot exceed five (5) years unless approved by the City Council by ordinance.

1.3 Contract Extension. The City may, in its sole discretion, unilaterally exercise an option to extend the Contract as described in the Contract Documents. In addition, the City may, in its sole discretion, unilaterally extend the Contract on a month-to-month basis following contract expiration if authorized under Charter section 99 and the Contract Documents. Contractor shall not increase its pricing in excess of the percentage increase described in the Contract.

ARTICLE II CONTRACT ADMINISTRATOR

2.1 Contract Administrator. The Purchasing Agent or designee is the Contract Administrator for purposes of this Contract, and has the responsibilities described in this Contract, in the San Diego Charter, and in Chapter 2, Article 2, Divisions 5, 30, and 32.

2.1.1 Contractor Performance Evaluations. The Contract Administrator will evaluate Contractor's performance as often as the Contract Administrator deems necessary throughout the term of the contract. This evaluation will be based on criteria including the quality of goods or services, the timeliness of performance, and adherence to applicable laws, including prevailing wage and living wage. City will provide Contractors who receive an unsatisfactory rating with a copy of the evaluation and an opportunity to respond. City may consider final evaluations, including Contractor's response, in evaluating future proposals and bids for contract award.

2.2 Notices. Unless otherwise specified, in all cases where written notice is required under this Contract, service shall be deemed sufficient if the notice is personally delivered or deposited in the United States mail, with first class postage paid, attention to the Purchasing Agent. Proper notice is effective on the date of personal delivery or five (5) days after deposit in a United States postal mailbox unless provided otherwise in the Contract. Notices to the City shall be sent to:

Purchasing Agent
City of San Diego, Purchasing and Contracting Division
1200 3rd Avenue, Suite 200
San Diego, CA 92101-4195

ARTICLE III COMPENSATION

3.1 Manner of Payment. Contractor will be paid monthly, in arrears, for goods and/or services provided in accordance with the terms and provisions specified in the Contract.

3.2 Invoices.

3.2.1 Invoice Detail. Contractor's invoice must be on Contractor's stationary with Contractor's name, address, and remittance address if different. Contractor's invoice must have a date, an invoice number, a purchase order number, a description of the goods or services provided, and an amount due.

3.2.2 Service Contracts. Contractor must submit invoices for services to City by the 10th of the month following the month in which Contractor provided services. Invoices must include the address of the location where services were performed and the dates in which services were provided.

3.2.3 Goods Contracts. Contractor must submit invoices for goods to City within seven days of the shipment. Invoices must describe the goods provided.

3.2.4 Parts Contracts. Contractor must submit invoices for parts to City within seven calendar (7) days of the date the parts are shipped. Invoices must include the manufacturer of the part, manufacturer's published list price, percentage discount applied in accordance with Pricing Page(s), the net price to City, and an item description, quantity, and extension.

3.2.5 Extraordinary Work. City will not pay Contractor for extraordinary work unless Contractor receives prior written authorization from the Contract Administrator. Failure to do so will result in payment being withheld for services. If approved, Contractor will include an invoice that describes the work performed and the location where the work was performed, and a copy of the Contract Administrator's written authorization.

3.2.6 Reporting Requirements. Contractor must submit the following reports using the City's web-based contract compliance portal. Incomplete and/or delinquent reports may cause payment delays, non-payment of invoice, or both. For questions, please view the City's online tutorials on how to utilize the City's web-based contract compliance portal.

3.2.6.1 Monthly Employment Utilization Reports. Contractor and Contractor's subcontractors and suppliers must submit Monthly Employment Utilization Reports by the fifth (5th) day of the subsequent month.

3.2.6.2 Monthly Invoicing and Payments. Contractor and Contractor's subcontractors and suppliers must submit Monthly Invoicing and Payment Reports by the fifth (5th) day of the subsequent month.

3.3 Annual Appropriation of Funds. Contractor acknowledges that the Contract term may extend over multiple City fiscal years, and that work and compensation under this Contract is contingent on the City Council appropriating funding for and authorizing such work and compensation for those fiscal years. This Contract may be terminated at the end of the fiscal year for which sufficient funding is not appropriated and authorized. City is not obligated to pay Contractor for any amounts not duly appropriated and authorized by City Council.

3.4 Price Adjustments. Based on Contractor's written request and justification, the City may approve an increase in unit prices on Contractor's pricing pages consistent with the amount requested in the justification in an amount not to exceed the increase in the Consumer Price Index, San Diego Area, for All Urban Customers (CPI-U) as published by the Bureau of Labor Statistics, or 5.0%, whichever is less, during the preceding one year term. If the CPI-U is a negative number, then the unit prices shall not be adjusted for that option year (the unit prices will not be decreased). A negative CPI-U shall be counted against any subsequent increases in the CPI-U when calculating the unit prices for later option years. Contractor must provide such written request and justification no less than sixty days before the date in which City may exercise the option to renew the contract, or sixty days before the anniversary date of the Contract. Justification in support of the written request must include a description of the basis for the adjustment, the proposed effective date and reasons for said date, and the amount of the adjustment requested with documentation to support the requested change (e.g. CPI-U or 5.0%, whichever is less). City's approval of this request must be in writing.

ARTICLE IV SUSPENSION AND TERMINATION

4.1 City's Right to Suspend for Convenience. City may suspend all or any portion of Contractor's performance under this Contract at its sole option and for its convenience for a reasonable period of time not to exceed six (6) months. City must first give ten (10) days' written notice to Contractor of such suspension. City will pay to Contractor a sum equivalent to the reasonable value of the goods and/or services satisfactorily provided up to the date of suspension. City may rescind the suspension prior to or at six (6) months by providing Contractor with written notice of the rescission, at which time Contractor would be required to resume performance in compliance with the terms and provisions of this Contract. Contractor will be entitled to an extension of time to complete performance under the Contract equal to the length of the suspension unless otherwise agreed to in writing by the Parties.

4.2 City's Right to Terminate for Convenience. City may, at its sole option and for its convenience, terminate all or any portion of this Contract by giving thirty (30) days' written notice of such termination to Contractor. The termination of the Contract shall be effective upon receipt of the notice by Contractor. After termination of all or any portion of the Contract, Contractor shall: (1) immediately discontinue all affected performance (unless the notice directs otherwise); and (2) complete any and all additional work necessary for the orderly filing of

documents and closing of Contractor's affected performance under the Contract. After filing of documents and completion of performance, Contractor shall deliver to City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials created or received by Contractor in performing this Contract, whether completed or in process. By accepting payment for completion, filing, and delivering documents as called for in this section, Contractor discharges City of all of City's payment obligations and liabilities under this Contract with regard to the affected performance.

4.3 City's Right to Terminate for Default. Contractor's failure to satisfactorily perform any obligation required by this Contract constitutes a default. Examples of default include a determination by City that Contractor has: (1) failed to deliver goods and/or perform the services of the required quality or within the time specified; (2) failed to perform any of the obligations of this Contract; and (3) failed to make sufficient progress in performance which may jeopardize full performance.

4.3.1 If Contractor fails to satisfactorily cure a default within ten (10) calendar days of receiving written notice from City specifying the nature of the default, City may immediately cancel and/or terminate this Contract, and terminate each and every right of Contractor, and any person claiming any rights by or through Contractor under this Contract.

4.3.2 If City terminates this Contract, in whole or in part, City may procure, upon such terms and in such manner as the Purchasing Agent may deem appropriate, equivalent goods or services and Contractor shall be liable to City for any excess costs. Contractor shall also continue performance to the extent not terminated.

4.4 Termination for Bankruptcy or Assignment for the Benefit of Creditors. If Contractor files a voluntary petition in bankruptcy, is adjudicated bankrupt, or makes a general assignment for the benefit of creditors, the City may at its option and without further notice to, or demand upon Contractor, terminate this Contract, and terminate each and every right of Contractor, and any person claiming rights by and through Contractor under this Contract.

4.5 Contractor's Right to Payment Following Contract Termination.

4.5.1 Termination for Convenience. If the termination is for the convenience of City an equitable adjustment in the Contract price shall be made. No amount shall be allowed for anticipated profit on unperformed services, and no amount shall be paid for an as needed contract beyond the Contract termination date.

4.5.2 Termination for Default. If, after City gives notice of termination for failure to fulfill Contract obligations to Contractor, it is determined that Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of City. In such event, adjustment in the Contract price shall be made as provided in Section 4.3.2. City's rights and remedies are in addition to any other rights and remedies provided by law or under this Contract.

4.6 Remedies Cumulative. City's remedies are cumulative and are not intended to be exclusive of any other remedies or means of redress to which City may be lawfully entitled in case of any breach or threatened breach of any provision of this Contract.

ARTICLE V ADDITIONAL CONTRACTOR OBLIGATIONS

5.1 Inspection and Acceptance. The City will inspect and accept goods provided under this Contract at the shipment destination unless specified otherwise. Inspection will be made and acceptance will be determined by the City department shown in the shipping address of the Purchase Order or other duly authorized representative of City.

5.2 Responsibility for Lost or Damaged Shipments. Contractor bears the risk of loss or damage to goods prior to the time of their receipt and acceptance by City. City has no obligation to accept damaged shipments and reserves the right to return damaged goods, at Contractor's sole expense, even if the damage was not apparent or discovered until after receipt.

5.3 Responsibility for Damages. Contractor is responsible for all damage that occurs as a result of Contractor's fault or negligence or that of its' employees, agents, or representatives in connection with the performance of this Contract. Contractor shall immediately report any such damage to people and/or property to the Contract Administrator.

5.4 Delivery. Delivery shall be made on the delivery day specified in the Contract Documents. The City, in its sole discretion, may extend the time for delivery. The City may order, in writing, the suspension, delay or interruption of delivery of goods and/or services.

5.5 Delay. Unless otherwise specified herein, time is of the essence for each and every provision of the Contract. Contractor must immediately notify City in writing if there is, or it is anticipated that there will be, a delay in performance. The written notice must explain the cause for the delay and provide a reasonable estimate of the length of the delay. City may terminate this Contract as provided herein if City, in its sole discretion, determines the delay is material.

5.5.1 If a delay in performance is caused by any unforeseen event(s) beyond the control of the parties, City may allow Contractor to a reasonable extension of time to complete performance, but Contractor will not be entitled to damages or additional compensation. Any such extension of time must be approved in writing by City. The following conditions may constitute such a delay: war; changes in law or government regulation; labor disputes; strikes; fires, floods, adverse weather or other similar condition of the elements necessitating cessation of the performance; inability to obtain materials, equipment or labor; or other specific reasons agreed to between City and Contractor. This provision does not apply to a delay caused by Contractor's acts or omissions. Contractor is not entitled to an extension of time to perform if a delay is caused by Contractor's inability to obtain materials, equipment, or labor unless City has received, in a timely manner, documentary proof satisfactory to City of Contractor's inability to obtain materials, equipment, or labor, in which case City's approval must be in writing.

5.6 Restrictions and Regulations Requiring Contract Modification. Contractor shall immediately notify City in writing of any regulations or restrictions that may or will require Contractor to alter the material, quality, workmanship, or performance of the goods and/or services to be provided. City reserves the right to accept any such alteration, including any resulting reasonable price adjustments, or to cancel the Contract at no expense to the City.

5.7 Warranties. All goods and/or services provided under the Contract must be warranted by Contractor or manufacturer for at least twelve (12) months after acceptance by City, except automotive equipment. Automotive equipment must be warranted for a minimum of 12,000 miles or 12 months, whichever occurs first, unless otherwise stated in the Contract. Contractor is responsible to City for all warranty service, parts, and labor. Contractor is required to ensure that warranty work is performed at a facility acceptable to City and that services, parts, and labor are available and provided to meet City's schedules and deadlines. Contractor may establish a warranty service contract with an agency satisfactory to City instead of performing the warranty service itself. If Contractor is not an authorized service center and causes any damage to equipment being serviced, which results in the existing warranty being voided, Contractor will be liable for all costs of repairs to the equipment, or the costs of replacing the equipment with new equipment that meets City's operational needs.

5.8 Industry Standards. Contractor shall provide goods and/or services acceptable to City in strict conformance with the Contract. Contractor shall also provide goods and/or services in accordance with the standards customarily adhered to by an experienced and competent provider of the goods and/or services called for under this Contract using the degree of care and skill ordinarily exercised by reputable providers of such goods and/or services. Where approval by City, the Mayor, or other representative of City is required, it is understood to be general approval only and does not relieve Contractor of responsibility for complying with all applicable laws, codes, policies, regulations, and good business practices.

5.9 Records Retention and Examination. Contractor shall retain, protect, and maintain in an accessible location all records and documents, including paper, electronic, and computer records, relating to this Contract for five (5) years after receipt of final payment by City under this Contract. Contractor shall make all such records and documents available for inspection, copying, or other reproduction, and auditing by authorized representatives of City, including the Purchasing Agent or designee. Contractor shall make available all requested data and records at reasonable locations within City or County of San Diego at any time during normal business hours, and as often as City deems necessary. If records are not made available within the City or County of San Diego, Contractor shall pay City's travel costs to the location where the records are maintained and shall pay for all related travel expenses. Failure to make requested records available for inspection, copying, or other reproduction, or auditing by the date requested may result in termination of the Contract. Contractor must include this provision in all subcontracts made in connection with this Contract.

5.9.1 Contractor shall maintain records of all subcontracts entered into with all firms, all project invoices received from Subcontractors and Suppliers, all purchases of materials and services from Suppliers, and all joint venture participation. Records shall show name, telephone number including area code, and business address of each Subcontractor and Supplier, and joint venture partner, and the total amount actually paid to each firm. Project relevant records, regardless of tier, may be periodically reviewed by the City.

5.10 Quality Assurance Meetings. Upon City's request, Contractor shall schedule one or more quality assurance meetings with City's Contract Administrator to discuss Contractor's performance. If requested, Contractor shall schedule the first quality assurance meeting no later than eight (8) weeks from the date of commencement of work under the Contract. At the quality assurance meeting(s), City's Contract Administrator will provide Contractor with feedback, will note any deficiencies in Contract performance, and provide Contractor with an opportunity to address and correct such deficiencies. The total number of quality assurance meetings that may be required by City will depend upon Contractor's performance.

5.11 Duty to Cooperate with Auditor. The City Auditor may, in his sole discretion, at no cost to the City, and for purposes of performing his responsibilities under Charter section 39.2, review Contractor's records to confirm contract compliance. Contractor shall make reasonable efforts to cooperate with Auditor's requests.

5.12 Safety Data Sheets. If specified by City in the solicitation or otherwise required by this Contract, Contractor must send with each shipment one (1) copy of the Safety Data Sheet (SDS) for each item shipped. Failure to comply with this procedure will be cause for immediate termination of the Contract for violation of safety procedures.

5.13 Project Personnel. Except as formally approved by the City, the key personnel identified in Contractor's bid or proposal shall be the individuals who will actually complete the work. Changes in staffing must be reported in writing and approved by the City.

5.13.1 Criminal Background Certification. Contractor certifies that all employees working on this Contract have had a criminal background check and that said employees are clear of any sexual and drug related convictions. Contractor further certifies that all employees hired by Contractor or a subcontractor shall be free from any felony convictions.

5.13.2 Photo Identification Badge. Contractor shall provide a company photo identification badge to any individual assigned by Contractor or subcontractor to perform services or deliver goods on City premises. Such badge must be worn at all times while on City premises. City reserves the right to require Contractor to pay fingerprinting fees for personnel assigned to work in sensitive areas. All employees shall turn in their photo identification badges to Contractor upon completion of services and prior to final payment of invoice.

5.14 Standards of Conduct. Contractor is responsible for maintaining standards of employee competence, conduct, courtesy, appearance, honesty, and integrity satisfactory to the City.

5.14.1 Supervision. Contractor shall provide adequate and competent supervision at all times during the Contract term. Contractor shall be readily available to meet with the City. Contractor shall provide the telephone numbers where its representative(s) can be reached.

5.14.2 City Premises. Contractor's employees and agents shall comply with all City rules and regulations while on City premises.

5.14.3 Removal of Employees. City may request Contractor immediately remove from assignment to the City any employee found unfit to perform duties at the City. Contractor shall comply with all such requests.

5.15 Licenses and Permits. Contractor shall, without additional expense to the City, be responsible for obtaining any necessary licenses, permits, certifications, accreditations, fees and approvals for complying with any federal, state, county, municipal, and other laws, codes, and regulations applicable to Contract performance. This includes, but is not limited to, any laws or regulations requiring the use of licensed contractors to perform parts of the work.

5.16 Contractor and Subcontractor Registration Requirements. Prior to the award of the Contract or Task Order, Contractor and Contractor's subcontractors and suppliers must register with the City's web-based vendor registration and bid management system. The City may not award the Contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified by the City, the City reserves the right to rescind the Contract award and to make the award to the next responsive and responsible proposer of bidder.

ARTICLE VI INTELLECTUAL PROPERTY RIGHTS

6.1 Rights in Data. If, in connection with the services performed under this Contract, Contractor or its employees, agents, or subcontractors, create artwork, audio recordings, blueprints, designs, diagrams, documentation, photographs, plans, reports, software, source code, specifications, surveys, system designs, video recordings, or any other original works of authorship, whether written or readable by machine (Deliverable Materials), all rights of Contractor or its subcontractors in the Deliverable Materials, including, but not limited to publication, and registration of copyrights, and trademarks in the Deliverable Materials, are the sole property of City. Contractor, including its employees, agents, and subcontractors, may not use any Deliverable Material for purposes unrelated to Contractor's work on behalf of the City without prior written consent of City. Contractor may not publish or reproduce any Deliverable Materials, for purposes unrelated to Contractor's work on behalf of the City, without the prior written consent of the City.

6.2 Intellectual Property Rights Assignment. For no additional compensation, Contractor hereby assigns to City all of Contractor's rights, title, and interest in and to the content of the Deliverable Materials created by Contractor or its employees, agents, or subcontractors, including copyrights, in connection with the services performed under this Contract. Contractor

shall promptly execute and deliver, and shall cause its employees, agents, and subcontractors to promptly execute and deliver, upon request by the City or any of its successors or assigns at any time and without further compensation of any kind, any power of attorney, assignment, application for copyright, patent, trademark or other intellectual property right protection, or other papers or instruments which may be necessary or desirable to fully secure, perfect or otherwise protect to or for the City, its successors and assigns, all right, title and interest in and to the content of the Deliverable Materials. Contractor also shall cooperate and assist in the prosecution of any action or opposition proceeding involving such intellectual property rights and any adjudication of those rights.

6.3 Contractor Works. Contractor Works means tangible and intangible information and material that: (a) had already been conceived, invented, created, developed or acquired by Contractor prior to the effective date of this Contract; or (b) were conceived, invented, created, or developed by Contractor after the effective date of this Contract, but only to the extent such information and material do not constitute part or all of the Deliverable Materials called for in this Contract. All Contractor Works, and all modifications or derivatives of such Contractor Works, including all intellectual property rights in or pertaining to the same, shall be owned solely and exclusively by Contractor.

6.4 Subcontracting. In the event that Contractor utilizes a subcontractor(s) for any portion of the work that comprises the whole or part of the specified Deliverable Materials to the City, the agreement between Contractor and the subcontractor shall include a statement that identifies the Deliverable Materials as a “works for hire” as described in the United States Copyright Act of 1976, as amended, and that all intellectual property rights in the Deliverable Materials, whether arising in copyright, trademark, service mark or other forms of intellectual property rights, belong to and shall vest solely with the City. Further, the agreement between Contractor and its subcontractor shall require that the subcontractor, if necessary, shall grant, transfer, sell and assign, free of charge, exclusively to City, all titles, rights and interests in and to the Deliverable Materials, including all copyrights, trademarks and other intellectual property rights. City shall have the right to review any such agreement for compliance with this provision.

6.5 Intellectual Property Warranty and Indemnification. Contractor represents and warrants that any materials or deliverables, including all Deliverable Materials, provided under this Contract are either original, or not encumbered, and do not infringe upon the copyright, trademark, patent or other intellectual property rights of any third party, or are in the public domain. If Deliverable Materials provided hereunder become the subject of a claim, suit or allegation of copyright, trademark or patent infringement, City shall have the right, in its sole discretion, to require Contractor to produce, at Contractor’s own expense, new non-infringing materials, deliverables or works as a means of remedying any claim of infringement in addition to any other remedy available to the City under law or equity. Contractor further agrees to indemnify, defend, and hold harmless the City, its officers, employees and agents from and against any and all claims, actions, costs, judgments or damages, of any type, alleging or threatening that any Deliverable Materials, supplies, equipment, services or works provided under this contract infringe the copyright, trademark, patent or other intellectual property or proprietary rights of any third party (Third Party Claim of Infringement). If a Third Party Claim

of Infringement is threatened or made before Contractor receives payment under this Contract, City shall be entitled, upon written notice to Contractor, to withhold some or all of such payment.

6.6 Software Licensing. Contractor represents and warrants that the software, if any, as delivered to City, does not contain any program code, virus, worm, trap door, back door, time or clock that would erase data or programming or otherwise cause the software to become inoperable, inaccessible, or incapable of being used in accordance with its user manuals, either automatically, upon the occurrence of licensor-selected conditions or manually on command. Contractor further represents and warrants that all third party software, delivered to City or used by Contractor in the performance of the Contract, is fully licensed by the appropriate licensor.

6.7 Publication. Contractor may not publish or reproduce any Deliverable Materials, for purposes unrelated to Contractor's work on behalf of the City without prior written consent from the City.

6.8 Royalties, Licenses, and Patents. Unless otherwise specified, Contractor shall pay all royalties, license, and patent fees associated with the goods that are the subject of this solicitation. Contractor warrants that the goods, materials, supplies, and equipment to be supplied do not infringe upon any patent, trademark, or copyright, and further agrees to defend any and all suits, actions and claims for infringement that are brought against the City, and to defend, indemnify and hold harmless the City, its elected officials, officers, and employees from all liability, loss and damages, whether general, exemplary or punitive, suffered as a result of any actual or claimed infringement asserted against the City, Contractor, or those furnishing goods, materials, supplies, or equipment to Contractor under the Contract.

ARTICLE VII INDEMNIFICATION AND INSURANCE

7.1 Indemnification. To the fullest extent permitted by law, Contractor shall defend (with legal counsel reasonably acceptable to City), indemnify, protect, and hold harmless City and its elected officials, officers, employees, agents, and representatives (Indemnified Parties) from and against any and all claims, losses, costs, damages, injuries (including, without limitation, injury to or death of an employee of Contractor or its subcontractors), expense, and liability of every kind, nature and description (including, without limitation, incidental and consequential damages, court costs, and litigation expenses and fees of expert consultants or expert witnesses incurred in connection therewith and costs of investigation) that arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, any goods provided or performance of services under this Contract by Contractor, any subcontractor, anyone directly or indirectly employed by either of them, or anyone that either of them control. Contractor's duty to defend, indemnify, protect and hold harmless shall not include any claims or liabilities arising from the sole negligence or willful misconduct of the Indemnified Parties.

7.2 Insurance. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or

in connection with the performance of the work hereunder and the results of that work by Contractor, his agents, representatives, employees or subcontractors.

Contractor shall provide, at a minimum, the following:

7.2.1 Commercial General Liability. Insurance Services Office Form CG 00 01 covering CGL on an “occurrence” basis, including products and completed operations, property damage, bodily injury, and personal and advertising injury with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.

7.2.2 Commercial Automobile Liability. Insurance Services Office Form Number CA 0001 covering Code 1 (any auto) or, if Contractor has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than \$1,000,000 per accident for bodily injury and property damage.

7.2.3 Workers' Compensation. Insurance as required by the State of California, with Statutory Limits, and Employer’s Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.

7.2.4 Professional Liability (Errors and Omissions). For consultant contracts, insurance appropriate to Consultant’s profession, with limit no less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate.

If Contractor maintains broader coverage and/or higher limits than the minimums shown above, City requires and shall be entitled to the broader coverage and/or the higher limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

7.2.5 Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:

7.2.5.1 Additional Insured Status. The City, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to Contractor’s insurance (at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10, CG 20 26, CG 20 33, or CG 20 38; and CG 20 37 if a later edition is used).

7.2.5.2 Primary Coverage. For any claims related to this contract, Contractor's insurance coverage shall be primary coverage at least as broad as ISO CG 20 01 04 13 as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by City, its officers, officials, employees, or volunteers shall be excess of Contractor's insurance and shall not contribute with it.

7.2.5.3 Notice of Cancellation. Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to City.

7.2.5.4 Waiver of Subrogation. Contractor hereby grants to City a waiver of any right to subrogation which the Workers' Compensation insurer of said Contractor may acquire against City by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.

7.2.5.5 Claims Made Policies (applicable only to professional liability). The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, Contractor must purchase "extended reporting" coverage for a minimum of five (5) years after completion of work.

7.3 Self Insured Retentions. Self-insured retentions must be declared to and approved by City. City may require Contractor to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or City.

7.4 Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-VI, unless otherwise acceptable to City.

City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State of California and is included on the List of Approved Surplus Lines Insurers (LASLI list). All policies of insurance carried by non-admitted carriers are subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

7.5 Verification of Coverage. Contractor shall furnish City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by City before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive Contractor's obligation to provide them. City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

7.6 Special Risks or Circumstances. City reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

7.7 Additional Insurance. Contractor may obtain additional insurance not required by this Contract.

7.8 Excess Insurance. All policies providing excess coverage to City shall follow the form of the primary policy or policies including but not limited to all endorsements.

7.9 Subcontractors. Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that City is an additional insured on insurance required from subcontractors. For CGL coverage, subcontractors shall provide coverage with a format at least as broad as the CG 20 38 04 13 endorsement.

ARTICLE VIII BONDS

8.1 Payment and Performance Bond. Prior to the execution of this Contract, City may require Contractor to post a payment and performance bond (Bond). The Bond shall guarantee Contractor's faithful performance of this Contract and assure payment to contractors, subcontractors, and to persons furnishing goods and/or services under this Contract.

8.1.1 Bond Amount. The Bond shall be in a sum equal to twenty-five percent (25%) of the Contract amount, unless otherwise stated in the Specifications. City may file a claim against the Bond if Contractor fails or refuses to fulfill the terms and provisions of the Contract.

8.1.2 Bond Term. The Bond shall remain in full force and effect at least until complete performance of this Contract and payment of all claims for materials and labor, at which time it will convert to a ten percent (10%) warranty bond, which shall remain in place until the end of the warranty periods set forth in this Contract. The Bond shall be renewed annually, at least sixty (60) days in advance of its expiration, and Contractor shall provide timely proof of annual renewal to City.

8.1.3 Bond Surety. The Bond must be furnished by a company authorized by the State of California Department of Insurance to transact surety business in the State of California and which has a current A.M. Best rating of at least "A-, VIII."

8.1.4 Non-Renewal or Cancellation. The Bond must provide that City and Contractor shall be provided with sixty (60) days' advance written notice in the event of non-renewal, cancellation, or material change to its terms. In the event of non-renewal, cancellation, or material change to the Bond terms, Contractor shall provide City with evidence of the new source of surety within twenty-one (21) calendar days after the date of the notice of non-renewal, cancellation, or material change. Failure to maintain the Bond, as required herein, in full force

and effect as required under this Contract, will be a material breach of the Contract subject to termination of the Contract.

8.2 Alternate Security. City may, at its sole discretion, accept alternate security in the form of an endorsed certificate of deposit, a money order, a certified check drawn on a solvent bank, or other security acceptable to the Purchasing Agent in an amount equal to the required Bond.

ARTICLE IX CITY-MANDATED CLAUSES AND REQUIREMENTS

9.1 Contractor Certification of Compliance. By signing this Contract, Contractor certifies that Contractor is aware of, and will comply with, these City-mandated clauses throughout the duration of the Contract.

9.1.1 Drug-Free Workplace Certification. Contractor shall comply with City's Drug-Free Workplace requirements set forth in Council Policy 100-17, which is incorporated into the Contract by this reference.

9.1.2 Contractor Certification for Americans with Disabilities Act (ADA) and State Access Laws and Regulations: Contractor shall comply with all accessibility requirements under the ADA and under Title 24 of the California Code of Regulations (Title 24). When a conflict exists between the ADA and Title 24, Contractor shall comply with the most restrictive requirement (i.e., that which provides the most access). Contractor also shall comply with the City's ADA Compliance/City Contractors requirements as set forth in Council Policy 100-04, which is incorporated into this Contract by reference. Contractor warrants and certifies compliance with all federal and state access laws and regulations and further certifies that any subcontract agreement for this contract contains language which indicates the subcontractor's agreement to abide by the provisions of the City's Council Policy and any applicable access laws and regulations.

9.1.3 Non-Discrimination Requirements.

9.1.3.1 Compliance with City's Equal Opportunity Contracting Program (EOCP). Contractor shall comply with City's EOCP Requirements. Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractors shall ensure that their subcontractors comply with this program. Nothing in this Section shall be interpreted to hold a Prime Contractor liable for any discriminatory practice of its subcontractors.

9.1.3.2 Non-Discrimination Ordinance. Contractor shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring or treatment of subcontractors, vendors or suppliers. Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result

in Contract termination, debarment, or other sanctions. Contractor shall ensure that this language is included in contracts between Contractor and any subcontractors, vendors and suppliers.

9.1.3.3 Compliance Investigations. Upon City's request, Contractor agrees to provide to City, within sixty calendar days, a truthful and complete list of the names of all subcontractors, vendors, and suppliers that Contractor has used in the past five years on any of its contracts that were undertaken within San Diego County, including the total dollar amount paid by Contractor for each subcontract or supply contract. Contractor further agrees to fully cooperate in any investigation conducted by City pursuant to City's Nondiscrimination in Contracting Ordinance. Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in Contract termination, debarment, and other sanctions.

9.1.4 Equal Benefits Ordinance Certification. Unless an exception applies, Contractor shall comply with the Equal Benefits Ordinance (EBO) codified in the San Diego Municipal Code (SDMC). Failure to maintain equal benefits is a material breach of the Contract.

9.1.5 Contractor Standards. Contractor shall comply with Contractor Standards provisions codified in the SDMC. Contractor understands and agrees that violation of Contractor Standards may be considered a material breach of the Contract and may result in Contract termination, debarment, and other sanctions.

9.1.6 Noise Abatement. Contractor shall operate, conduct, or construct without violating the City's Noise Abatement Ordinance codified in the SDMC.

9.1.7 Storm Water Pollution Prevention Program. Contractor shall comply with the City's Storm Water Management and Discharge Control provisions codified in Division 3 of Chapter 4 of the SDMC, as may be amended, and any and all applicable Best Management Practice guidelines and pollution elimination requirements in performing or delivering services at City owned, leased, or managed property, or in performance of services and activities on behalf of City regardless of location.

Contractor shall comply with the City's Jurisdictional Urban Runoff Management Plan encompassing Citywide programs and activities designed to prevent and reduce storm water pollution within City boundaries as adopted by the City Council on January 22, 2008, via Resolution No. 303351, as may be amended.

Contractor shall comply with each City facility or work site's Storm Water Pollution Prevention Plan, as applicable, and institute all controls needed while completing the services to minimize any negative impact to the storm water collection system and environment.

9.1.8 Service Worker Retention Ordinance. If applicable, Contractor shall comply with the Service Worker Retention Ordinance (SWRO) codified in the SDMC.

9.1.9 Product Endorsement. Contractor shall comply with Council Policy 000-41 which requires that other than listing the City as a client and other limited endorsements, any advertisements, social media, promotions or other marketing referring to the City as a user of a product or service will require prior written approval of the Mayor or designee. Use of the City Seal or City logos is prohibited.

9.1.10 Business Tax Certificate. Unless the City Treasurer determines in writing that a contractor is exempt from the payment of business tax, any contractor doing business with the City of San Diego is required to obtain a Business Tax Certificate (BTC) and to provide a copy of its BTC to the City before a Contract is executed.

9.1.11 Equal Pay Ordinance. Unless an exception applies, Contractor shall comply with the Equal Pay Ordinance codified in San Diego Municipal Code sections 22.4801 through 22.4809. Contractor shall certify in writing that it will comply with the requirements of the EPO.

9.1.11.1 Contractor and Subcontract Requirement. The Equal Pay Ordinance applies to any subcontractor who performs work on behalf of a Contractor to the same extent as it would apply to that Contractor. Any Contractor subject to the Equal Pay Ordinance shall require all of its subcontractors to certify compliance with the Equal Pay Ordinance in its written subcontracts.

ARTICLE X CONFLICT OF INTEREST AND VIOLATIONS OF LAW

10.1 Conflict of Interest Laws. Contractor is subject to all federal, state and local conflict of interest laws, regulations, and policies applicable to public contracts and procurement practices including, but not limited to, California Government Code sections 1090, *et. seq.* and 81000, *et. seq.*, and the Ethics Ordinance, codified in the SDMC. City may determine that Contractor must complete one or more statements of economic interest disclosing relevant financial interests. Upon City's request, Contractor shall submit the necessary documents to City.

10.2 Contractor's Responsibility for Employees and Agents. Contractor is required to establish and make known to its employees and agents appropriate safeguards to prohibit employees from using their positions for a purpose that is, or that gives the appearance of being, motivated by the desire for private gain for themselves or others, particularly those with whom they have family, business or other relationships.

10.3 Contractor's Financial or Organizational Interests. In connection with any task, Contractor shall not recommend or specify any product, supplier, or contractor with whom Contractor has a direct or indirect financial or organizational interest or relationship that would violate conflict of interest laws, regulations, or policies.

10.4 Certification of Non-Collusion. Contractor certifies that: (1) Contractor's bid or proposal was not made in the interest of or on behalf of any person, firm, or corporation not identified; (2) Contractor did not directly or indirectly induce or solicit any other bidder or proposer to put in a sham bid or proposal; (3) Contractor did not directly or indirectly induce or

solicit any other person, firm or corporation to refrain from bidding; and (4) Contractor did not seek by collusion to secure any advantage over the other bidders or proposers.

10.5 Hiring City Employees. This Contract shall be unilaterally and immediately terminated by City if Contractor employs an individual who within the twelve (12) months immediately preceding such employment did in his/her capacity as a City officer or employee participate in negotiations with or otherwise have an influence on the selection of Contractor.

ARTICLE XI DISPUTE RESOLUTION

11.1 Mediation. If a dispute arises out of or relates to this Contract and cannot be settled through normal contract negotiations, Contractor and City shall use mandatory non-binding mediation before having recourse in a court of law.

11.2 Selection of Mediator. A single mediator that is acceptable to both parties shall be used to mediate the dispute. The mediator will be knowledgeable in the subject matter of this Contract, if possible.

11.3 Expenses. The expenses of witnesses for either side shall be paid by the party producing such witnesses. All other expenses of the mediation, including required traveling and other expenses of the mediator, and the cost of any proofs or expert advice produced at the direct request of the mediator, shall be borne equally by the parties, unless they agree otherwise.

11.4 Conduct of Mediation Sessions. Mediation hearings will be conducted in an informal manner and discovery will not be allowed. The discussions, statements, writings and admissions will be confidential to the proceedings (pursuant to California Evidence Code sections 1115 through 1128) and will not be used for any other purpose unless otherwise agreed by the parties in writing. The parties may agree to exchange any information they deem necessary. Both parties shall have a representative attend the mediation who is authorized to settle the dispute, though City's recommendation of settlement may be subject to the approval of the Mayor and City Council. Either party may have attorneys, witnesses or experts present.

11.5 Mediation Results. Any agreements resulting from mediation shall be memorialized in writing. The results of the mediation shall not be final or binding unless otherwise agreed to in writing by the parties. Mediators shall not be subject to any subpoena or liability, and their actions shall not be subject to discovery.

ARTICLE XII MANDATORY ASSISTANCE

12.1 Mandatory Assistance. If a third party dispute or litigation, or both, arises out of, or relates in any way to the services provided to the City under a Contract, Contractor, its agents, officers, and employees agree to assist in resolving the dispute or litigation upon City's request. Contractor's assistance includes, but is not limited to, providing professional consultations,

attending mediations, arbitrations, depositions, trials or any event related to the dispute resolution and/or litigation.

12.2 Compensation for Mandatory Assistance. City will compensate Contractor for fees incurred for providing Mandatory Assistance. If, however, the fees incurred for the Mandatory Assistance are determined, through resolution of the third party dispute or litigation, or both, to be attributable in whole, or in part, to the acts or omissions of Contractor, its agents, officers, and employees, Contractor shall reimburse City for all fees paid to Contractor, its agents, officers, and employees for Mandatory Assistance.

12.3 Attorneys' Fees Related to Mandatory Assistance. In providing City with dispute or litigation assistance, Contractor or its agents, officers, and employees may incur expenses and/or costs. Contractor agrees that any attorney fees it may incur as a result of assistance provided under Section 12.2 are not reimbursable.

ARTICLE XIII MISCELLANEOUS

13.1 Headings. All headings are for convenience only and shall not affect the interpretation of this Contract.

13.2 Non-Assignment. Contractor may not assign the obligations under this Contract, whether by express assignment or by sale of the company, nor any monies due or to become due under this Contract, without City's prior written approval. Any assignment in violation of this paragraph shall constitute a default and is grounds for termination of this Contract at the City's sole discretion. In no event shall any putative assignment create a contractual relationship between City and any putative assignee.

13.3 Independent Contractors. Contractor and any subcontractors employed by Contractor are independent contractors and not agents of City. Any provisions of this Contract that may appear to give City any right to direct Contractor concerning the details of performing or providing the goods and/or services, or to exercise any control over performance of the Contract, shall mean only that Contractor shall follow the direction of City concerning the end results of the performance.

13.4 Subcontractors. All persons assigned to perform any work related to this Contract, including any subcontractors, are deemed to be employees of Contractor, and Contractor shall be directly responsible for their work.

13.5 Covenants and Conditions. All provisions of this Contract expressed as either covenants or conditions on the part of City or Contractor shall be deemed to be both covenants and conditions.

13.6 Compliance with Controlling Law. Contractor shall comply with all applicable local, state, and federal laws, regulations, and policies. Contractor's act or omission in violation of applicable local, state, and federal laws, regulations, and policies is grounds for contract

termination. In addition to all other remedies or damages allowed by law, Contractor is liable to City for all damages, including costs for substitute performance, sustained as a result of the violation. In addition, Contractor may be subject to suspension, debarment, or both.

13.7 Governing Law. The Contract shall be deemed to be made under, construed in accordance with, and governed by the laws of the State of California without regard to the conflicts or choice of law provisions thereof.

13.8 Venue. The venue for any suit concerning solicitations or the Contract, the interpretation of application of any of its terms and conditions, or any related disputes shall be in the County of San Diego, State of California.

13.9 Successors in Interest. This Contract and all rights and obligations created by this Contract shall be in force and effect whether or not any parties to the Contract have been succeeded by another entity, and all rights and obligations created by this Contract shall be vested and binding on any party's successor in interest.

13.10 No Waiver. No failure of either City or Contractor to insist upon the strict performance by the other of any covenant, term or condition of this Contract, nor any failure to exercise any right or remedy consequent upon a breach of any covenant, term, or condition of this Contract, shall constitute a waiver of any such breach of such covenant, term or condition. No waiver of any breach shall affect or alter this Contract, and each and every covenant, condition, and term hereof shall continue in full force and effect without respect to any existing or subsequent breach.

13.11 Severability. The unenforceability, invalidity, or illegality of any provision of this Contract shall not render any other provision of this Contract unenforceable, invalid, or illegal.

13.12 Drafting Ambiguities. The parties acknowledge that they have the right to be advised by legal counsel with respect to the negotiations, terms and conditions of this Contract, and the decision of whether to seek advice of legal counsel with respect to this Contract is the sole responsibility of each party. This Contract shall not be construed in favor of or against either party by reason of the extent to which each party participated in the drafting of the Contract.

13.13 Amendments. Neither this Contract nor any provision hereof may be changed, modified, amended or waived except by a written agreement executed by duly authorized representatives of City and Contractor. Any alleged oral amendments have no force or effect. The Purchasing Agent must sign all Contract amendments.

13.14 Conflicts Between Terms. If this Contract conflicts with an applicable local, state, or federal law, regulation, or court order, applicable local, state, or federal law, regulation, or court order shall control. Varying degrees of stringency among the main body of this Contract, the exhibits or attachments, and laws, regulations, or orders are not deemed conflicts, and the most stringent requirement shall control. Each party shall notify the other immediately upon the identification of any apparent conflict or inconsistency concerning this Contract.

13.15 Survival of Obligations. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with this Contract, as well as all continuing obligations indicated in this Contract, shall survive, completion and acceptance of performance and termination, expiration or completion of the Contract.

13.16 Confidentiality of Services. All services performed by Contractor, and any sub-contractor(s) if applicable, including but not limited to all drafts, data, information, correspondence, proposals, reports of any nature, estimates compiled or composed by Contractor, are for the sole use of City, its agents, and employees. Neither the documents nor their contents shall be released by Contractor or any subcontractor to any third party without the prior written consent of City. This provision does not apply to information that: (1) was publicly known, or otherwise known to Contractor, at the time it was disclosed to Contractor by City; (2) subsequently becomes publicly known through no act or omission of Contractor; or (3) otherwise becomes known to Contractor other than through disclosure by City.

13.17 Insolvency. If Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the Contract, written notification of the bankruptcy to the Purchasing Agent and the Contract Administrator responsible for administering the Contract. This notification shall be furnished within five (5) days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of City contract numbers and contracting offices for all City contracts against which final payment has not been made. This obligation remains in effect until final payment is made under this Contract.

13.18 No Third Party Beneficiaries. Except as may be specifically set forth in this Contract, none of the provisions of this Contract are intended to benefit any third party not specifically referenced herein. No party other than City and Contractor shall have the right to enforce any of the provisions of this Contract.

13.19 Actions of City in its Governmental Capacity. Nothing in this Contract shall be interpreted as limiting the rights and obligations of City in its governmental or regulatory capacity.

3. Tab B

3.1 Title Page for Proposal

Proposal to Furnish the City of San Diego with Energy Consultant Services

Solicitation Number 10089958-23-E



MRW & Associates, LLC
1814 Franklin Street, Suite 720
Oakland, CA 94612

September 16, 2022

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3.3 Executive Summary

MRW & Associates, LLC (MRW) is pleased to present this proposal to the City of San Diego Department of Sustainability and Mobility to provide Energy Consultant Services as requested in Solicitation Number 10089958-23-E (Solicitation).

MRW was founded in 1986 and has provided energy consulting services to the City since 1989. Over that period, MRW has provided expert witness support and advisory services on behalf of various departments of the City, including the Environmental Services Department, the Public Utilities Department, and the City Attorney. These activities include:

- MRW represented the City's interests before the California Public Utilities Commission (CPUC) by providing expert witness testimony, regulatory analysis, and negotiation support services in various General Rate Case proceedings, investigations, rulemakings, and cost recovery proceedings, resulting in significant cost savings to the City.
- MRW advised the City during its consideration and implementation of Customer Choice Aggregation (CCA), providing a peer review of its CCA feasibility study and drafting its CCA Business Plan. MRW also reviewed SDG&E's proposal to supply the City with 100% renewable energy and advised the City on SDG&E franchise renewal issues, including an assessment of utility municipalization options.
- MRW has provided technical and economic analysis and evaluation of energy-related projects being considered by the City, such as the City's landfill gas and cogeneration operations at the Miramar Landfill and the North City Water Reclamation Plant. MRW has also provided analysis and advice regarding the City's independent power program, including advising the City regarding sale of excess power from its Point Loma facility.

In addition to representing the City's interests in these matters before the CPUC, MRW has represented other clients, including consumer advocates, in various General Rate Case proceedings, other proceedings concerning rates and tariffs, including demand charges and utility franchise oversight. MRW is pleased to provide work product examples for a selection of these engagements.

MRW has assembled a very strong team to provide the requested services to the City. In addition to the highly-qualified MRW staff that will work on this project, Energy Dynamix, RMS Energy Consulting (RMS) and Tierra Resource Consultants (Tierra) have agreed to act as subcontractors to MRW for this assignment, providing consulting expertise that complements MRW's own capabilities.

As described further below, MRW's team has the breadth and depth of experience needed to respond to a wide range of energy-related issues that may emerge and require the City's attention during the up to 5-year term contemplated by this solicitation.

MRW appreciates the opportunity to present this proposal to the City and looks forward to continuing to provide high quality energy consulting services to support the City's innovative energy program. If you have any questions about this proposal, please feel free to contact me at (510) 834-1999 or dnh@mrwassoc.com.

3.4 Proposal

This section presents MRW's proposal regarding the services that MRW would be available to provide under this contract. Please note that the City may request other tasks that are not described below but that MRW or its subcontractors may be able to provide.

3.4.1 Proposed Services to be Provided to the City

The City of San Diego is involved in a wide array of energy-related activities. These include:

- Controlling electricity and natural gas costs;
- Ensuring cost-effective energy supplies;
- Controlling and reducing emissions and environmental damage associated with the City's energy usage;
- Supporting the establishment of opportunities for the citizens and businesses of San Diego to control their own energy costs through creative procurement strategies such as Community Choice Aggregation; and
- Providing energy efficiency programs to customers of SDG&E that would otherwise be underserved.

The City pursues these initiatives in various ways. Some of these approaches include:

- Intervention in rate and policy-setting proceedings at the California Public Utilities Commission (CPUC);
- Obtaining low-cost loans from the California Energy Commission and other agencies;
- Establishing public-private partnerships with other public agencies (such as San Diego County, the Port of San Diego, the San Diego Association of Governments) and SDG&E;
- Utilizing existing waste products such as landfill gas, biogas, and treated sewage to generate electricity; and
- Pursuing alternative power supply opportunities for the City and its citizens and businesses by establishing San Diego Community Power.

MRW has assisted the City with many of these activities in the past and has established a team of highly qualified experts so that we may continue to help the City meet its cost and climate goals in the coming years.

The strategy and tactics that the City will undertake to meet its goals over the next five years will depend on regulatory developments and forthcoming City decisions, meaning that the City's future efforts are not fully known at this time. However, MRW believes that the City will likely be involved in, and require consultant assistance for, at least some of the following activities:

Proposal to Furnish the City of San Diego with Energy Consultant Services

- **SDG&E General Rate Cases:** SDG&E’s General Rate Cases are now scheduled to occur every four years, with the 2019 GRC cycle extended by two years through 2023. The next GRC Phase 2 proceeding, with a test year of 2024, will therefore occur during the five year period covered by this RFP.
- **SDG&E Energy Efficiency Proceedings:** The City currently participates in Public-Private Partnerships with SDG&E to deliver energy efficiency services to underserved customers. The CPUC is in the process of modifying the approval process and operational requirements for these programs. The City may need to intervene in these energy efficiency proceedings to defend its existing programs and to potentially propose new programs.
- **Net Energy Metering:** The City currently has solar photovoltaic (PV) systems that take service as part of SDG&E’s Net Energy Metering (NEM) program. MRW understands that the City is also planning to install additional PV systems in the future. The “rules of the road” for NEM continue to evolve and the City may find it necessary to advocate for its interests in these proceedings in order to ensure that it is able to develop PV systems that are cost-effective.
- **Publicly Funded Energy Programs:** Support acquiring public funding for and implementing City energy programs. The team is experienced at providing the financial, regulatory, and technical assistance needed to acquire grant funding for energy demand and supply side initiatives, and also at defining strategies to access and utilize public purpose funds being collected by the CPUC through SDG&E.
- **Self-Generation, Exit Fees and other Issues.** The City will likely want to ensure that it has the opportunity to continue to develop behind-the-meter generation projects and that it is fully compensated for the energy provided by these projects. The City would likely want to participate in proceedings that establish the so-called “exit fees” paid by customers to ensure that the exit fee methodologies are just and reasonable and that they are implemented appropriately. We anticipate that the recently established San Diego Community Power will take the lead on regulatory issues that directly impact their CCA customers, however, the City would also benefit from monitoring SDG&E’s rate proceedings in this area. Finally, the City may want to continue its efforts to ensure that SDG&E implements real-time pricing thoughtfully and engage in regulatory proceedings shaping electrification of the economy and the deployment of infrastructure to support expanded use of electric vehicles.
- **Bill Review and Rate Analysis.** The City has over 3,000 retail accounts with SDG&E. The bills for each of these accounts need to be reviewed to ensure that the meter readings are reasonable, that the charges are properly computed, that they reflect all refunds coming to the City, and that past errors have been corrected. The MRW Team will review bills quarterly (to control costs). In addition to this quarterly bill review, it is advantageous for the City to ensure that its accounts are on the most favorable rate schedule. For example, the City derived significant savings from switching its pumping loads from SDG&E’s large commercial/industrial tariff to a water pumping tariff. As

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SDG&E offers new tariff options or the City’s load characteristics shift, the City needs to ensure that its accounts are on the best tariff, given the load characteristics of each accounts.

The following table outlines MRW’s assumptions regarding the City’s activities in these areas:

Table 1: Assumptions Regarding Phasing of Issues

Area	Activity	2022	2023	2024	2025	2026	Requires Testimony and/or Representation?
Regulatory	GRC	✓	✓	✓			Testimony/Representation
	NEM ¹	✓			✓		Representation
	RTP & EVs ²	✓	✓				Testimony/Representation
	EVs & Electrification ³	✓	✓	✓	✓	✓	Testimony/Representation
	EE ⁴	✓		✓		✓	Testimony/Representation
	PPPS ⁵	✓	✓	✓		✓	Representation
	SGIP ⁶		✓			✓	Representation
Bill and Tariff Review	Quarterly Bill Review	✓	✓	✓	✓	✓	
	Semi-Annual Tariff Review	✓	✓	✓	✓	✓	

Based on this assumed set of regulatory proceedings and other activities, MRW developed an estimate of total fees to provide all of these services (see Tab C below). Note that pursuant to the RFP, the City will determine the proceedings and activities it wishes to pursue under the Energy Consulting contract. The purpose of this table and our budget estimate is to provide the City with an upper bound on potential fees assuming that it undertakes ALL of these activities.⁷

¹ NEM = Rulemaking related to the Net Energy Metering policy. While these issues have been addressed in a pending decision, they may need to be revisited because of utility challenges in the future.

² RTP & EVs = Rulemaking related to the implementation of real-time pricing programs, especially as they apply to electric vehicle charging.

³ EVs & Electrification = The CPUC has an open proceeding to develop rates and infrastructure for vehicle electrification. We anticipate additional electrification initiatives to be undertaken that may affect City programs.

⁴ EE = Rulemaking related to SDG&E’s energy efficiency programs. This proceeding could affect the ability of the City to form a REN.

⁵ PPPS = Public Purpose Program Surcharge. Accessing funds collected from City ratepayers.

⁶ SGIP = Small Generation Incentive Program. This program has been under review and will likely continue to be reviewed to ensure that non-participating ratepayers receive sufficient value for incentives paid to customers under the SGIP.

⁷ It is not possible to precisely identify all potential activities in which the City may need to participate. For example, the CPUC may open a rulemaking that is not anticipated in the above table.

3.4.2 Approach to Assignment

MRW sees four broad sets of potential tasks for this assignment. These are:

1. Provide expert witness testimony and representation services.
2. Provide analysis and advice regarding resource decisions, cost/benefit analysis of investment decisions, and resource allocation.
3. Identify and pursue opportunities for public funding of City energy programs.
4. Review bills and tariffs to ensure least-cost energy purchases.

The following discusses our approach to addressing these four sets of tasks below.

3.4.2.1 Expert Witness Testimony and Representation

While the issues associated with different regulatory proceedings vary, MRW has found that the steps associated with providing expert witness testimony and representation services are fairly predictable. In providing these services to the City, we would take the following steps:

1. MRW would review the application or rulemaking documents issued by the applicant or regulator.
2. If we needed further information to analyze aspects of the proposal, we would draft data requests and work with the City to develop final data requests and prepare follow-up data requests as needed.
3. After gaining a full understanding of the proposal, we would analyze the issues of the case and develop potential litigation positions.
4. After vetting these positions with the City, we would develop draft testimony. The City would review the draft testimony and provide comments and suggestions to ensure consistency with the City's goals in the proceeding. MRW would then finalize the testimony, with either the City or MRW serving the testimony on the parties to the proceeding.
5. MRW would then review all testimony submitted in the proceeding to understand the positions of other parties. This may require issuance of further sets of data requests to ensure that MRW and the City have a complete understanding of the opening testimony.
6. If there is opportunity for rebuttal testimony, MRW would identify issues that are ripe for rebuttal and work with the City to develop positions for the rebuttal testimony. MRW would then draft the rebuttal testimony, if needed, obtaining review and comment from the City as appropriate.
7. Once rebuttal testimony has been served, we would submit additional data requests to prepare for hearing, if needed. Upon request by the City, we would additionally assist with the development of cross-examination questions and exhibits.
8. MRW would prepare for hearing and be available to stand for cross-examination.
9. If the parties are amenable to discussing settlement of issues, MRW would work with the City to develop settlement positions and to analyze the impacts of alternate proposals on the City. This might require development of detailed models of the City's loads and utility bills. MRW would also be available to assist with negotiations.

10. Once the hearings are completed (or settlement is reached), MRW would be available to assist the City Attorney with development of briefs and comments on proposed decisions. If necessary, MRW would be available to assist the City with any ex parte meetings with Commissioners or advisors.

The level of effort associated with regulatory proceedings depends on the number of issues being examined, the type of case being presented (e.g., quantitative testimony tends to be more costly than policy testimony), the amount of testimony being submitted, the extent of hearings and/or settlement talks,⁸ and the number of parties to the proceeding.

In order to provide some context to the above high-level discussion of scope, following are descriptions of two CPUC rate cases in which MRW represented the City.

1. In SDG&E's last General Rate Case Phase II proceeding in 2020, MRW reviewed SDG&E's testimony, propounded numerous sets of data requests, and ultimately submitted expert witness testimony that recommended simplifying SDG&E tariffs, dividing the medium/large commercial and industrial customer (M/L C&I) rate class, moving slowly to adopt dynamic pricing, and working with SDG&E to improve streetlight tariffs. After submitting testimony, MRW worked with the City Attorney, Fritz Ortlieb, to represent the City in settlement discussions with other intervenors and obtained agreement from other intervenors and from SDG&E regarding MRW's proposals, which were ultimately adopted by the CPUC. As a result, there will be follow-on workshops with SDG&E to review a study by SDG&E on potentially dividing the M/L C&I rate class in the next GRC, and to consider ways to make SDG&E's streetlight tariffs more attractive.
2. In a 2014 SDG&E rate proceeding, MRW submitted expert testimony objecting to SDG&E's proposed changes to its time-of-use period definitions, in part because SDG&E's proposal would have severely undercut the economics of existing and future solar energy projects being installed at City facilities and in part because consideration of this issue outside of SDG&E's General Rate Case Phase II proceeding made a full evaluation of the proposals' rate implications impossible. In this proceeding, MRW developed numerous data requests and submitted testimony opposing SDG&E's proposal. SDG&E was not amenable to settle the outstanding issues, and hearings were held instead. MRW assisted the City Attorney, Fritz Ortlieb, in the preparation of cross-examination questions for SDG&E and also provided support during the hearings. Ultimately, the CPUC adopted MRW's recommendations and denied SDG&E's application, ordering SDG&E to re-apply to revise its time-of-use periods in a more appropriate regulatory proceeding (i.e., its General Rate Case Phase II proceeding).

⁸ Settlement discussions can be very time-consuming but can lead to a more certain resolution to a proceeding and allow for a broader range of solutions.

3.4.2.2 Provide analysis and advice regarding resource decisions, cost/benefit analysis of investment decisions, and resource allocation

It is very difficult to generalize about the types of analyses that the City might need. As discussed below, MRW has provided a range of such analyses to the City. MRW has found that our analysis tends to be iterative, with MRW working with the City Staff to define the problem or issue needing analysis, then developing initial sets of analyses, and then working with City Staff to refine the analyses. Sometimes, it is necessary to develop written reports that present our approach, assumptions, results, and areas for further analysis and examination. Other times, only an oral presentation is required.

For example, the issue of whether and at what rate to renew SDG&E's franchise with the City was a significant concern for the City and the subject of significant effort during the term of the previous contract. MRW assisted the City Attorney's office with negotiations and litigation over this issue and participated in studies of municipalization as an alternative to franchise renewal. Of particular concern to the City was how to meet its zero carbon energy supply targets and MRW provided a peer review of SDG&E's proposal to fully supply the City with renewables.

In recent years, MRW has analyzed and forecasted electricity, natural gas, and renewable natural gas prices for City budgeting purposes and project evaluation, such as options available for use of directed biogas. MRW confirmed the benefits of diverting biogas from fuel cell to transportation use resulting in a discounted rate for fuel cell electricity purchases. MRW has also assisted the City's Public Utilities Department with a review of applicable standby charges.

Previously, MRW supported Environmental Services Department (ESD) and Public Utilities Department (PUD) with their evaluation of options regarding the 2019 expiration of the contract with Minnesota Methane for landfill gas rights at the Miramar Landfill. The City's engineering consultant on this assignment identified opportunities to expand landfill gas collection and technically feasible alternatives for utilizing the additional landfill gas. MRW developed a financial model for comparing landfill-gas-to-energy alternatives, which involved forecasting wholesale and retail electricity rates to estimate the net benefits of the different approaches. The model also identified the net benefits accruing to both the ESD and PUD under the existing arrangements and provided the flexibility to analyze different scenarios that may be developed through a memorandum of understanding between the departments. MRW then drafted a report presenting our results and conclusions.

3.4.2.3 Public Funding for City Energy Programs

A preliminary analysis completed for our proposal indicates that residents and businesses in San Diego County paid roughly \$190 million in public purpose funds to the CPUC in 2020, a significant amount of which came from City ratepayers. Our research further suggests that a large portion of these funds go elsewhere and are not re-invested into the City. For example, the City does not have a Regional Energy Network (REN) and San Diego Community Power (SDCP) does not currently receive program funding through the CPUC. As such, annual per capita funding for CCA and REN programs in San Diego is \$0 compared to ratepayers in

Marin County who will receive per capita funding of over \$9 per year for their REN and CCA programs. Given differences in climate and energy use, we estimate San Diego County residents pay more in public purpose funds than many other regions, contributing \$68 per capita in public propose funds compared to Marin residents who each pay about \$46 annually.

Given the City’s ambitious climate policy it will need to be aggressive in its efforts to reduce energy use, electrify its remaining sources of direct emissions to be supplied by the SDCP’s 100% renewable energy portfolio. The MRW team is experienced at providing the financial, regulatory, and technical assistance needed to acquire grant funding for these kinds of energy demand and supply side initiatives, and also at defining strategies to access and utilize public purpose funds to reduce up-front costs.

The MRW team will help the City identify the most cost-effective strategies for reducing and electrifying its energy use. In particular, we will focus on innovative approaches that qualify for public purpose funding from the State. To secure these funds, the MRW team will perform the detailed analyses needed to demonstrate program benefits and complete the necessary applications for funding. For programs that are funded, the MRW team can support the City through program design, implementation, measurement and verification, as needed.

3.4.2.4 Bill Review and Tariff Analysis

To help the City ensure that its utility accounts are being billed correctly, to identify billing anomalies that may indicate equipment issues and to suggest tariff changes that may reduce costs for particular accounts, the MRW Team proposes to provide bill review and tariff analysis services to the City.

- Perform quarterly review of roughly 3,000 City accounts to identify usage continuity issues and other anomalies and also identify if there is a possibility of a change to a different tariff. We expect that at least half of the accounts will have to remain on the current tariff due to limitations in the tariffs.
- Process estimated 1,500 selected accounts on a quarterly basis to compare applicable rates and tariffs to identify optimal tariffs for reviewed accounts.
- Provide reports to the City presenting results of bill review and tariff analysis.

3.4.3 Organization Chart and Staffing Profile

MRW has assembled a strong team to provide these services to the City. The following figure presents the organization of the MRW Team.

Figure 1: Overall Organization Chart for MRW Team



MRW would provide overall project management. In addition, MRW would take the lead in providing expert witness testimony and representation on rate, policy, and resource procurement activities. MRW would also provide analytical support for resource decisions facing the City. MRW’s subcontractor, Tierra Resource Consultants, would take the lead on REN development and on representation of the City in energy efficiency proceedings. If necessary, MRW would be available to provide expert witness testimony on energy efficiency issues in addition to any testimony provided by Tierra. MRW’s other subcontractors, Energy Dynamix and RMS Energy Consulting, would take the lead on bill and tariff review as well as support the analysis, implementation and evaluation of energy supply and efficiency projects. The following table summarizes the key members of the MRW team, their positions within each firm, their education, years of experience, and task areas in which they would contribute.

Table 2: Organization Chart for MRW Team

MRW	Position	Education	Years of Experience	Task Areas
William Monsen	Principal Consultant	B.S., Engineering Physics M.S., Mechanical Engineering	32 years (MRW) 8 years (PG&E)	Overall Project Management; Expert Witness Testimony (Rate and Resource issues); Rate and tariff evaluation
Mark Fulmer	Principal	B.S., Mechanical Engineering M.S., Mechanical Engineering	22 years (MRW) 10 years (Various)	Expert Witness Testimony (exit fees)
David Howarth	Principal	B.S., Economics and Biology M.S., Energy & Resources	25 years (MRW) 3 years (ICF)	Economic analysis of energy projects and investments
Mary Neal	Senior Project Manager	B.S., Mechanical Engineering M.A., Energy and Environmental Analysis	4 years (MRW) 11 years (Various)	Expert witness testimony (Rate and resource issues)

Proposal to Furnish the City of San Diego with Energy Consultant Services

Subcontractors

Subcontractor	Key Personnel	Position	Education	Experience	Task Area
Energy Dynamix	Bob Hoffman	Owner	B.S., Mechanical Engineering B.A., Business-Economics	21 years (ED) 20 years (Various)	Bill Analysis, Energy project assessments
RMS	Martin Vu	Principal	B.S., Electronics & Computer Engineering Technology MBA, J.D., PMP, CWEP	9 years (RMS) 9 years (SCE) 6 years (Various)	Bill Analysis, Energy project assessments
	David Wylie, P.E.	Engineering Manager	B.S., Mechanical Engineering MBA	3 years (RMS) 45 (Various)	Bill Analysis, Energy project assessments
	Angela Crowley	Engineer III	B.S., Computer Science	6 years (RMS) 11 (Various)	Bill Analysis, Energy project assessments
	Steven Apodaca	Engineer II	B.S., Electrical Engineering	5 years (RMS)	Bill Analysis, Energy project assessments
Tierra Resource Consultants	Floyd Keneipp	Principal	B.S., Industrial Engineers MBA, Finance and Marketing	8 Years (Tierra) 26 years (Various)	Energy Project Funding and Regulatory Support
	Nicholas Snyder	Managing Consultant	B.A., Economics	5 Years (Tierra)	Energy Project Funding and Regulatory Support
	Gabriela Limon	Analyst	B.S., Media and Communications	2 years (Tierra)	Energy Project Funding and Regulatory Support

3.4.4 Experience Working with the City of San Diego

Over the 32 years that MRW has provided energy consulting services to the City, MRW has provided high-quality work product across a wide range of topics. MRW consultants have worked with City Staff and the City Attorney’s office to represent the City’s interests in regulatory matters at the CPUC, analyzed the economic impacts on the City of investments in power and other energy projects, evaluated the City’s loads and assisted the City in obtaining commodity energy services from a supplier other than SDG&E, assisted the City in its negotiations of franchise fees with SDG&E, advocated for the City in its efforts to expand the City’s undergrounding of overhead electric and telecommunications lines, and provided prompt expert advice on issues that required immediate analysis and advice. The following section discusses some of the myriad consulting services MRW has provided to the City.

Representation of City of San Diego before CPUC in General Rate Cases and Other Rate Setting Proceedings

MRW has represented the City in at least ten different rate setting proceedings at the CPUC. MRW's representation has resulted in significant cost savings to the City, new tariff options that allow the City to pursue new solar and energy efficiency projects to meet the City's renewable energy goals, and protection from onerous proposed changes in rates that would have resulted in either significant cost increases or unwieldy changes in operations for City departments.

- Summary of activities
 - o Analyzed issues proposed by SDG&E and other parties, worked with the City's departments and City Attorney to develop litigation positions, prepared affirmative expert witness testimony, responded to other parties' testimonies in rebuttal testimony, assisted with settlement negotiations (including analysis of alternative settlement positions), and provided litigation support.
 - o Proposed rate designs that are beneficial to the City
 - o Negotiated on behalf of the City in settlement discussions regarding rate design and revenue allocation
- List of issues
 - o Revenue allocation and rate design
 - o Bill impacts of alternative rate designs
 - o Propose new tariffs
 - o Advocated for volumetric-based tariffs to improve cost-effectiveness of solar and energy efficiency investments
 - o Critical peak pricing
 - o Time-of-Use periods
- List of proceedings in which MRW presented expert witness testimony (Mr. Monsen was an expert witness for the City in each of the following SDG&E rate setting proceedings)
 - o SDG&E Applications 00-10-045 and 01-01-044 (2002)
 - o SDG&E Application 05-01-016 et al. (2005)
 - o SDG&E Application 05-02-019 (2005)
 - o SDG&E Application 07-01-047 (2007)
 - o SDG&E Application 08-11-014 (2009)
 - o SDG&E Application 11-10-012 (2012)
 - o SDG&E Application 14-01-027 (2014)
 - o SDG&E Application 15-04-012 (2016)
 - o SDG&E Application 18-03-003 (2018)
 - o SDG&E Application 19-03-002 (2020)

Representation before CPUC in Distributed Generation (DG) Proceedings

MRW has provided expert witness testimony and regulatory support to the City in order to allow the City to pursue distributed generation projects at City facilities. MRW's assistance has included advocacy in workshops addressing interconnection requirements for DG systems, aggregation of City loads to be served by net metered generation, providing expert witness

testimony recommending that the CPUC require SDG&E to set aside capacity for DG in its resource planning activities, and working with the City Attorney to eliminate the imposition of exit fees on new DG projects.

- Summary of activities
 - o Participated via expert witness testimony and representation in workshop process to support the City's positions.
 - o Wrote comments on proposed decisions
- List of issues
 - o Interconnection requirements for City-specific configurations
 - o Advocated for ability of City to net meter solar projects against multiple adjacent meters
 - o Overturned proposal for exit fees on the City's behind-the-meter generation projects
 - o Advocated against exit fees for proposed City generation projects
 - o Advocate for ability of City to develop multiple DG projects at one location
- List of proceedings in which MRW presented expert witness testimony (Mr. Monsen was an expert witness for the City in each of the following DG proceedings)
 - o CPUC Rulemaking 01-10-024 (2003)
 - o CPUC Rulemaking 04-03-017 (2005)
 - o CPUC Rulemaking 04-04-003 (2004)
- Other proceedings in which MRW participated on behalf of City
 - o CPUC Rulemaking 11-05-005 (2013)

Economic evaluation of DG programs and projects

- Summary of Activities
 - o Assist City Staff with assessment of options for selling excess power from Pt. Loma facility (1998-1999)
 - o Analyzed options for maximizing value of excess energy from Pt. Loma (2002)
 - o Assist City Staff with evaluation and assessment of risks associated with construction of gas-fired peaking power plant (2002)
 - o Assist City Staff with preparation of proposals to sell power to SDG&E from in-line hydroelectric facilities (2005)
 - o Assist City Staff with preparation of proposals to sell power to SDG&E from photovoltaic facilities at City reservoirs (2007)
 - o Analysis of Feed-In Tariff and Renewable Market Adjusting Tariff for NCCFE (2013)
 - o Analysis of Value to City of NCCF Ownership (2014)
 - o Assisted City Staff with efforts to market excess power from North City and elsewhere (2014)
 - o Assisted with negotiations over potential acquisition of Fortistar assets (2015)
 - o Analyses and determination of most financially beneficial long-term strategies for landfill gas and cogeneration at Miramar Landfill and NCWRP (2015)
 - o Evaluation of Point Loma directed biogas options and fuel cell supply substitution at South Bay (2017)
 - o Review of WDAT charges at Point Loma (2018)
 - o Assessment of MOC 10 and Black Mountain Reservoir solar PV projects (2019)

- Investigation of SDG&E standby charges for PUD (2021)

Advocacy at CPUC re: existing solar installations

- Summary of activities
 - Testimony in rate design proceedings opposing non-coincident demand charges, supporting volumetric rates, and advocating for “solar-friendly” tariffs
 - Assisted City attorney and staff in negotiations to establish “solar-friendly” tariff
- List of proceedings in which MRW presented expert witness testimony (Mr. Monsen was an expert witness for the City in each of the following proceedings involving solar power issues)
 - SDG&E Application 08-11-014 (2009)
 - SDG&E Application 11-10-012 (2012)
 - SDG&E Application 14-01-027 (2014)

Advising on economics of additional solar development

- MRW assisted a large landholder in San Luis Obispo evaluate the potential for ground-mounted solar project development, estimating solar insolation levels, project costs, and potential revenue.
- MRW assisted an existing natural gas generation owner evaluate an opportunity to develop a utility-scale solar energy project on adjacent property, providing an assessment of technologies and project costs.
- On behalf of a large cement producer MRW evaluated the cost savings potential of installed major solar PV for behind-the-meter use and assisted the client review bids to provide the PV

Advising and advocacy regarding CCA issues

As it has for many other jurisdictions, MRW provided an independent peer review in 2017 of the feasibility study that the City commissioned to support its consideration of forming a CCA in San Diego. Then, in 2018-2019, MRW developed a business plan to support the formation of San Diego Community Power (SDCP). Throughout this period, MRW advised the City on CCA issues, including a particular focus on exit fee and resource adequacy considerations. MRW has been active in regulatory proceedings at the CPUC and performs regulatory monitoring for CalCCA, the association representing CCAs, of which SDCP is a member.

- List of testimonies for CCAs
 - Local Government Commission Coalition (2004)
 - City and County of San Francisco (2004)
 - Marin Clean Energy and others (2007)
 - Direct Access Customer Coalition, Alliance for Retail Energy Markets, and City and County of San Francisco (2010)
 - CalCCA (2017)
 - California Choice Energy Authority, Clean Power Alliance (2020)

Advising on tariff rate schedules for all electric and gas accounts

- MRW has not provided extensive advice to the City regarding its rate schedules for its electric and gas accounts. As a result, MRW has added subcontractors Energy Dynamix and RMS Energy Consulting to our team. Energy Dynamix and RMS have performed analyses of PG&E, SCE, SDG&E rates, including analyses to assist customers evaluate Direct Access opportunities.

Other Analytical and Advocacy Support for City

- Represented City in CPUC Rulemaking regarding undergrounding electric distribution facilities (2000-2001)
- Assisted City with developing bidding strategy for CEC New Renewables Funding (2000)
- Evaluation of SDG&E renewable energy supply proposal (2018)
- SDG&E franchise renewal litigation support (2018)
- San Diego utility municipalization study (2019-2020)

3.4.5 Knowledge of the City of San Diego's Electric and Gas Accounts, Account Tariffs, and Energy Program

MRW has developed models of the City's electric usage and costs to support its representation of the City in SDG&E's General Rate Case proceedings. These models simulate the vast majority of the City's electric accounts in order to allow the City and MRW to understand the impacts of alternate revenue allocation and rate design proposals on the City's electric costs.

3.4.6 Experience with Preparing Testimonies at California Public Utilities Commission

The MRW team has extensive experience in the preparation and defense of expert witness testimony before the CPUC and other regulatory agencies. Between them, William Monsen, Mark Fulmer, David Howarth and Mary Neal have presented almost 250 pieces of expert witness testimony, with the majority of that testimony being presented before the CPUC. MRW's testimony has been instrumental in establishing policy and rates that are beneficial to the City and MRW's other clients.

The following table summarizes the range of testimony presented by the MRW Team in different jurisdictions:

Table 3: Testimony Topics For MRW Team By Jurisdiction

	Monsen	Fulmer	Howarth	Neal
Electric Resource Planning	CPUC	CPUC	CPUC	CPUC
Electric Revenue Allocation and Rate Design	CPUC, CO PUC	CPUC, ACC, WUTC		CPUC
Electric Revenue Requirements	CPUC	CPUC		CPUC, NSURB, NYPSC, WIPSC
Electric Retail Competition/CCAs		ACC, CPUC		
Net Energy Meeting	CPUC, PUCN	ACC, CPUC, NMPRC, WUTC		
Electric Resource Procurement	CPUC, CO PUC, OPUC, PUCN			
Natural Gas Procurement		CPUC		
Natural Gas Revenue Requirements	CPUC	CPUC		
Natural Gas Revenue Allocation and Rate Design	CPUC	CPUC		
Industry Restructuring	CPUC			
Demand Response	CPUC			
Energy Efficiency	CEC	HPUC, RIPUC		
Electric Vehicles	CPUC			CPUC, VPSB
Mergers	HPUC, PUCN			
Project Valuation	Sonoma County			

Legend:

- ACC: Arizona Corporation Commission
- CEC: California Energy Commission
- CPUC: California Public Utilities Commission
- CO PUC: Colorado Public Utilities Commission
- HPUC: Hawaii Public Utilities Commission
- MDPU: Massachusetts Department of Public Utilities
- NMPRC: New Mexico Public Regulation Commission
- NSURB: Nova Scotia Utility and Review Board
- NYPSC: New York Public Service Commission
- OPUC: Oregon Public Utilities Commission
- PUCN: Public Utilities Commission of Nevada
- VPSB: Vermont Public Service Board
- WIPSC: Public Service Commission of Wisconsin
- WUTC: Washington Utilities and Transportation Commission

3.4.7 Understanding of City of San Diego's Energy and Climate Action Goals

In December 2015 the City of San Diego adopted a Climate Action Plan that establishes greenhouse gas (GHG) emissions reductions targets that are 15% below the 2010 baseline in 2020 and 50% below the 2010 baseline by 2035. The current draft of the City's Climate Action Plan significantly accelerates these targets with a goal of achieving net zero GHG emissions by 2035. While existing state and federal programs contribute significantly to GHG reductions over this time frame, local initiatives will be required to emissions to net zero. The City has identified five local strategies for reducing GHG emissions:

Strategy 1: Decarbonization of the Built Environment

Drive the decarbonization of residential, non-residential, and municipal energy and water use through mixture of regulatory mandates and incentives to reduce energy consumption and switch to zero carbon sources.

Strategy 2: Access to Clean & Renewable Energy

With San Diego Community Power achieve 100% renewable or GHG-free energy city-wide by 2030. Incentivize local on-site and utility-scale renewables, develop city fleet vehicle electrification strategy and increase private electric vehicle adoption.

Strategy 3: Mobility & Land Use

Reduce vehicle miles travelled (VMTs), improve mobility, and enhance vehicle fuel efficiency through changing land uses, community design, and other measures.

Strategy 4: Circular Economy & Clean Communities

Source reduction, increased recycling, and gas capture with goal of 90% waste diversion and 90% landfill gas capture by 2035.

Strategy 5: Resilient Infrastructure and Healthy Ecosystems

Flexible programs, policies, and processes that can be changed to respond to unexpected events and continue to function effectively. Pursue measures to increase carbon sequestration, expand tree canopy and develop local water supply.

Strategy 6: Emerging Climate Action

Address residual emissions to achieve goal of net zero by exploring additional actions, including GHG removal, emissions offsets and supporting research.

For years, MRW has assisted the City of San Diego pursue its clean and renewable energy goals. As discussed above, MRW has assisted the Environmental Services Department and Public Utilities Department evaluate energy projects and programs, including energy development at its Point Loma and North City facilities, at the Miramar landfill, and at other facilities including pump stations and covered reservoirs. MRW has also assisted the City Attorney's office with regulatory interventions aimed at improving the City's ability to pursue its energy goals on behalf of its citizens, including solar-friendly tariffs and rules that permit the City to use excess energy produced by its generation facilities to offset energy purchases by other City accounts.

3.4.8 Understanding of Past and Current California Law and Policy as it Relates to the City of San Diego's Energy and Climate Action Goals.

California's laws and policies related to energy and climate action goals extend back to the 1974 passage of the Warren-Alquist Energy Resources Conservation and Development Act, which created the California Energy Commission (CEC) for the purpose of planning and setting standards for the development and use of energy resources. The first law concerning greenhouse gas (GHG) emissions (AB 4420) was passed in 1988 and required the CEC to prepare a GHG inventory, study the effects of climate change on the State's resources, and recommend ways to address climate change impacts.

California's renewable portfolio standard (RPS) was established in 2002 with SB 1078, which required that California utilities supply 20% of their sales with eligible renewable energy by 2017. In 2006, SB 107 accelerated this target to 20% by 2010. Governor Schwarzenegger sought to further expand the RPS target, issuing an executive order in 2008 requiring retail sellers to meet a 33% RPS target by 2020. This RPS target was established in law with the 2011 passage of SB X1-2, which required all sellers, including public utilities and community choice aggregators, to comply with the 33% RPS by 2020. More recently, SB 350 extended the RPS to 50% by 2030, with interim requirements between 2020 and 2030.

California's climate policy was initially established by an executive order by Governor Schwarzenegger in 2005 that set a goal of reducing California's GHG emissions to 80% below 1990 levels by 2050. In 2006 the California Legislature passed AB 32, which required the California Air Resources Board (CARB) to adopt a statewide GHG emissions limit equal to 1990 levels by 2020. To implement AB 32, CARB established a cap and trade program for GHG emissions allowances, which is currently in effect. Through this program, California achieved the emissions reductions required by AB 32 in 2016, four years earlier than the 2020 mandate. In April 2015 Governor Brown issued an executive order setting a target to reduce GHG emissions in California to 40% below 1990 levels by 2030. The California Air Resources Board adopted a 2017 Scoping Plan Update to achieve the 2030 target.

Since its founding in 1986, MRW has been closely involved with the development and implementation of California's energy and climate policies. MRW has worked with renewable energy and cogeneration owners and developers on policy issues concerning implementation of rules requiring utility purchases from qualifying facilities (QFs) and the creation of RPS regulations. MRW has assisted its clients, including the City of San Diego, navigate the myriad utility programs for purchasing energy to meet their renewable energy and climate standards, including net energy metering (NEM), small generator incentive program (SGIP), feed-in tariff (FIT), renewable market adjusting tariff (REMAT), renewable auction mechanism (RAM), QF must-buy obligation, combined heat and power (CHP) settlement and procurement obligation, RPS solicitations, long-term procurement planning and all-source solicitations, and local capacity resource procurement.

3.4.9 Examples of MRW Representation Before the CPUC and Associated Workproduct

The RFP requests at least three (3) specific examples of relevant experience in which MRW represented the interests of a client before the CPUC in matters relating to a General Rate Case, rates & tariffs analysis including demand charges, and utility franchise oversight.

MRW has performed the cited activities on behalf of the City, as discussed above, as well as other clients. The following are some specific examples, with sample workproduct provided as separate attachments to the proposal:

1. SDG&E General Rate Case (Application 19-03-002): In Phase II of SDG&E's 2020 GRC pertaining to marginal costs, revenue allocation and rate design, MRW submitted expert witness testimony on behalf of the City that recommended simplifying SDG&E tariffs, dividing the medium/large commercial and industrial customer (M/L C&I) rate class, moving slowly to adopt dynamic pricing, and working with SDG&E to improve streetlight tariffs. [See attachment "SDG&E GRC Phase II Testimony for CSD.pdf"]
2. PG&E General Rate Case (Application 21-06-021): In Phase I of PG&E's 2023 GRC pertaining to revenue requirements, MRW submitted expert witness testimony on behalf of The Utility Reform Network that recommended changes to PG&E's requested capital expenditures for its hydroelectric, nuclear, natural gas and solar generation projects, its staffing costs and its use of a hydro licensing balancing account. [See attachment PG&E GRC Phase I Testimony for TURN.pdf]
3. CPUC Net Metering Revisit (Rulemaking 20-08-020): MRW submitted expert witness testimony on behalf of The Coalition for Community Solar Access (CCSA) concerning the net billing tariff proposed by CCSA and how the rates for each element are derived from avoided costs and the costeffectiveness of CCSA's proposed tariff design. [See attachment "Solar Net Metering Tariff Testimony for CCSA.pdf"]

3.4.10 Resumes for MRW Team



MRW & Associates offers a comprehensive portfolio of multi-disciplinary energy consulting services to financial institutions, power generators and marketers, electric and gas utilities, natural gas pipelines and producers, regulatory commissions and public agencies, as well as end-users across the areas detailed below. Our policy and analytic skills, combined with extraordinary breadth of accomplishment make MRW pre-eminent in providing a wide range of client services.

POWER MARKET ANALYSIS AND CONTRACT SERVICES

- sophisticated modeling to forecast power prices, avoided cost, and retail electric rates
- strategic analysis of regional power markets
- assessment of energy options for end-users, including power marketing and bill analysis
- negotiation and re-negotiation of power sales contracts, transmission and interconnection contracts
- integration of electric power and fuel supply contracts
- contract restructuring and mediation

GAS MARKET ANALYSIS AND FUEL PURCHASE STRATEGIES

- review of detailed supply and transport arrangements for power projects and other end-users
- assistance in developing fuels strategy and contract terms
- periodic re-assessments of contract reasonableness in light of changing market conditions
- forecasts and evaluation of gas supply and transportation costs
- gas utility rate design and cost allocation

PROJECT ANALYSIS

- lender due diligence reviews and analysis of proposed power and/or gas pipeline projects
- assessment of risks and mitigation strategies
- assistance to purchasers or sellers of existing projects
- portfolio and asset valuation
- fatal flaw review of potential investments
- bid strategy and development
- workout assistance

REGULATORY AND LITIGATION SUPPORT

- intervention and representation in electric and gas proceedings
- expert witness testimony on gas- or power-related policy, financial or technical issues
- financial, economic and regulatory analysis in regulatory and commercial litigation
- establishing need for energy facilities
- regulatory monitoring

MRW builds on a strong base of experience in the western U.S. (including California, the Southwest and Pacific Northwest), with additional project work elsewhere in North America and overseas.

RESUME FOR WILLIAM ALAN MONSEN

**PROFESSIONAL
EXPERIENCE**

**Principal Consultant
MRW & Associates, LLC
(1989 - Present)**

Specialist in electric utility generation planning, resource auctions, demand-side management (DSM) policy, power market simulation, power project evaluation, and evaluation of customer energy cost control options. Typical assignments include: analysis, testimony preparation and strategy development in large, complex regulatory intervention efforts regarding the economic benefits of utility mergers and QF participation in California's biennial resource acquisition process, analysis of markets for non-utility generator power in the western US, China, and Korea, evaluate the cost-effectiveness of onsite power generation options, sponsor testimony regarding the value of a major new transmission project in California, analyze the value of incentives and regulatory mechanisms in encouraging utility-sponsored DSM, negotiating non-utility generator power sales contract terms with utilities, and utility ratemaking.

**Energy Economist
Pacific Gas & Electric Company
(1981 - 1989)**

Responsible for analysis of utility and non-utility investment opportunities using PG&E's Strategic Analysis Model. Performed technical analysis supporting PG&E's Long Term Planning efforts. Performed Monte Carlo analysis of electric supply and demand uncertainty to quantify the value of resource flexibility. Developed DSM forecasting models used for long-term planning studies. Created an engineering-econometric modeling system to estimate impacts of DSM programs. Responsible for PG&E's initial efforts to quantify the benefits of DSM using production cost models.

**Academic Staff
University of Wisconsin-Madison Solar Energy Laboratory
(1980 - 1981)**

Developed simplified methods to analyze efficiency of passive solar energy systems. Performed computer simulation of passive solar energy systems as part of Department of Energy's System Simulation and Economic Analysis working group.

EDUCATION

M.S., Mechanical Engineering, University of Wisconsin-Madison, 1980.
B.S., Engineering Physics, University of California, Berkeley, 1977.

Prepared Testimony and Expert Reports

1. California Public Utilities Commission (CPUC) Applications 90-08-066, 90-08-067, 90-09-001
Prepared Testimony with Aldyn W. Hoekstra regarding the California-Oregon Transmission Project for Toward Utility Rate Normalization (TURN). November 29, 1990.
2. CPUC Application 90-10-003
Prepared Testimony with Mark A. Bachels regarding the Value of Qualifying Facilities and the Determination of Avoided Costs for the San Diego Gas & Electric Company for the Kelco Division of Merck & Company, Inc. December 21, 1990.
3. California Energy Commission Docket No. 93-ER-94
Rebuttal Testimony regarding the Preparation of the 1994 Electricity Report for the Independent Energy Producers Association. December 10, 1993.
4. CPUC Rulemaking 94-04-031 and Investigation 94-04-032
Prepared Testimony Regarding Transition Costs for The Independent Energy Producers. December 5, 1994.
5. Massachusetts Department of Telecommunications and Energy DTE 97-120
Direct Testimony regarding Nuclear Cost Recovery for The Commonwealth of Massachusetts Division of Energy Resources. October 23, 1998.
6. CPUC Application 97-12-039
Prepared Direct Testimony Evaluating an Auction Proposal by SDG&E on Behalf of The California Cogeneration Council. June 15, 1999.
7. CPUC Application 99-09-053
Prepared Direct Testimony of William A. Monsen on Behalf of The Independent Energy Producers Association. March 2, 2000.
8. CPUC Application 99-09-053
Prepared Rebuttal Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association. March 16, 2000.
9. CPUC Rulemaking 99-10-025
Joint Testimony Regarding Auxiliary Load Power and Stand-By Metering on Behalf of Duke Energy North America. July 3, 2000.
10. CPUC Application 99-03-014
Joint Testimony Regarding Auxiliary Load Power and Stand-By Metering on Behalf of Duke Energy North America. September 29, 2000.

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11. CPUC Rulemaking 99-11-022
Testimony of the Independent Energy Producers Association Regarding Short-Run Avoided Costs. May 7, 2001.
12. CPUC Rulemaking 99-11-022
Rebuttal Testimony of the Independent Energy Producers Association Regarding Short-Run Avoided Costs. May 30, 2001.
13. CPUC Application 01-08-020
Direct Testimony on Behalf of Bear Mountain, Inc. in the Matter of Southern California Water Company's Application to Increase Rates for Electric Service in the Bear Valley Electric Customer Service Area. December 20, 2001.
14. CPUC Application 00-10-045; 01-01-044
Direct Testimony on Behalf of the City of San Diego. May 29, 2002.
15. CPUC Rulemaking 01-10-024
Prepared Direct Testimony on Behalf of Independent Energy Producers and Western Power Trading Forum. May 31, 2002.
16. CPUC Rulemaking 01-10-024
Rebuttal Testimony on Behalf of Independent Energy Producers and Western Power Trading Forum. June 5, 2002.
17. Arizona Corporation Commission Docket Numbers E-00000A-02-0051, E-01345A-01-0822, E-0000A-01-0630, E-01933A-98-0471, E01933A-02-0069
Rebuttal Testimony on Behalf of AES NewEnergy, Inc. and Strategic Energy L.L.C.: Track A Issues. June 11, 2002.
18. CPUC Application 00-11-038
Testimony on Behalf of the Alliance for Retail Energy Markets in the Bond Charge Phase of the Rate Stabilization Proceeding. July 17, 2002.
19. CPUC Rulemaking 01-10-024
Prepared Testimony in the Renewable Portfolio Standard Phase on Behalf of Center for Energy Efficiency and Renewable Technologies. April 1, 2003.
20. CPUC Rulemaking 01-10-024
Direct Testimony of William A. Monsen Regarding Long-Term Resource Planning Issues on Behalf of the City of San Diego. June 23, 2003.
21. CPUC Application 03-03-029
Testimony of William A. Monsen Regarding Auxiliary Load Power Metering Policy and Standby Rates on Behalf of Duke Energy North America. October 3, 2003.

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22. CPUC Rulemaking 03-10-003
Opening Testimony of William A. Monsen Regarding Phase One Issues Related to Implementation of Community Choice Aggregation on Behalf of the Local Government Commission Coalition. April 15, 2004.
23. CPUC Rulemaking 03-10-003
Reply Testimony of William A. Monsen Regarding Phase One Issues Related to Implementation of Community Choice Aggregation on Behalf of Local Government Commission. May 7, 2004.
24. CPUC Rulemaking 04-04-003
Direct Testimony of William A. Monsen Regarding the 2004 Long-Term Resource Plan of San Diego Gas & Electric Company on Behalf of the City of San Diego. August 6, 2004.
25. Sonoma County Assessment Appeals Board
Expert Witness Report of William A. Monsen Regarding the Market Price of Electricity in the Matter of the Application for Reduction of Assessment of Geysers Power Company, LLC, Sonoma County Assessment Appeals Board, Application Nos.: 01/01-137 through 157. September 10, 2004.
26. Sonoma County Assessment Appeals Board
Presentation of Results from Expert Witness Report of William A. Monsen Regarding the Market Price of Electricity in the Matter of the Application for Reduction of Assessment of Geysers Power Company, LLC, Sonoma County Assessment Appeals Board, Application Nos.: 01/01-137 through 157. September 10, 2004.
27. Sonoma County Assessment Appeals Board
Presentation of Rebuttal Testimony and Results of William A. Monsen Regarding the Market Price of Electricity in the Matter of the Application for Reduction of Assessment of Geysers Power Company, LLC, Sonoma County Assessment Appeals Board, Application Nos.: 01/01-137 through 157. October 18, 2004.
28. CPUC Rulemaking 04-03-017
Testimony of William A. Monsen Regarding the Itron Report on Behalf of the City of San Diego. April 13, 2005.
29. CPUC Rulemaking 04-03-017
Rebuttal Testimony of William A. Monsen Regarding the Cost-Effectiveness of Distributed Energy Resources on Behalf of the City of San Diego. April 28, 2005.
30. CPUC Application 05-02-019
Testimony of William A. Monsen SDG&E's 2005 Rate Design Window Application on Behalf of the City of San Diego. June 24, 2005.

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31. CPUC Rulemaking 04-01-025, Phase II
Direct Testimony of William A. Monsen on Behalf of Crystal Energy, LLC. July 18, 2005.
32. CPUC Application 04-12-004, Phase I
Direct Testimony of William A. Monsen on Behalf of Crystal Energy, LLC. July 29, 2005.
33. CPUC Application 04-12-004, Phase I
Rebuttal Testimony of William A. Monsen on Behalf of Crystal Energy, LLC. August 26, 2005.
34. CPUC Rulemakings 04-04-003 and 04-04-025
Prepared Testimony of William A. Monsen Regarding Avoided Costs on Behalf of the Independent Energy Producers. August 31, 2005.
35. CPUC Application 05-01-016 et al.
Prepared Testimony of William A. Monsen Regarding SDG&E's Critical Peak Pricing Proposal on Behalf of the City of San Diego. October 5, 2005.
36. CPUC Rulemakings 04-04-003 and 04-04-025
Prepared Rebuttal Testimony of William A. Monsen Regarding Avoided Costs on Behalf of the Independent Energy Producers. October 28, 2005.
37. Public Utilities Commission of the State of Colorado Docket No. 05A-543E
Answer Testimony of William A. Monsen on Behalf of AES Corporation and the Colorado Independent Energy Association. April 18, 2006.
38. CPUC Application 04-12-004
Prepared Testimony of William A. Monsen Regarding Firm Access Rights on Behalf of Clearwater Port, LLC. July 14, 2006.
39. CPUC Application 04-12-004
Prepared Rebuttal Testimony of William A. Monsen Regarding Firm Access Rights on Behalf of Clearwater Port, LLC. July 31, 2006.
40. Public Utilities Commission of Nevada Dockets 06-06051 and 06-07010
Testimony of William A. Monsen on Behalf of the Nevada Resort Association Regarding Integrated Resource Planning. September 13, 2006.
41. CPUC Application 07-01-047
Testimony of William A. Monsen on Behalf of the City of San Diego Concerning the Application of San Diego Gas & Electric Company for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design. August 10, 2007.
42. Public Utilities Commission of the State of Colorado Docket No. 07A-447E
Answer Testimony of William A. Monsen on Behalf of the Colorado Independent Energy Association. April 28, 2008.

43. CPUC Application 08-02-001
Testimony of William A. Monsen On Behalf of the City of Long Beach Gas & Oil Department Concerning the Application of San Diego Gas & Electric Company and Southern California Gas Company for Authority to Revise Their Rates Effective January 1, 2009 In Their Biennial Cost Allocation Proceeding. June 18, 2008.
44. CPUC Application 08-02-001
Rebuttal Testimony of William A. Monsen On Behalf of the City of Long Beach Gas & Oil Department Concerning the Application of San Diego Gas & Electric Company and Southern California Gas Company for Authority to Revise Their Rates Effective January 1, 2009 In Their Biennial Cost Allocation Proceeding. July 10, 2008.
45. CPUC Application 08-06-001 et al.
Prepared Testimony of William A. Monsen On Behalf of the California Demand Response Coalition Concerning Demand Response Cost-Effectiveness and Baseline Issues. November 24, 2008.
46. CPUC Application 08-02-001
Testimony of William A. Monsen On Behalf of the City of Long Beach Gas & Oil Department Concerning Revenue Allocation and Rate Design Issues in The San Diego Gas & Electric Company and Southern California Gas Company Biennial Cost Allocation Proceeding. December 23, 2008.
47. CPUC Application 08-06-034
Testimony of William A. Monsen On Behalf of Snow Summit, Inc. Concerning Cost Allocation and Rate Design. January 9, 2009.
48. CPUC Application 08-02-001
Rebuttal Testimony of William A. Monsen on Behalf of the City of Long Beach Gas & Oil Department Concerning Revenue Allocation and Rate Design Issues in The San Diego Gas & Electric Company and Southern California Gas Company Biennial Cost Allocation Proceeding. January 27, 2009.
49. CPUC Application 08-11-014
Testimony of William A. Monsen on Behalf of the City of San Diego Concerning the Application of San Diego Gas & Electric Company for Authority to Update Cost Allocation and Electric Rate Design. April 17, 2009.
50. Public Utilities Commission of the State of Colorado Docket No. 09-AL-299E
Answer Testimony of William A. Monsen on Behalf of Copper Mountain, Inc. and Vail Summit Resorts, Inc. – Notice of Confidentiality: A Portion of Document Has Been Filed Under Seal. October 2, 2009.

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51. Public Utilities Commission of the State of Colorado Docket No. 09-AL-299E Supplemental Answer Testimony of William A. Monsen on Behalf of Copper Mountain, Inc. and Vail Summit Resorts, Inc. October 8, 2009.
52. Public Utilities Commission of the State of Colorado Docket No. 09AL-299E Surrebuttal Testimony of William A. Monsen on Behalf of Copper Mountain, Inc. and Vail Summit Resorts, Inc. December 18, 2009.
53. United States District Court for the District of Montana, Billings Division, Rocky Mountain Power, LLC v. Prolec GE, S De RL De CV Case No. CV-08-112-BLG-RFC, “Evaluation of Business Interruption Loss Associated with a Fault on December 15, 2007, of a Generator Step-Up (GSU) Transformer at the Hardin Generating Station, Located in Hardin, Montana,” September 15, 2010.
54. United States District Court for the District of Montana, Billings Division, Rocky Mountain Power, LLC v. Prolec GE, S De RL De CV Case No. CV-08-112-BLG-RFC, “Supplemental Findings and Conclusions Regarding Evaluation of Business Interruption Loss Associated with a Fault on December 15, 2007, of a Generator Step-Up (GSU) Transformer at the Hardin Generating Station, Located in Hardin, Montana,” November 2, 2010.
55. CPUC Application 10-05-006 Testimony of William Monsen on Behalf of the Independent Energy Producers Association in Track III of the Long-Term Procurement Planning Proceeding Concerning Bid Evaluation. August 4, 2011.
56. Public Utilities Commission of the State of Colorado Docket No. 11A-869E Answer Testimony of William A. Monsen on Behalf of Colorado Independent Energy Association, Colorado Energy Consumers and Thermo Power & Electric LLC. June 4, 2012.
57. CPUC Application 11-10-002 Testimony of William A. Monsen on Behalf of the City of San Diego Concerning the Application of San Diego Gas & Electric Company for Authority to Update Marginal Costs, Cost Allocations, and Electric Rate Design. June 12, 2012.
58. Public Utilities Commission of the State of Colorado Docket No 11A-869E Cross Answer Testimony of William A. Monsen on Behalf of Colorado Independent Energy Association, Colorado Energy Consumers and Thermo Power & Electric LLC. July 16, 2012.
59. CPUC Rulemaking 12-03-014 Reply Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Concerning Track One of the Long-Term Procurement Proceeding. July 23, 2012.

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60. CPUC Application 12-03-026
Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association concerning Pacific Gas and Electric Company's Proposed Acquisition of the Oakley Project. July 23, 2012.
61. CPUC Application 12-02-013
Testimony of William A. Monsen on Behalf of Snow Summit, Inc. Concerning Revenue Requirement, Marginal Costs, and Revenue Allocation. July 27, 2012.
62. CPUC Application 12-03-026
Rebuttal Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Concerning Pacific Gas and Electric Company's Proposed Acquisition of the Oakley Project. August 3, 2012.
63. CPUC Application 12-02-013
Rebuttal Testimony of William A. Monsen on Behalf of Snow Summit, Inc. in Response to the Division of Ratepayer Advocates' Opening Testimony. August 27, 2012.
64. Public Utilities Commission of the State of Colorado Docket No 11A-869E
Supplemental Answer Testimony of William A. Monsen on Behalf of Colorado Independent Energy Association, Colorado Energy Consumers and Thermo Power & Electric LLC. September 14, 2012.
65. Public Utilities Commission of the State of Colorado Docket No 11A-869E
Supplemental Cross Answer Testimony of William A. Monsen on Behalf of Colorado Independent Energy Association, Colorado Energy Consumers and Thermo Power & Electric LLC. October 5, 2012.
66. Public Utilities Commission of the State Oregon Docket No UM 1182
Northwest and Intermountain Power Producers Coalition Direct Testimony of William A. Monsen. November 16, 2012.
67. Public Utilities Commission of the State Oregon Docket No UM 1182
Northwest and Intermountain Power Producers Coalition Exhibit 300 Witness Reply Testimony of William A. Monsen. January 14, 2013.
68. CPUC Rulemaking 12-03-014
Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Concerning Track 4 of the Long-Term Procurement Plan Proceeding. September 30, 2013.
69. CPUC Rulemaking 12-03-014
Rebuttal Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Concerning Track 4 of the Long-Term Procurement Plan Proceeding. October 14, 2013.

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70. CPUC Application 13-07-021
Response Testimony of William A. Monsen on Behalf of Interwest Energy Alliance Regarding the Proposed Merger of NV Energy, Inc. with Midamerican Energy Holdings Company. October 24, 2013.
71. CPUC Application 13-12-012
Testimony of William A. Monsen on Behalf of Commercial Energy Concerning PG&E's 2015 Gas Transmission and Storage Rate Application. August 11, 2014.
72. Public Utilities Commission of Nevada Docket No. 14-05003
Direct Testimony of William A. Monsen on Behalf of Ormat Nevada Inc. August 25, 2014.
73. CPUC Application 13-12-012/I.14-06-016
Rebuttal Testimony of William A. Monsen on Behalf of Commercial Energy Concerning PG&E's 2015 Gas Transmission & Storage Application. September 15, 2014.
74. CPUC Rulemaking 12-06-013
Testimony of William A. Monsen on Behalf of Vote Solar Concerning Residential Electric Rate Design Reform. September 15, 2014.
75. CPUC Rulemaking 13-12-010
Opening Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Regarding Phase1A of the 2014 Long-Term Procurement Planning Proceeding. September 24, 2014.
76. CPUC Application 14-01-027
Testimony of William A. Monsen on Behalf of the City of San Diego Concerning the Application of SDG&E for Authority to Update Electric Rate Design. November 14, 2014.
77. CPUC Application 14-01-027
Rebuttal Testimony of William A. Monsen on Behalf of the City of San Diego Concerning the Application of SDG&E for Authority to Update Electric Rate Design. December 12, 2014.
78. CPUC Rulemaking 13-12-010
Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Regarding Supplemental Testimony in Phase1A of the 2014 Long-Term Procurement Planning Proceeding. December 18, 2014.
79. CPUC Application 14-06-014
Opening Testimony of William A. Monsen on Behalf of the Independent Energy Producers Association Regarding Standby Rates in Phase 2 of SCE's 2015 Test Year General Rate Case. March 13, 2015.

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80. CPUC Application 14-04-014
Opening Testimony of William A. Monsen on Behalf of ChargePoint, Inc. Regarding SDG&E's Vehicle Grid Integration Pilot Program. March 16, 2015.
81. Public Utilities Commission of the State of Hawaii Docket No. 2015-0022
Direct Testimony on Behalf of AES Hawaii, Inc. July 20, 2015.
82. Federal Energy Regulatory Commission Docket Nos. EL02-60-007 and EL02-62-006
(Consolidated)
Prepared Answering Testimony of William A. Monsen on Behalf of Iberdrola Renewables Regarding Rate Impacts of the Iberdrola Contract. July 21, 2015.
83. Public Utilities Commission of Nevada Docket Nos. 15-07041 and 15-07042
Prepared Direct Testimony of William A. Monsen on Behalf of the Alliance for Solar Choice (TASC). October 27, 2015.
84. Arizona Corporation Commission Docket No. E-00000J-14-0023
Rebuttal Testimony of William A. Monsen on Behalf of the Alliance for Solar Choice (TASC). April 7, 2016.
85. Arizona Corporation Commission Docket No. E-01461A-15-0363
The Energy Freedom Coalition of America's (EFCA) Direct Testimony of William A. Monsen. June 1, 2016.
86. Public Utilities Commission of the State of Colorado Proceeding No. 16AL-0048-E
Answer Testimony of William A. Monsen on Behalf of Vail Summit Resorts, Inc. June 6, 2016.
87. CPUC Application 15-04-012
Direct Testimony of William A. Monsen on Behalf of the City of San Diego Regarding Marginal Costs, Revenue Allocation, and Rate Design. July 5, 2016.
88. Arizona Corporation Commission Docket No. E-01461A-15-0363
The Energy Freedom Coalition of America's (EFCA) Direct Testimony of William A. Monsen and Patrick J. Quinn. July 29, 2016.
89. Arizona Corporation Commission Docket No. E-01461A-15-0363
The Energy Freedom Coalition of America's (EFCA) Rebuttal Testimony of William A. Monsen. August 15, 2016.
90. CPUC Application 15-04-012
Rebuttal Testimony of William A. Monsen on Behalf of the City of San Diego Regarding Marginal Costs, Revenue Allocation, and Rate Design. October 14, 2016.

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91. Public Utilities Commission of Nevada Docket No. 16-07001 and 16-08027
Direct Testimony of William A. Monsen on Behalf of Ormat Nevada Inc. November 10, 2016.
92. CPUC Application 15-04-012
Joint Supplemental Testimony of Cynthia Fang on Behalf of San Diego Gas & Electric Company, R. Thomas Beach on Behalf of The Solar Energy Industries Association, Maurice Brubaker on Behalf of The Federal Executive Agencies, And William A. Monsen on Behalf of the City of San Diego. November 14, 2016.
93. CPUC Application 15-04-012
Joint Supplemental Testimony of Cynthia Fang on Behalf of San Diego Gas & Electric Company, Nathan Chau on Behalf of The Office of Ratepayer Advocates, William Monsen on Behalf of the City of San Diego and Alison M. Lechowicz on Behalf of the California City-County Street Light Association. November 16, 2016.
94. Public Utilities Commission of Nevada Docket No. 16-07001 and 16-08027
Supplemental Direct Testimony of William A. Monsen on Behalf of Ormat Nevada Inc. November 17, 2016.
95. Public Utilities Commission of the State of Colorado Proceeding No. 16A-0396E
Answer Testimony of William A. Monsen on Behalf of Colorado Independent Energy Association. December 9, 2016.
96. JAMS Arbitration Case No: 1220049998
Declaration of William A. Monsen on Behalf of Watson Cogeneration Company and Camino Energy, LLC. January 11, 2017.
97. CPUC Application A.16-06-013
Direct Testimony of William A. Monsen and Anna Casas on Behalf of South San Joaquin Irrigation District. March 15, 2017.
98. CPUC Application A.16-09-003
Direct Testimony of William A. Monsen on Behalf of the California Solar Energy Industries Association in Southern California Edison's Rate Design Window Application. April 28, 2017.
99. American Arbitration Association Case No. 01-16-0002-2121
Claimant Buena Vista Biomass Power, LLC's Expert Witness Disclosure. August 18, 2017.
100. American Arbitration Association Case No. 01-16-0005-1073
Expert Report of William A. Monsen on Behalf of Saguaro Power Company. September 15, 2017.

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101. CPUC Application A.17-05-004
Direct Testimony of William A. Monsen on Behalf of Snow Summit LLC in Bear Valley Electric Services General Rate Case Application. September 29, 2017.
102. CPUC Application A.17-05-004
Rebuttal to Testimony by the Office of Ratepayer Advocates by William A. Monsen on Behalf of Snow Summit LLC in Bear Valley Electric Services General Rate Case Application. October 27, 2017.
103. Superior Court of California, County of San Diego Case No. 37-2015-00014540-CU-MC-CTL
Declaration in Support of Defendant's Motion for Summary Judgement, or in the Alternative, Motion for Summary Adjudication. February 3, 2018.
104. CPUC Application 17-06-030
Testimony of William A. Monsen on Behalf of the Coalition for Affordable Street Lights Concerning Street Light Rates and LED Conversions. March 23, 2018.
105. CPUC Application 17-09-006
Direct Testimony of William A. Monsen on Behalf of The Western Manufactured Housing Communities Association in Pacific Gas & Electric's 2018 Gas Cost Allocation and Rate Design Proceeding. June 20, 2018.
106. JAMS Arbitration No. 1100088728
Expert Report by William A. Monsen for Aera Energy, LLC. July 24, 2018.
107. JAMS Arbitration No. 1100088728
Conclusions and Summary of Opinions of William A. Monsen for Aera Energy, LLC. July 24, 2018.
108. CPUC Application 18-03-003
Prepared Joint Testimony of Brandon Charles on Behalf of the California Farm Bureau Federation, William A. Monsen on Behalf of the City of San Diego and Cynthia Fang on Behalf of San Diego Gas and Electric Company. August 20, 2018.
109. CPUC Application 18-03-003
Prepared Supplemental Testimony of Brandon Charles on Behalf of the California Farm Bureau Federation, William A. Monsen on Behalf of the City of San Diego and Cynthia Fang on Behalf of San Diego Gas and Electric Company. September 27, 2018.
110. CPUC Application 19-03-002
Direct Testimony of William A. Monsen on Behalf of the City of San Diego Regarding Marginal Costs, Revenue Allocation, and Rate Design. April 6, 2020.

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111. CPUC Application 19-11-019
Direct Testimony of William A. Monsen and Carlo Bencomo-Jasso on Behalf of the California Farm Bureau Federation Concerning Revenue Allocation and Agricultural Rate Design. November 20, 2020.
112. Rachel Kropp et al vs Southern California Edison Company Case No. BC698926
Declaration of William A. Monsen on Behalf of Brent & Foil, LLP. December 24, 2020.
113. CPUC Application 19-11-019
Reply Testimony of William A. Monsen and Carlo Bencomo-Jasso on Behalf of the California Farm Bureau Federation Concerning Revenue Allocation and Agricultural Rate Design. February 26, 2021.
114. CPUC Application 20-10-012
Direct Testimony of William A. Monsen on Behalf of the California Farm Bureau Federation Concerning Revenue Allocation and Agricultural Rate Design. July 26, 2021.
115. Public Utilities Commission of the State of Colorado Docket No. 21A-0141E
Hearing Exhibit No. 1000 Answer Testimony and Attachments of William A. Monsen on Behalf of the Colorado Independent Energy Association. October 11, 2021.
116. Kern County Assessment Appeals Board
Testimony of William A. Monsen on Behalf of Clearway Energy Regarding Differences Between Standard Offer Contracts and Modern PPAs. October 19, 2021.
117. Public Utilities Commission of the State of Colorado Docket No. 21A-0141E
Hearing Exhibit No. 1001 Cross-Answer Testimony and Attachments of William A. Monsen on Behalf of the Colorado Independent Energy Association. November 12, 2021.
118. Public Utilities Commission of the State of Colorado Docket No. 21A-0141E
Hearing Exhibit No. 1002 Testimony and Attachments in Opposition to the Non-Unanimous Partial Settlement Agreement of William A. Monsen on Behalf of the Colorado Independent Energy Association. December 6, 2021.

MARK E. FULMER

**PROFESSIONAL
EXPERIENCE**

**Principal
MRW & Associates, LLC
(1999 - Present)**

Conduct economic and technical studies in support of clients involved in regulatory and legislative proceedings and power project development. Advise clients on the economic issues associated with taking electricity and natural gas service from non-utility sources or self-generating power. Work includes expert testimony on rate matters; economic analysis of end-use energy-efficiency projects, retail rate and wholesale price forecasting, and pro forma analysis of cogeneration and distributed generation facilities.

**Project Engineer
Daniel, Mann, Johnson & Mendenhall
(1996 - 1999)**

Acted as project manager and technical advisor on energy efficiency projects. Work included management of PG&E program to promote innovative energy efficient technologies for large electricity users. Coordinated the implementation of an intranet-based energy efficiency library. Directed technical and market analyses of small commercial and residential emerging technologies.

**Associate
Tellus Institute
(1990-1996)**

Advised public utility commissions in five states on electric and gas industry deregulation issues. Submitted testimony on the rate design of a natural gas utility to the Pennsylvania Public Utilities Commission. Testified before the Hawaii PUC on Behalf of a gas distribution utility concerning a competing electric utility's demand-side management plan. Analyzed national energy policies for a set of non-governmental agencies, including critiquing the DOE's national energy forecasting model. Developed model to track transportation energy use and emissions and used the model to evaluate state-level transportation policies. Developed model to track greenhouse gas emission reductions resulting from state-level carbon taxes.

**Research Assistant
Center for Energy and Environmental Studies, Princeton University
(1988-1990)**

Researched the technical and economic viability of gas turbine cogeneration using biomass in the cane sugar and alcohol industries. First researcher to apply "pinch" analysis and a mixed-integer linear programming model to minimize energy use in cane sugar refineries and alcohol distilleries.

EDUCATION M.S.E. Mechanical and Aerospace Engineering, Princeton University, 1991
B.S., Mechanical Engineering, University of California, Irvine, 1986

Prepared Testimony

1. Rhode Island Public Utilities Commission No. 2025
Prepared Testimony on Behalf of Rhode Island Department of Public Utilities and Carriers (Commission Staff). Testimony addressed the costs, savings, and cost-effectiveness of the proposed demand-side management programs of Providence Gas Company. April 1993.
2. Pennsylvania Public Utility Commission R-943029
Prepared Testimony on Behalf of the Pennsylvania Office of Consumer Advocate. Testimony reviewed 1307(f) filing of Columbia Gas of Pennsylvania, particularly the impact of the proposed gas cost recovery mechanism on residential customers. May 1994.
3. Public Utilities Commission of the State of Hawaii No. 94-0206
Prepared Testimony on Behalf of the Gas Company of Hawaii (Gasco). Testimony identification of Gasco's concerns regarding HECO's proposed DSM programs for competitive energy end-use markets. December 1994.
4. Arizona Corporation Commission No. E-00000A-02-0051, E-01345A-01-0822, E-00000A-01-0630. E01933A-02-0069, E-01933A-98-0471
Rebuttal Testimony on Behalf of Constellation NewEnergy, Inc. and Strategic Energy, L.L.C. Testimony addressed the future of the Arizona Independent System Administrator. July 28, 2002.
5. FERC Docket Nos. EL00-95-075 and EL00-98-063
Affidavit on Behalf of Duke Energy Trading and Marketing LLC. March 20, 2003.
6. CPUC Rulemaking 01-10-024
Prepared Testimony on Behalf of the Alliance for Retail Energy Markets. Testimony addressed the utility procurement plans with respect to resource adequacy. June 23, 2003.
7. CPUC Rulemaking 01-10-024
Rebuttal Testimony on Behalf of the Alliance for Retail Energy Markets. July 14, 2003.
8. Arizona Corporation Commission No. E-00000A-02-0051
Reply Testimony on Behalf of Constellation NewEnergy, Inc. and Strategic Energy L.L.C. August 29, 2003.
9. Arizona Corporation Commission No. E-01345A-03-0437
Direct Testimony on Behalf of Constellation NewEnergy and Strategic Energy, Inc. February 3, 2004.
10. Arizona Corporation Commission No. E-01345A-03-0437
Cross Rebuttal Testimony of Mark E. Fulmer on Behalf of Constellation NewEnergy and Strategic Energy, Inc. March 30, 2004.

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11. CPUC Rulemaking 03-10-003
Direct Testimony of Mark E. Fulmer on Behalf of The City and County of San Francisco on Community Choice Aggregation Transaction Costs. April 15, 2004.
12. CPUC Rulemaking 03-10-003
Reply Testimony of Mark E. Fulmer on Behalf of The City and County of San Francisco on Cost Responsibility Surcharge for Community Choice Aggregation. May 7, 2004.
13. CPUC Rulemaking 03-10-003
Rebuttal Testimony of Mark E. Fulmer on Behalf of The City and County of San Francisco on Cost Responsibility Surcharge for Community Choice Aggregation. May 20, 2004.
14. CPUC Rulemaking 04-04-003
Testimony of Mark Fulmer on Behalf of Strategic Energy LLC and Constellation NewEnergy concerning the Long Term Procurement Plans of PG&E, SCE and SDG&E. August 6, 2004.
15. CPUC Rulemaking 04-04-003
Rebuttal Testimony of Mark Fulmer on Behalf of Strategic Energy LLC and Constellation NewEnergy concerning the Long Term Procurement Plans of PG&E, SCE and SDG&E. August 20, 2004.
16. CPUC Rulemaking 03-10-003
Opening Testimony of Mark E. Fulmer on Behalf of the City and County of San Francisco on Allocation of Costs for Community Choice Aggregation Phase 2. April 28, 2005.
17. CPUC Rulemaking 04-12-014
Testimony of Mark E. Fulmer on Behalf of the Alliance for Retail Energy Markets Concerning SCE's Test Year 2006 General Rate Case Application. May 6, 2005.
18. CPUC Rulemaking 03-10-003
Rebuttal Testimony of Mark E. Fulmer on Behalf of the City and County of San Francisco on Allocation of Costs for Community Choice Aggregation Phase 2. May 16, 2005.
19. CPUC Rulemaking 04-12-014
Testimony of Mark E. Fulmer on Behalf of the Alliance for Retail Energy Markets Concerning SCE's Test Year 2006 General Rate Case Application. May 25, 2005.
20. CPUC Application 06-03-005
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of the PG&E's 2007 General Rate Case Marginal Cost, Revenue Allocation and Rate Design. October 27, 2006.

21. CPUC Application 07-01-045
Testimony of Mark E. Fulmer on Behalf of The Alliance for Retail Energy Markets and The California Manufacturers and Technology Association Concerning SCE's Application to Update its Direct Access and Other Service Fees. June 22, 2007.
22. CPUC Rulemaking 08-03-002
Testimony of Mark Fulmer Behalf of Debenham Energy, LLC. Concerning Tariffs Supportive of Green Distributed Generation. October 31, 2008.
23. CPUC Application 09-02-022
Testimony of Mark E. Fulmer on Behalf of The Direct Access Customer Coalition Concerning PG&E's 2009 Rate Design Window Application. July 31, 2009.
24. CPUC Application 09-02-019
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition Concerning the Cost Recovery Proposed By PG&E in its Application to Implement a Photovoltaic Program. August 14, 2009.
25. Superior Court of San Francisco
Deposition of Mark E. Fulmer on Behalf of the City and County of San Francisco in PG&E v. CCSF. (Verbal deposition only.) September 2, 2009.
26. California Superior Court of San Francisco Court Case No. CGC-07-470086 Testimony of Mark E. Fulmer on Behalf of the City and County of San Francisco in PG&E v. City and County of San Francisco. (Trial exhibits only in electronic file.) September 25, 2009.
27. CPUC Application 09-12-020
Testimony of Mark E. Fulmer on Behalf of The Direct Access Customer Coalition Concerning Phase 1 of PG&E's Test Year 2011 General Rate Case. May 19, 2010.
28. CPUC Application 10-03-014
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of PG&E's Test Year 2011 General Rate Case Application. October 6, 2010.
29. CPUC Rulemaking 07-05-025
Testimony of John P. Dalessi, Mark E. Fulmer, Margaret A. Meal on Behalf of the Joint Parties on a Fair and Reasonable Methodology to Determine the Power Charge Indifference Adjustment (PCIA) and the Competition Transition Charge (CTC). January 31, 2011.
30. CPUC Rulemaking 07-05-025
Testimony of Mark E. Fulmer on Behalf of the Direct Access Parties Concerning the Transitional Bundled Service Rate, Direct Access Switching Rules, Minimum Stay

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Provisions, and Energy Service Provider Financial Security Requirements. January 31, 2011.

31. CPUC Rulemaking 07-05-025
Rebuttal Testimony of Mark E. Fulmer on Behalf of The Direct Access Parties Concerning the Transitional Bundled Service Rate, Direct Access Switching Rules, Minimum Stay Provisions, and Energy Service Provider Financial Security Requirements. February 25, 2011.
32. CPUC Rulemaking 07-05-025
Rebuttal Testimony of John P. Dalessi, Mark E. Fulmer, Margaret A. Meal on Behalf of The Joint Parties on a Fair and Reasonable Methodology to Determine the Power Charge Indifference Adjustment (PCIA) and the Competition Transition Charge (CTC). February 25, 2011.
33. CPUC Application A.11-03-001, 11-03-002, 11-03-003
Testimony of Mark E. Fulmer on Behalf of The Direct Access Customer Coalition and The Alliance for Retail Energy Markets Concerning Competitive Issues in the 2012-2014 Demand Response Program Proposals. June 15, 2011.
34. CPUC Application 11-03-001, 11-03-002, 11-03-003
Rebuttal Testimony of Mark E. Fulmer on Behalf of The Direct Access Customer Coalition and The Alliance for Retail Energy Markets Concerning Competitive Issues in the 2012-2014 Demand Response Program Proposals. July 11, 2011.
35. CPUC Application 11-06-004
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition and the Alliance for Retail Energy Markets concerning PG&E's 2012 Energy Resource Recovery Account (ERRA) and 2012 Generation Non-bypassable Charges Forecast. August 26, 2011.
36. CPUC Application 11-05-023
Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition, the Alliance for Retail Energy Markets and the Western Power Trading Forum concerning the Application of SDG&E for Authority to Enter into Purchase Power Tolling Agreements with Escondido Energy Center, Pio Pico Energy Center, and Quail Brush Power. September 22, 2011.
37. CPUC Application 11-06-007
Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of SCE's Test Year 2012 General Rate Case Application. February 6, 2012.
38. CPUC Application 11-12-009
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition, the Alliance for Retail Energy Markets and the City and County of San Francisco

Concerning PG&E's Application to Revise Direct Access and Community Choice Aggregation Service Fees. May 14, 2012.

39. CPUC Rulemaking 12-03-014
Testimony on Behalf of the Alliance for Retail Markets, Direct Access Customer Coalition, and Marin Energy Authority. With Sue Mara. June 25, 2012.
40. CPUC Rulemaking 12-03-014
Reply Testimony on Behalf of the Alliance for Retail Energy Markets, Direct Access Customer Coalition, and Marin Energy Authority. With Sue Mara. July 23, 2012.
41. CPUC Application 12-03-001
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets Concerning PG&E Company's Application to Implement Economic Development Rates for 2013-2017. August 24, 2012.
42. CPUC Application 12-02-001
Rebuttal Testimony of Mark E. Fulmer on Behalf of the Alliance for Retail Energy Markets Concerning PG&E's Application to Implement Economic Development Rates for 2013-2017. October 19, 2012.
43. CPUC Application 12-04-020
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets, the Direct Access Customer Coalition and 3 Phases Renewables Regarding PG&E's Application to Establish a Green Option Tariff. October 19, 2012.
44. CPUC Application 12-04-020
Rebuttal Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets, the Direct Access Customer Coalition and 3 Phases Renewables Regarding PG&E's Application to Establish a Green Option Tariff. November 9, 2012.
45. CPUC Application 11-11-002
Testimony of Mark Fulmer on Behalf of the City of Long Beach. November 16, 2012.
46. CPUC Application 11-11-002
Rebuttal Testimony of Mark Fulmer on Behalf of the City of Long Beach. December 14, 2012.
47. CPUC Investigation 12-10-013
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding the Rate Treatment of the San Onofre Nuclear Generating Station. September 10, 2013.
48. CPUC Application 13-06-015

- Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding SDG&E's Application for Approval of an Amended Power Purchase Tolling Agreement with Pio Pico Energy Center. September 20, 2013.
49. CPUC Investigation 12-10-013
Rebuttal Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding the Rate Treatment of the San Onofre Nuclear Generating Station. September 23, 2013.
50. CPUC Application 13-06-015
Rebuttal Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding SDG&E's Application for Approval of an Amended Power Purchase Tolling Agreement with Pio Pico Energy Center. October 4, 2013.
51. CPUC Application 13-08-004
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding the SCE's 2014 "ERRA" Forecast. November 20, 2013.
52. CPUC Application 13-06-011
Testimony of Mark Fulmer on Behalf of the Core Transport Agent Consortium Concerning PG&E's Core Gas Capacity Planning Range. November 20, 2013.
53. CPUC Application 13-04-012
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of PG&E's Test Year 2014 General Rate Case Application. December 13, 2013.
54. CPUC Application 13-06-011
Testimony of Mark Fulmer on Behalf of the Core Transport Agent Consortium Concerning PG&E's Core Gas Capacity Planning Range. December 18, 2013.
55. CPUC Application 13-12-012/Investigation 14-06-016
Testimony of Mark Fulmer on Behalf of the Core Transport Agent Consortium Concerning Core Transport Issues in PG&E's Gas Transmission and Storage Rate Case and Consolidated Order Instituting Investigation. August 11, 2014.
56. New Mexico Public Regulation Commission Case No. 13-00390-UT
Direct Testimony of Mark E. Fulmer on Behalf of Renewable Energy Industries Association of New Mexico. August 29, 2014.
57. CPUC Application 14-05-024

- Rebuttal Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition. September 2, 2014.
58. CPUC Application 13-12-012
Rebuttal Testimony of Mark Fulmer on Behalf of the Core Transport Agent Consortium Concerning Core Transport Issues In PG&E's Gas Transmission and Storage Rate Case. September 15, 2014.
59. CPUC Rulemaking 12-06-013
Direct Testimony of Mark Fulmer on Behalf of the Interstate Renewable Energy Council, Inc. Concerning Residential Electric Rate Design Reform. September 15, 2014.
60. CPUC Application 14-06-011
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets, the Direct Access Customer Coalition and the Public Agency Coalition. October 3, 2014.
61. Washington Utilities & Transportation Commission Docket UE-140762 ET AL.
Direct Testimony of Mark Fulmer on Behalf of the Alliance for Solar Choice. October 10, 2014.
62. CPUC Rulemaking 12-06-013
Rebuttal Testimony of Mark Fulmer on Behalf of the Interstate Renewable Energy Council, Inc. Concerning Residential Electric Rate Design Reform. October 17, 2014.
63. Washington Utilities & Transportation Commission Docket UE-140762 ET AL.
Cross-Answering Testimony of Mark Fulmer on Behalf of the Alliance for Solar Choice. November 14, 2014.
64. CPUC Application 14-06-014
Testimony of Mark E. Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of SCE's Test Year 2015 General Rate Case Application. March 13, 2015.
65. CPUC Application 14-06-014
Testimony of Mark E. Fulmer on SCE's Application to Establish Marginal Costs, Allocate Revenues, Design Rates, and Implement Additional Dynamic Pricing Rates. March 13, 2015.
66. CPUC Application 13-12-013
Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. May 8, 2015.
67. CPUC Application 14-11-003
Testimony of Briana Kobor, Laura Norin, and Mark Fulmer on Behalf of the Utility Consumers' Action Network Concerning Sempra's Revenue Requirement Proposals for SDG&E and SoCal Gas. May 15, 2015.

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68. CPUC Application 13-12-013
Rebuttal Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. June 12, 2015.
69. CPUC Application 14-12-017
Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. June 22, 2015.
70. CPUC Application 14-12-007
Testimony of Mark Fulmer and Laura Norin on Behalf of the Utility Consumers' Action Network Concerning Risk Assignment of SONGS Decommissioning Costs. July 15, 2015.
71. Federal Energy Regulatory Commission Docket Nos. EL02-60-007, EL02-62-006 (Consolidated)
Answering Testimony of Mark Fulmer on Behalf of Shell Energy North America (US), L.P. July 21, 2015.
72. CPUC Application 14-12-007
Rebuttal Testimony of Mark Fulmer and Laura Norin on Behalf of the Utility Consumers' Action Network Concerning Risk Assignment of SONGS Decommissioning Costs. August 3, 2015.
73. CPUC Rulemaking 14-07-002
Joint Solar Parties Net Energy Metering Successor Tariff Rebuttal Testimony of R. Thomas Beach, Mark Fulmer and Jose Luis Contreras. September 30, 2015.
74. Arizona Corporation Commission No. E-04204A-15-0142
Direct Testimony of Mark Fulmer on Behalf of the Alliance for Solar Choice. November 6, 2015.
75. Arizona Corporation Commission No. E-04204A-15-0142
Direct Testimony of Mark Fulmer on Behalf of the Alliance for Solar Choice. December 9, 2015.
76. Arizona Corporation Commission No. E-04204A-15-0142
Surrebuttal Testimony of Mark Fulmer on Behalf the Alliance for Solar Choice. February 23, 2016.
77. CPUC Application 15-07-014
Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. March 11, 2016.
78. Arizona Corporation Commission No. E-01575A-15-0312

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- Direct Testimony of Mark Fulmer on Behalf the Energy Freedom Coalition of America. April 1, 2016.
79. CPUC Application 15-07-014
Rebuttal Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. April 11, 2016.
80. Public Utilities Commission of the State of Colorado Proceeding No. 16AL-0048E
Confidential Answer Testimony of Mark E. Fulmer on Behalf of the Energy Freedom Coalition of America. June 6, 2016.
81. CPUC Application 16-08-006
Joint Intervenor Opening Testimony. January 27, 2017.
82. CPUC Application 16-06-0136
Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of Pacific Gas & Electric Company's Test Year 2017 General Rate Case Application. March 15, 2017.
83. CPUC Application 17-01-019
Testimony of Mark Fulmer and Brandon Charles on Behalf of The Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Proposed Demand Response Portfolio. May 11, 2017.
84. CPUC Rulemaking 03-10-003
Testimony of Mark Fulmer on Behalf of CalCCA Concerning Community Choice Aggregation Financial Security Requirements as Required by California Public Utilities Code Section 394.25(e). July 28, 2017.
85. CPUC Rulemaking 03-10-003
Rebuttal Testimony of Mark Fulmer, Jeremy Waen, and Charles Perl on Behalf of CalCCA Concerning Community Choice Aggregation Financial Security Requirements as Required by California Public Utilities Code Section 394.25(e). August 25, 2017.
86. CPUC Application 17-06-030
Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase Concerning Phase 2 of Southern California Edison's Test Year 2019 General Rate Case Application. March 23, 2018.
87. CPUC Rulemaking 17-06-026
Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition. April 2, 2018.
88. CPUC Rulemaking 17-06-026
Rebuttal Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition. April 23, 2018.

89. CPUC Application 17-10-007/17-10-008
Testimony of Mark E. Fulmer on Behalf of The City of Long Beach, Energy Resources Department. May 14, 2018.
90. CPUC Application 17-11-009
Testimony of Mark Fulmer on Behalf of Just Energy Solutions, Inc., School Project for Utility Rate Reduction (“SPURR”); Tiger Natural Gas, Inc.; United Energy Trading, LLC Dba Blue Spruce Energy; and Vista Energy Marketing in Pacific Gas & Electric’s Application of Pacific Gas and Electric Company Proposing Cost of Service and Rates for Gas Transmission and Storage Services for the Period 2019-202. July 20, 2018.
91. CPUC Application 17-11-009
Rebuttal Testimony of Mark Fulmer on Behalf of Just Energy Solutions, Inc., School Project for Utility Rate Reduction (“SPURR”); Tiger Natural Gas, Inc.; United Energy Trading, LLC dba Blue Spruce Energy; and Vista Energy Marketing (Collectively, the “CTA Group”) Concerning Core Transport Issues in Pacific Gas & Electric’s Gas Transmission and Storage Rate Case. August 20, 2018.
92. CPUC Application 19-08-013
Testimony of Mark Fulmer on The California Choice Energy Authority and the Clean Power Alliance of Southern California Concerning Service Fees Charged to Community Choice Aggregators. May 5, 2020.
93. CPUC Application 19-08-013
Testimony of Mark Fulmer on The California Choice Energy Authority and the Clean Power Alliance of Southern California Concerning Service Fees Charged to Community Choice Aggregators. June 23, 2020.
94. CPUC Application 19-11-019
Prepared Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition on Pacific Gas & Electric Company’s 2020 General Rate Case Phase 2. November 20, 2020.
95. CPUC Application 19-11-019
Rebuttal Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition on Pacific Gas & Electric Company’s 2020 General Rate Case Phase 2. February 26, 2021.
96. CPUC Rulemaking 20-08-020
Prepared Direct Testimony of Mark Fulmer on Behalf of Coalition for Community Solar Access. June 18, 2021.
97. CPUC Rulemaking 20-08-020
Rebuttal Testimony of Mark Fulmer on Behalf of the Coalition for Community Solar Access. July 16, 2021.

98. CPUC Application 20-10-012
Direct Testimony of Mark Fulmer on Behalf of the Direct Access Customer Coalition Concerning Phase 2 of Southern California Edison's 2021 General Rate Case Application. July 26, 2021.
99. CPUC Application 21-09-001
Direct Testimony of Mark Fulmer on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application to Update Rate Design Include a Residential Untiered Time-of-Use Rate with a Fixed Charge. January 14, 2022.
100. CPUC Application 21-09-001
Rebuttal Testimony of Mark Fulmer on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application to Update Rate Design Include a Residential Untiered Time-of-Use Rate with a Fixed Charge. February 11, 2022.

DAVID N. HOWARTH

**PROFESSIONAL
EXPERIENCE**

**Principal
MRW & Associates, LLC
(9/96 - Present)**

Specializes in quantitative and qualitative analysis of energy economics, policy and technology issues. Clients include energy project developers, owners, lenders, public agencies, and end users. He is an expert on renewable energy policy and has worked with a number of renewable energy project developers in the western states and Hawaii, providing analytical support to their development efforts. Activities have included construction of pro forma financial models, bid support for utility RFOs and analysis of QF energy pricing for existing projects. He has also worked with customers and distributed generation suppliers to analyze supply options and utility bill impacts. Other work has included litigation support, market due diligence, and contract negotiation support.

**Associate
RDC, Inc.
(9/93 - 9/94) Independent Consultant (9/94 - 9/96)**

Provided management consulting services, including strategic business planning and subcontractor management, to developer of a flywheel energy storage system for transportation and stationary applications. Performed market study for manufacturer of small, advanced gas turbines. Completed assessment of emerging market for fiber optic communications installed along electric utility rights-of-way. Identified and characterized industrial processes for which electricity-to-gas energy substitution opportunities exist to support utility demand-side management efforts.

**Analyst
Global Change Unit, ICF Incorporated
(9/89 - 7/93)**

Co-authored EPA study of the potential for renewable sources of electricity to reduce air pollution. Developed models to analyze the long-term impacts of U.S. government programs to increase carbon storage in forests and to reduce greenhouse gas emissions from agricultural sources. Participated in a variety of regulatory studies of selected toxic substances for USEPA. Analyzed the operations and financial performance of multinational corporations to determine profit levels consistent with a fair treatment of transfers with their foreign subsidiaries.

EDUCATION

M.A., Energy and Resources Group, University of California, Berkeley, 1996
B.A., Economics and high honors in Biology, Wesleyan University, 1989

Prepared Testimony

1. California Public Utilities Commission Application 02-05-046
Prepared Testimony for the Natural Resources Defense Council, October 10, 2003. Report of the Center for Energy Efficiency and Renewable Energy Technologies: Mohave Generating Station Alternative Supply Assessment. October 10, 2003.
2. California Public Utilities Commission Application 16-08-006
Opening Testimony of David N. Howarth on Behalf of the Independent Energy Producers Association Concerning Retirement of Diablo Canyon Power Plant, Implementation of the Joint Proposal, and Recovery of Associated Costs Through Proposed Ratemaking Mechanisms. January 27, 2017.
3. California Public Utilities Commission Application 16-08-006
Rebuttal Testimony of David N. Howarth on Behalf of the Independent Energy Producers Association Concerning Retirement of Diablo Canyon Power Plant, Implementation of the Joint Proposal, and Recovery of Associated Costs Through Proposed Ratemaking Mechanisms. March 17, 2017.
4. Jams Arbitration Ref No. 1100107175
Direct Testimony of David Howarth on Behalf of City of Vernon Regarding Bicent Overcharges. August 3, 2020.

MARY NEAL

**PROFESSIONAL
EXPERIENCE**

**Senior Project Manager
MRW & Associates, LLC
(2018)**

Conduct technical analysis of electric and gas utility rate cases and other regulatory filings and serve as expert witness in regulatory proceedings. Perform integrated resource planning on behalf of Community Choice Aggregators and Electric Service Providers in California. Construct and critique models for utility cost allocation, rate design, retail rate forecasts, and benefits of distributed generation facilities. Evaluate energy procurement options and provide analytical and strategic support for business decisions and litigation on electric and gas issues.

**Senior Consultant
Daymark Energy Advisors, Inc.
(2009-2017)**

Advised electric and gas industry clients on resource planning, utility rates, and market design issues. Testified before multiple state and Canadian provincial regulatory agencies on issues related to electric market modeling, fuel cost forecasting, cost allocation, rate design, and electric utility capital planning. Prepared and critiqued numerous electric and gas utility allocated cost of service, revenue requirement and rate design models. Led modeling team for Daymark Energy Advisors' AURORAxmp Northeast electric market model.

**Engineer
Solar Turbines, Inc.
(2005-2008)**

Designed dry low-emission combustion systems for Mars SoLoNOx gas turbines. Led development of fuel injectors for landfill gas and aftermarket retrofit applications.

EDUCATION

M.A., Energy and Environmental Analysis, Boston University, 2010
B.S. Mechanical Engineering, University of California, Davis, 2005

Prepared Testimony

1. Nova Scotia Utility and Review Board Matter No. 04600
Direct Testimony of Mary Neal on Behalf of the Nova Scotia Small Business Advocate Concerning Nova Scotia Power's 2012 Annual Capital Expenditure Plan. January 13, 2012.
2. Public Service Commission of Wisconsin Docket No. 3270-UR-118
Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board of Wisconsin Concerning Madison Gas & Electric's Application for Authority to Change Electric and Natural Gas Rates. August 27, 2012.
3. Public Service Commission of Wisconsin Docket No. 6690-UR-123
Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board of Wisconsin Concerning Wisconsin Public Service Corporation's Application to Adjust Electric and Natural Gas Rates. August 13, 2014.
4. Nova Scotia Utility and Review Board Matter No. 06514
Direct Testimony of Mary Neal on Behalf of the Nova Scotia Small Business Advocate Concerning Nova Scotia Power's 2015 Annual Capital Expenditure Plan. January 16, 2015.
5. Public Service Commission of Wisconsin Docket No. 05-CE-145/05-CE-147
Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board of Wisconsin Concerning the Joint Application of Wisconsin Electric Power Company, Madison Gas and Electric Company, and WPPI Energy for a Certificate of Authority to Upgrade Various Power Block Equipment at Elm Road Generating Station Units to Facilitate the Use of Sub-Bituminous or Powder River Basin Coals as a Fuel Source/Construct a Site Bulk Material Handling Project at Oak Creek and Elm Road Generating Station. February 24, 2015.
6. Public Service Commission of Wisconsin Docket No. 6690-UR-124
Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board of Wisconsin Concerning Wisconsin Public Service Corporation's Application to Adjust Electric and Natural Gas Rates. September 2, 2015.
7. Nova Scotia Utility and Review Board Matter No. 07176
Direct Testimony of Mary Neal on Behalf of the Nova Scotia Small Business Advocate Concerning Nova Scotia Power's 2016 Annual Capital Expenditure Plan. February 17, 2016.
8. New York Public Service Commission Case No. 16-E-0060
Direct Testimony of the Electric Rate Panel on Behalf of the New York Utility Intervention Unit Concerning the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service (with Lee Smith and Danielle Panko). May 27, 2016.

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9. Vermont Public Service Board
Testimony of Mary Neal on Behalf of Swanton Village Electric Concerning Swanton Village Electric's Proposed Electric Vehicle Charging Station Pilot Program (with assistance from Vermont Public Power Supply Authority). June 2016.
10. CPUC Application 18-07-024
Testimony on Behalf of The City of Long Beach, Energy Resources Department. April 12, 2019.
11. Public Service Commission of Wisconsin Docket No. 5-CE-146
Direct Testimony of Mary Neal on Behalf of Citizens Utility Board. April 26, 2019.
12. Public Service Commission of Wisconsin Docket No. 5-CE-146
Supplemental Direct Testimony of Mary Neal on Behalf of Citizens Utility Board. May 3, 2019.
13. Public Service Commission of Wisconsin Docket No. 5-CE-146
Rebuttal Testimony of Mary Neal on Behalf of Citizens Utility Board. May 28, 2019.
14. Public Service Commission of Wisconsin Docket No. 5-CE-146
Surrebuttal Testimony of Mary Neal on Behalf of Citizens Utility Board. May 28, 2019.
15. Public Service Commission of Wisconsin Docket No. 6690-UR-126
Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board, Clean Wisconsin & Wisconsin Industrial Energy Group. August 23, 2019.
16. Public Service Commission of Wisconsin Docket No. 6690-UR-126
Supplemental Direct Testimony of Mary Neal on Behalf of the Citizens Utility Board, Clean Wisconsin & Wisconsin Industrial Energy Group. August 28, 2019.
17. Public Service Commission of Wisconsin Docket No. 6690-UR-126
Surrebuttal Testimony of Mary Neal on Behalf of the Citizens Utility Board, Clean Wisconsin & Wisconsin Industrial Energy Group. October 4, 2019.
18. CPUC Application 19-03-002
Direct Testimony of Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design. April 6, 2020.
19. CPUC Application 19-03-002
Rebuttal Testimony of Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design. May 4, 2020.

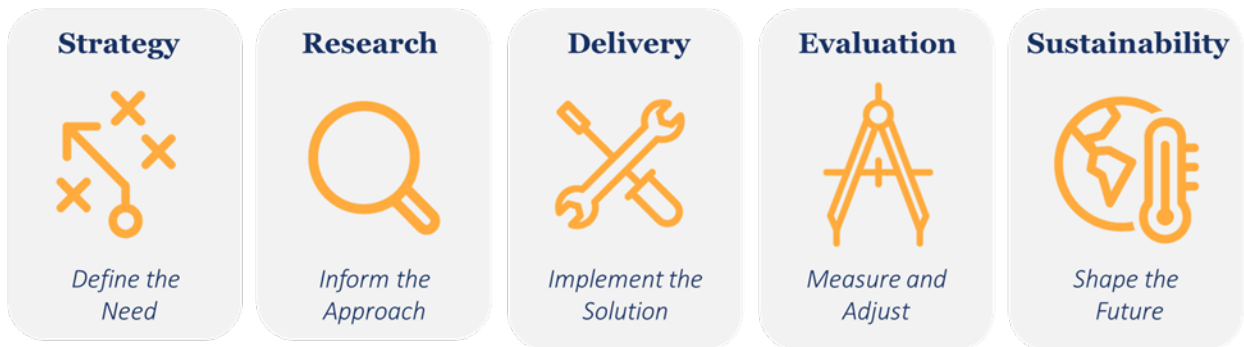
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20. CPUC Application 19-10-012
Testimony of Substitute Witness Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application to Extend and Modify the Power Your Drive Pilot Approved by Decision 16-01-045. May 18, 2020.
21. CPUC Application 19-10-012
Rebuttal Testimony of Substitute Witness Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application to Extend and Modify the Power Your Drive Pilot Approved by Decision 16-01-045. June 19, 2020.
22. CPUC Application 19-09-014
Direct Testimony of Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Phase 2 Opening Testimony. August 21, 2020.
23. CPUC Application 19-11-019
Direct Testimony of Mary Neal on Behalf of the Western Manufactured Housing Communities Association in Pacific Gas & Electric's 2020 Electric Cost Allocation and Rate Design Proceeding. November 20, 2020.
24. CPUC Application 20-10-012
Direct Testimony of Mary Neal on Behalf of the Western Manufactured Housing Communities Association in Phase 2 of Southern California Edison's 2021 General Rate Case Application. July 26, 2021.
25. CPUC Application 21-08-010
Direct Testimony of Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application for Approval of its 2022 Electric Sales Forecast. October 1, 2021.
26. CPUC Application 21-08-010
Rebuttal Testimony of Mary Neal on Behalf of the Utility Consumers' Action Network Concerning San Diego Gas & Electric Company's Application For Approval of its 2022 Electric Sales Forecast. October 8, 2021.



Company Description

Tierra Resource Consultants, LLC (“Tierra”) provides energy and carbon management consulting services to utilities, government agencies, regulatory bodies, and private sector clients across North America. Our senior staff have been at the leading edge of energy supply and demand side analysis and solution delivery for over three decades. Formed in 2014, Tierra has five main practice areas:



In every engagement we leverage our experience to help our clients achieve excellence. For example, our staff have used our market knowledge to design programs that have earned our clients more than 20 national awards for program design, including 12 ENERGY STAR Partner of the Year awards. Recently, programs designed by Tierra staff have earned our clients the 2019 SEPA Innovative Partnership, the 2020 AESP Emerging Technology Program of the Year, and the 2020 PLMA Program Pacesetter Award. In March of 2022 Tierra received an award from the Energy Systems Integration Group (ESIG) of Institute of Electrical and Electronics Engineers (IEEE) for our work with Arizona Public Service to integrate distributed energy resources onto the grid. These awards reflect our ability to define strategy, conduct targeted research, create innovative solutions, and adjust over time as markets evolve.

FLOYD KENEIPP

PRINCIPAL

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Walnut Creek, CA 94596
Office: 925-954-7363 | Mobile: 925-305-8915

Email: Floyd.Keneipp@tierrarc.com

Web: www.TierraRC.com

PROFESSIONAL HISTORY

ENERGY MANAGEMENT CONSULTING

Principal, Tierra Resource Consults, May 2014 – Present

Managing Director, Navigant Consulting, April 2011 – April 2014

Director, Navigant Consulting, January 2010 – March 2011

Principal, Summit Blue Consulting, April 2008 – December 2009

Manager of West Coast Operations, Summit Blue Consulting, 2002 – April 2008

ESCO PROJECT DEVELOPMENT

Owner/President, The Industrial Lighting Company 2001-2002

Senior Project Developer, Enron Energy Services, 1999 – 2001

Project Developer, Sempra Energy, 1997 – 1999

INDUSTRIAL ENGINEERING

Senior Industrial Engineer, Unisys Corporation, 1989 – 1995

EDUCATION

M.B.A., University of San Diego, Finance and Marketing, 1994

B.S., Montana State University, Industrial and Management Engineering, 1983

BIOGRAPHY

Floyd is a principal at Tierra Resource Consultants (Tierra) and brings 32 years of experience developing and managing complex engineering projects and business solutions. Since 1999 he has worked on the technical, programmatic, and regulatory application of distributed energy resources (DER). For the past several years he has focused on developing integrated approaches to scale DER implementation at the community and utility levels, including optimizing the impacts on fuel consumption (buildings and transportation), grid reliability, and economic development. He has been a founding member of several consulting firms, including Tierra and Summit Blue Consulting (acquired by Navigant Consulting Inc. in 2010) where he served as the impact evaluation practice area lead. Floyd's engineering and management knowledge is enhanced by his prior work as a project developer for several large energy service companies where he engaged in all aspects of project development, from inception through financing, design, construction, and commissioning of final installations. During this time Floyd also founded and operated the Industrial Lighting Company, a design/build firm that installed energy efficiency projects in the commercial and industrial markets. Prior to entering the energy services industry, he was a licensed professional engineer (Industrial, state of California) implementing manufacturing systems and refining management processes to improve cost, quality, and production efficiencies in the aerospace, consumer products, and commercial semiconductor markets.

PROFESSIONAL EXPERIENCE

Connected Communities Grant, U.S. Department of Energy.

Principal Investigator on a DOE grant to build 500 new homes in North Carolina in partnership with Duke Energy, the National Renewable Energy Lab (NREL), and Ibacos. The project will explore the capabilities of a connected network of distributed energy resource (DER) technologies for serving utility peak capacity and resource adequacy needs at the bulk system and local transmission and distribution level. The project will demonstrate how a diverse ecosystem of DER technologies installed in Grid-interactive Efficient Buildings (GEBs), integrated through a common aggregation platform and coordinated with appropriate pricing signals can support grid reliability and resiliency while delivering meaningful customer, climate and community benefits.

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Winter Peak Study, Duke Energy. Project Manager tasked with defining the causes of Duke Energy's winter peak in North and South Carolina. The project completed three reports, including a Winter Peak Definition and Solution Set study that reviewed consumption and IRP data to define critical factors driving winter peak in the residential, commercial, and industrial sectors and what solutions exist or are in late-stage development. The second report forecast the load impacts on winter and financial implications for Duke Energy from various rate innovations and customer program solution offerings. A third report provided details on customer program designs that are consistent with North and South Carolina regulatory requirements that could be implemented over a three-year period.

Electrification Program Roadmap, Monterey Bay Community Power. Developed baseline CO₂e emissions across four counties for various classes of vehicles and measures in the residential and commercial built environment. Baseline emission estimates were developed at the measure and vehicle level and then calibrated against public data on annual county level consumption of electricity, natural gas, propane, gasoline, and diesel fuels. Reductions in CO₂e were then forecast through 2030 using a technology diffusion modelling approach for a range of program interventions developed with input from MBCP and stakeholders.

Advanced Energy Community Pilot Design, California Energy Commission. Designer and project manager for an advanced energy community (AEC) project that designed an Energy Performance District in Fresno. The AEC design leverages core city planning activities (general plans, metropolitan water plans, regional transportation plans, housing plans, carbon action plans, etc.) to identify and prioritize sustainability projects in key redevelopment areas. The pilot defined a project development and implementation approach that features an integrated design for distributed energy resource and leverages a wide range of market ready financing and funding sources to support implementation. By integrating planning, community outreach, and funding, the pilot defines the path to implement more sustainable energy projects citywide, including projects that capture deeper resource savings than have been historically achieved, while also addressing grid resiliency and reliability concerns associated with an aggressive deployment of DERs.

Electric Vehicle Ready Community Blueprint: Low-Income Multi-Family, California Energy Commission. Project manager to develop an EV Ready Community Blueprint for the low-income multifamily market. The research developed four 'frameworks' that define the low-income multi-family market including 1) housing and technology characteristics, 2) state and regional policy support and barriers, 3) financing and economic considerations, and 4) community engagement strategies to drive demand and supply of charging equipment. A technology diffusion model was then developed based on these frameworks to assess adoption rates and investment requirements over time.

Analysis to Update Energy Efficiency Potential, Goals, and Targets, California Public Utilities Commission. While serving as a Managing Director at Navigant Consulting Inc. (Navigant) managed the 2011 and 2013 updates to the energy efficiency potential, goals, and targets for the IOU territories in the state of California and supported the 2015 and 2018 updates as a subcontractor to Navigant. The primary goals of these studies included providing guidance for the investor-owned utilities' energy efficiency portfolios, support forecasts for energy procurement and transmission planning at the IOU and state level, and to inform strategic contributions to California's greenhouse gas reduction targets as expressed in Assembly Bill (AB) 32.

NICHOLAS SNYDER

MANAGING CONSULTANT BIOGRAPHY

Tierra Resource Consultants, LLC
1501 N. Broadway, Suite 300
Walnut Creek, CA 94596
Mobile: 707-327-1529
Email: Nick.Snyder@tierrarc.com
Web: www.TierraRC.com

PROFESSIONAL HISTORY

Managing Consultant, Tierra Resource Consultants, November 2020 – Present
Senior Consultant, Tierra Resource Consultants, October 2019 – October 2020
Consultant, Tierra Resource Consultants, July 2018 – September 2019
Senior Analyst, Tierra Resource Consults, May 2017 – Present
Intern, Tierra Resource Consultants, October 2016 – April 2017
Local Government Program and Regional Initiatives Intern, California Public Utilities Commission, December 2015 – May 2016

EDUCATION

B.A. in Economics, Saint Mary's College of California, 2017

Nick Snyder is a Managing Consultant with Tierra. His work focuses on strategic planning for government agencies and utilities regarding the design, evaluation, and financing of distributed energy resource (DER) programs in a rapidly changing policy, technology, and financial landscape. His experience includes financial analysis of energy efficiency, distributed generation, electric vehicles, and load management; electrification program design; technical and market assessments of DER technologies; analysis of public utility commission regulations and legislation; evaluation, measurement and verification of energy efficiency programs; incremental cost and tariff analysis; air quality research and analysis; as well as forecasting and modeling. Nick also has a deep understanding of the current barriers and opportunities facing local governments from his multiple appointments to the Contra Costa County Sustainability Commission. Before joining Tierra, Nick worked in the Energy Division of the California Public Utilities Commission (CPUC) supporting the lead regulatory analyst for local government programs and regional initiatives including Community Choice Aggregators (CCAs), Regional Energy Networks (RENs), and Local Government Partnerships (LGPs).

PROFESSIONAL EXPERIENCE

Electrification Strategic Planning, Central Coast Community Energy (3CE). Lead analyst and researcher responsible for the preparation of a 5-year electrification program road map. In collaboration with 3CE management, designed a robust set of transportation and built environment electrification programs that will be deployed over five years to support 3CE in achieving aggressive decarbonization, fostering affordable electricity rates, promoting economic development and supporting grid reliability. The 5-year program road map documents how and why these programs will be deployed using the results of Tierra's electrification market characterization and forecasting efforts as well as extensive secondary research. Presenting a vision for how 3CE can employ a full suite of behind-the-meter or demand-side energy management options that are now available in the marketplace to achieve 3CE's electrification goals, including: energy efficiency, solar photovoltaic generation, demand management and battery storage, as well as fuel switching. Additionally, was responsible for supporting the development of a built environment and transportation electrification measure forecasting tool as well as assessing the current regulatory environment which included; CCA options to elect or apply to become a program administrator; fuel switching regulations; emerging statewide electrification funds from AB1477, and statewide program administration structures.

Winter Peak Targeted DSM Plan, Duke Energy Carolinas and Duke Energy Progress. Lead analyst responsible for coordinating and developing the winter peak targeted demand side management plan. This Plan was the final of three winter peak study reports on the winter peak capacity needs and potential EE/DSM program opportunities of Duke Energy Carolinas (DEC) and Duke Energy Progress (DEP). The report presents a strategic framework and plan for developing a focused solution set of potential customer rates, initiatives, and DSM customer programs and technologies that together can drive targeted EE/DR/Flex DER load shape savings impacts to solve Duke Carolina’s near term and longer-term winter peak challenges. Key solution concepts detailed in the report include Bring-Your-Own-Smart Thermostat Demand Response, Rate-Enabled Smart Thermostat Load Shifting, and Connected Water Heater Controls programs as well Time-of-Use, Critical Peak Pricing, and Bill-Certainty + Peak Time Rebate rates.

Energy Efficiency Target Setting Technical Support – Characterization of Gas and Fuel Substitution Technologies, California Energy Commission. Lead analyst and researcher responsible for coordinating with the prime contractor and overseeing Tierra staffs’ efforts to develop an electrification assessment tool that compares the costs and energy consumption of common gas and electrification technologies. This work included the characterization of baseline and fuel substitution measures’ costs and performance metrics. Including residential as well as commercial space heating, water heating, laundry and cooking technologies. Personally, characterized all baseline measures as well as select electrification measures.

Electric Vehicle Ready Community Low-Income Multi-Family Blueprint, California Energy Commission. Lead analyst and a principal author of the CEC grant funding opportunity (GFO) 17-604, which conducted research on how markets and technologies, state and regional policies, financing and economics, as well as local community engagement are influencing local EV adoption in the City of Fresno. Responsible for overseeing the development of the Policy Framework Chapter which details the various state and local policies that influence adoption and installation of EV charging stations in multi-family buildings. In addition to developing the Economic and Financial Framework Chapter which includes an infrastructure cost analysis as well as details how funding and financing products can be leveraged to produce net positive cash flows for property owners.

Program Design and Technology Evaluation of Grid Interactive Heat Pump Water Heating, Sonoma Clean Power. Conducted the technical assessment of multiple vendors’ grid interactive heat pump water heaters. This included an analysis of system performance metrics, installation requirements, controls, and data collection capabilities, as well as how well they aligned with proposed program use-cases including energy efficiency, demand response, and thermal storage/load shifting.

Funding Platform, Integrated Community Resource Market, California Energy Commission. Led the design and development of a database that leverages various types of funding and financing for sustainability projects—including energy efficiency, distributed generation, and demand management. Then matched building developments with these financing and funding sources, and analyzed how these mechanisms—which includes rebates, grants, fee waivers, tax incentives, matching funds, low interest loans, and bonds—can be combined to generate a capital stack and cash flow that is attractive for investors.

GABRIELA LIMON

ANALYST

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Email: gabriela.limon@tierrarc.com
Web: www.TierraRC.com

PROFESSIONAL HISTORY

ENERGY MANAGEMENT CONSULTING
Analyst, Tierra Resource Consults, October 2020 – Present

EDUCATION

B.S., Smith College, 2017

BIOGRAPHY

Gabriela is an Analyst with Tierra. Her work focuses on supporting evaluation projects, including the CPUC's evaluation of California Investor-Owned Utilities' Local Government Partnership and Regional Energy Network programs. Her ongoing work on the CPUC evaluations focuses on reviewing program tracking data for the evaluation of resource impacts and program delivery effectiveness. Other related experience includes supporting survey efforts to evaluate Advanced Energy's history and impact on utility markets in the Southeast, data analysis supporting a redesign of Duke Energy Indiana's portfolio of demand response programs, including profiling market characteristic based data from the Census Bureau's American Community Survey

(ACS) and EIA's Commercial Buildings Energy Consumption Survey (CBECS). In addition, Ms. Limon has led the analysis of survey data to help evaluate APS' Storage Rewards program, a pilot program intended to understand customer experience with residential storage batteries. Gaby also supports Tierra's data visualization efforts, including leading the firm's application of Tableau in developing dashboards that support customer engagement efforts. Recent visualization work includes updating an interactive dashboard that allows users to explore vehicle and buildings stocks, energy use and emissions as part of an electrification project completed for Central Coast Community Energy.

PROFESSIONAL EXPERIENCE

Community Electrification Value Metrics. Developed an interactive Tableau dashboard that gives an overview of CO₂e emissions (CO₂e) across four counties for various classes of vehicles and measures in the residential and commercial built environment.

Duke Energy Indiana Demand Response Program Opportunities Report. Profiled Duke Indiana territory's market characteristics based on data from the American Community Survey (ACS) and Commercial Buildings Energy Consumption Survey (CBECS). This research defined the following aspects of the residential market to provide summer peak solutions: 1) housing and occupant characteristics, 2) income characteristics, 3) space heating characteristics, 4) water heating characteristics, and 5) Wi-Fi thermostats in the relevant territory.

APS Storage Rewards Customer Research. Led analysis of customer research for APS' residential battery storage pilot program. Summarized customer findings using insights gathered from in-depth surveys.

Local Government Partnerships Portfolio Evaluation, CPUC. Analyst for the evaluation of the 2017 and 2018 portfolio of local government energy efficiency programs.. Responsible for analyzing claimed savings provided in IOU resource tracking databases and comparing to savings reported in CEDARS for the selected LGPs.



CAPABILITY STATEMENT

COMPANY:

RMS Energy Consulting, LLC provides a full range of energy engineering and program management services with the goal of helping our clients achieve an economically and environmentally sustainable energy future. The company has intimate experience in addressing key issues relating to engineering workpapers and ex-ante reporting that directly impacts the behaviors of policy leaders, regulating bodies, energy service companies and end-use customers concerning energy and water efficiency.

RMS services also include performing energy audits and technical review, conducting emerging technologies and demand response (DR) lab and field assessments, supporting water efficiency strategies, and contributing to the adoption of new codes and standards through utility CASE studies to ensure the delivery of a well-balanced and cost-effective energy efficiency portfolio.

CORE COMPETENCY:

- Provide engineering review and calculation of energy efficiency and demand response measures
- Generate engineering workpapers to substantiate energy savings claims
- Manage utility energy efficiency programs
- Conduct engineering audits and field monitoring
- Educate customers in obtaining incentives and reducing operating costs
- Assess emerging technologies and systems
- Perform studies to support utility program attribution efforts in enhancing building and appliance standards

DIFFERENTIATING ADVANTAGE:

- Sound decision making abilities balancing regulatory policy mandates with consumer needs.
- Strong project management/organizational skills.

CORPORATE PROFILE:

Company: RMS Energy Consulting, LLC
Address: 30724 Benton Road, Suite C302-565
Winchester, CA 92596
Website: www.rmsenergyconsulting.com
Contact: Martin Vu, Esq.
Phone: 818-939-4159
Email: mvu@rmsenergyconsulting.com

CERTIFICATIONS:

Dept. of General Services - Small Business/Micro Business – 1753283
Supplier Clearinghouse – MBE - Minority Business Entity – 13020139
California Unified Certification Program – Diverse Business Entity - 20366866

NAICS:

541330 – Engineering Services
541690 – Technical Consulting

UNSPSC:

81101516 – Energy or utility consulting service

COMPANY DESIGNATIONS:

DUNS: 079097930
CAGE: 6YUD5
Utility Management Consulting: 541618

PAST PERFORMANCE:

SCE – 2014-Present
Scope: Engineering & Technical Support
Budget: \$3,600,000
SDG&E – 2013-Present
Scope: Engineering & Technical Support
Budget: \$850,000
SCG – 2016-Present
Scope: Energy Audits & Calculations
Budget: \$300,000
California Energy Commission – 2016-2018
Scope: Engineering & Technical Support
Budget: \$110,000
Lockheed Martin – 2017-Present
Scope: Technology Assessment
Budget: \$350,000
CLEARResult – 2014-2019
Scope: Energy Audits and Calculations
Budget: \$150,000
Waypoint Building – 2014-2018
Scope: Energy Audits and Calculations
Budget: \$100,000

Education

Doctor of Jurisprudence (J.D.),
Trinity International University
– Law School, Santa Ana, 2015

Project Management

Professional Certification,
University of California, Irvine –
Extended University, Irvine,
2011

Master of Business

Administration, California
Polytechnic State University,
Pomona, 2008

Bachelor of Science,
Electronics & Computer
Engineering Technology,
California Polytechnic State
University, Pomona, 2004

Licenses/Certifications

California State Bar License
#: 339957

Project Management
Professional (PMP)
1524818

Certified Water Efficiency
Professional (CWEP)
#43

Organizations/Affiliations

National Small Business
Association Leadership Council
- Energy, Environment, and
Regulatory Affairs Committee
- Small Business technology
Council
- Tax and Economic
Development Committee
California Technical Forum
(CalTF)
- Technical Forum Member

Experience

Years of Experience: 24

Martin Vu, J.D., MBA, PMP, CWEP

Principal

Martin is a California Licensed Attorney and has over 24 years of utility operations and supervisory experience for Fortune 200 energy utility clients, training institutes, and government regulating bodies. This experience spans across interdisciplinary competencies comprising of energy engineering, regulatory, entrepreneurial, real estate, consumer protection, education, and law. Martin serves as one of California’s energy efficiency professional experts who has extensive knowledge of California’s energy markets, regulations, and industry trends. He has proven track record of guiding and bringing to market new and emerging technologies that thoughtfully balance innovative growth opportunities with consumer ratepayer protection mandates.

Martin founded RMS Energy Consulting, and his experience covers the entire energy efficiency engineering spectrum. He has a comprehensive understanding of California's energy policies and long-term strategic direction. Martin also serves on the California Technical Forum (CALTF) where he is one of 35 energy efficiency professional experts who address key issues relating to engineering workpapers and ex-ante reporting to regulating bodies, including the California Public Utilities Commission (CPUC). In this role, Martin directly impacts the behaviors of policy leaders, companies and individuals around energy consumption and carbon reduction to support California’s Long-Term Energy Efficiency Plan. Martin received his Bachelors degree in Electronics and Computer Engineering Technology and his Masters in Business Administration (MBA) from California State Polytechnic University, Pomona. He obtained his Project Management Professional (PMP) certification from the University of California, Irvine and completed his Juris Doctor (J.D.) degree from Trinity Law School. Martin is also a Certified Water Efficiency Professional (CWEP).

SELECT PROJECT EXPERIENCE

Principal Engineering Lead (January 2018 – December 2019)

Southern California Edison’s Overgeneration Pilot Case Study

- Identified innovative strategies to support regional electric reliability through development of preferred distributed energy resources (DER) for water and wastewater utility customers to help IOUs mitigate risks of over-generation and expand Water-Energy Pilot Partnership opportunities with its customers. Case reports were customized to each of the 6 participating water sector customers on how they can proactively participate in future programs.
- Designed and recommended a demand-side management program that helps the water sector design and implement changes to their systems, facilities, and operations that enable provision of electric reliability support.

Principal Engineering Lead (January 2015 – June 2019)

Southern California Edison’s Preferred Resource Program (PRP) Pilot

- Facilitated the technical and project management partnership activities on behalf of SCE and its customer Irvine Ranch Water District (IRWD) to enable grid resiliency and reliability through the consideration of flexible demand response opportunities.
- Identified demand side management opportunities to help with grid impacts to the Orange County to help with future flexible Demand Response (DR) opportunities by managing SCE’s electric grid while giving IRWD the flexibility to shed load based on forecast from the previous day or use energy based on the new 2019 TOU rate design.

Principal Engineering Lead (Feb. 2013 – January 2020)

Investor-Owned Utility Statewide Engineering Workpapers

- Supported the oversight of the development, design, and execution of engineering workpapers for all of San Diego Gas and Electric's (SDG&E) Residential, Commercial and Transformational energy efficiency programs in order to meet shareholder performance goals, metrics and directives required by the CPUC.
- Assessed and transitions emerging technologies and systems into the mainstream rebate and incentive programs.
- Maintains strategic relationships with CPUC stakeholders, industry leaders, government agencies, academia, trade alliances and other Energy Allies.
- Assisted California Technical Forum (CalTF) staff accurately analyze engineering information, make strategic decisions and recommendations, and guide appropriate decision making by identifying the anticipated total resource cost benefits, consequences, and impacts of alternative solutions.
- Used independent professional judgment and a transparent and technically robust process to review and issue technical information related to California's integrated demand side management portfolio.

Principal Engineering Lead (June 2016 – December 2018)

Southern California Edison's All-Electric Zero Net Energy Demonstration Project

- Led the emerging technology field monitoring assessment measurement and verification (M&V) effort and confirmed the annual energy usage and savings due to construction of an all-electric zero-net energy (ZNE) home located in Santa Ana, California.
- Monitored, tracked, and reviewed 40 different and distinct electrical breaker points by capturing all major equipment including but not limited to heat pumps, refrigerator, washer, dryer, hot water heater, bath fans, lights and outlets for other plug load devices and equipment at 15 minute intervals for an entire year.
- Conducted hourly, daily and monthly load profiles and calibrated the energy model to be compliant with code compliant software using field measured data.

Principal Engineering Lead (June 2017 – December 2019)

Southern California Edison's Dynamic HVAC Zonal Controls in Commercial Offices

- Led the emerging technology field monitoring assessment measurement and verification (M&V) effort and confirmed the annual energy usage and savings due to a dynamic HVAC zonal control technology using an internet of things (IOT) design control strategy. The project field assessment focused on rooftop constant volume package unit commercial applications where the technology provided real-time feedback on energy use and building performance.
- Performed ASHRAE Level 3 energy audit, which involved metering energized electric panels and equipment for commercial HVAC systems.
- Assisted customers identify existing energy usages and offered alternative solutions to aid the customer in making economically viable business decisions relating to reducing energy costs.

Principal Engineering Lead (June 2019 – Present)

Southern California Edison's Codes and Standards Education

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- Taught the latest version of California's Title 24 2019 Residential and Non-Residential Lighting updates to industry professionals including but not limited to architects, lighting designers, commissioning agents, municipalities and academia.
- Supported and educated Edison's largest non-residential business customers generate incentive applications, which required the understanding of building simulation software and fundamental engineering calculations.
- Created an educational curriculum pathway that had an immediate impact on the California Community Colleges for job placement for a future pool of demand-side management professionals.
- Created an energy efficiency educational program curriculum that prepares a future workforce with the requisite skills and competencies to meet California's energy and environmental goals.

Education

Master of Business Administration, National University, California, 1989

Bachelor of Science, Electronics & Computer Engineering Technology, California Polytechnic State University, San Luis Obispo, 1976

Certifications

Organizations/Affiliations

Association of Professional Energy Managers – Southern California Chapter

ASHRAE - Orange County Chapter

Experience

Years of Experience: 40

David Wylie, P.E.
Senior Engineering Manager

David began working in the energy industry in 1976 and founded the Engineering Management Consulting firm of ASW (formerly ASWB Engineering). His work experience covers the range of energy engineering including research, development, program design, measurement, feasibility study of electrical/mechanical systems and energy supply for commercial and industrial facilities.

David, who holds a college teaching credential, teaches what he does and knows about, and has developed over 20 courses that address energy-efficient systems. He has an ability to take sophisticated engineering concepts and relate them in a way you can understand, and the materials are presented in a friendly and practical way.

Several of David’s articles have been published in trade magazines and he has written a book titled “New Refrigerants for Air Conditioning and Refrigeration Systems” that was published in 1996. ASW Engineering has received awards for innovations in engineering from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Southern California Edison, and California’s former Governor.

SELECT TRAINING EXPERIENCE

David has more than 10,000 hours of classroom instruction experience, more than 75% at Southern California Edison (SCE). He has prepared more than 100 individual classes in the past 30 years. Training clients also include:

- City of Anaheim
- City of Pasadena
- City of Glendale
- Hawaiian Electric
- Pacific Gas and Electric (PG&E)
- Sacramento Municipal Utility
- SoCalGas
- Coast Community College
- San Diego Gas and Electric (SDG&E)
- Los Angeles DWP

Training developer and instructor for:

- PG&E’s Industrial Strength Energy Efficiency Seminar Series
- SCE Energy Education Center efficiency seminars
- SCE Customer Energy Services Department internal training courses
- SoCalGas’s “Clean Profits” seminar for coin laundries and dry cleaners
- National Electrical Contractors Association courses for energy survey and business development

California Community College Teaching Credential 1978 - Engineering

- Developed Coast Community College Energy Efficiency Associate Degree Program
- Designed and delivered most of those classes

RECENT PROJECT EXPERIENCE

- California Energy Commission, Workforce Training for Automated Demand Response, 2015
- SDG&E Energy and Emerging Technology Evaluation Services, 2012
- PG&E Automated Demand Response Enabling Technology Incentive Program, 2012
- Honeywell Automated Demand Response Market Development, 2009

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- SCE Automated Demand Response Program Verification Engineer, 2005
Business Energy Coalition, a demand response aggregation, in San Francisco, 2005

SELECT PREVIOUS EXPERIENCE

- Developer and Manager of Small Business Energy Alliance (SBEA) Energy Savers Program, a third-party initiative funded under the auspices of the California Public Utilities Commission (CPUC)
- Overseer of data collection survey team of state-wide studies as directed by the CPUC:
 - Residential Ceiling Fan Study
 - PG&E Non-Residential New Construction Evaluation
 - SCE Non-Residential New Construction Program: Industrial Saturation Survey
 - SoCalGas Energy Advantage Home Program Retention Study for
 - City of Anaheim Small Business Energy Management Assistance Program
 - SDGE Commercial Lighting Load Study
 - SoCalGas Commercial Appliance Retention Study
- Operations Manager of Ancillary Services Coalition, a state-wide load shedding aggregation that participates in Independent System Operator Demand Response programs
- Project Manager of Commercial Refrigeration Research Laboratory, Comparative Testing of New Refrigerants, an SCE project
- Developer of Interactive Air Conditioning and Lighting Savings Assessment protocol for SCE
- Project Manager for development of a Fuel Substitution Savings Analysis protocol for SCE/CPUC
- Project Manager for research and demonstration of ozone water treatment for cooling towers at several sites

SELECTED PAPER AND PUBLICATIONS

Art Meets Science in a Downtown Demand Response Program, San Francisco/BEC American Council for an Energy Efficient Economy, 2006

"Hybrid" Central Plants, Energy Engineering Magazine, 1997

New Refrigerants for Air Conditioning and Refrigeration Systems, Fairmont Press, 1996

Electric Rate Options: New Products and More Choices, Edison Electric Institute, 1995

Practical Concern for Refrigerant Management in Buildings, Energy Engineering Magazine, 1994

Evaluating and Selecting Thermal Energy Storage, Energy Engineering Magazine, 1990

Education

Bachelor of Science,
Public Health, University of
Arkansas, Little Rock, 2014

Organizations/Affiliations

California Technical Forum
(CalTF) Subcommittee Member

Experience

Years of Experience: 8

Jeremy Sasse

Senior Project Manager

Jeremy is currently the project management lead overseeing all projects within the RMS portfolio. He is actively working with California’s Energy Codes and Standards (EC&ES) team to develop and deliver education and training content for California Title 24 and Title 20 compliance. Jeremy is also working to support California’s Emerging Products team to assess advanced lighting control systems and fan exhaust systems. In addition, Jeremy actively leads the development and update of statewide workpapers and custom solution code measures by accelerating the commercialization and development of new, emerging, and underutilized technologies into demand-side management rebate and incentive programs.

Jeremy’s project management experience centers on energy-efficiency, public health, and business development. He earned his Bachelor of Science in Public Health at the University of Arkansas – Little Rock and is currently pursuing his Project Management Professional (PMP) certification.

SELECT PROJECT EXPERIENCE

Project Manager

Southern California Gas Company’s Engineering Workpaper Development

- Supported the oversight of the development, design, and execution of engineering workpapers to support Southern California Gas Company’s Residential and Commercial energy efficiency programs in order to meet shareholder performance goals, metrics and directives required by the California Public Utilities Commission (CPUC).
- Led the development and integration of project scope, schedule, budget, and quality requirements to ensure alignment on work product deliverables and scope verification.
- Reviewed and analyzed CPUC policy and decision language to ensure that workpapers adhered to all policy constraints.
- Assessed and transitions emerging technologies and systems into the mainstream rebate and incentive programs.

Project Manager

Southern California Edison’s Advanced Lighting Control System Bench Testing

- Facilitated the technical and project management partnership activities on behalf of SCE with UC- Davis’s California Lighting Technology Center staff in order to meet project goals and metrics.
- Implemented Project Management Body of Knowledge best practices to ensure project management activities adhered to acceptable industry standards including scope, schedule, and budget metrics were achieved.
- Facilitated the market assessment that identified new commercially available products, major manufacturers serving the market, technology roadmaps and industry concerns with the technology and its use by pay-per-performance utility programs.
- Conducted regularly scheduled meetings with project stakeholders to ensure alignment of project objectives.

Project Manager

San Diego Gas & Electric's Advanced Plug Load Control System Testing

- Facilitated the technical and project management partnership activities on behalf of San Diego Gas & Electric with UC- Davis's California Lighting Technology Center staff in order to meet project requirements, metrics, and goals.
- Implemented Project Management Body of Knowledge best practices to ensure project management activities adhered to acceptable industry standards including scope, schedule, and budget metrics were achieved.

Project Manager

San Diego Gas & Electric's Engineering Workpaper Development

- Lead the development, update, and execution of the Water Energy Nexus (WEN) Workpaper Revision Update to support the technical and compliance aspects of SDG&E's Energy Efficiency Program offering for SDG&E's service territory.
- Coordinated bi-weekly meetings with relevant stakeholders including manufacturers, customers, and statewide investor-owned utility as SDG&E deemed appropriate to provide bi-weekly project updates.
- Maintained strategic relationships with California Public Utilities (CPUC) stakeholders, industry leaders, government agencies, academia, trade alliances and other Energy Allies.
- Examined CPUC decision language to ensure that workpapers adhered to all policy, code, and industry-standard practice requirements.

Project Manager

Southern California Edison Local Capacity Requirements Lighting Logger Deployment

- Led all project management activities for the field lighting logger deployment duties supporting SCE's local transmission-constrained areas resulting in over 1 MW of energy savings.
- Coordinated with over 110 customers from office, retail, warehouse, and industrial spaces to determine the ideal time of day to visit for both logger installation and retrieval in order to avoid disruptions to ongoing operations.
- Provided general site survey and temporary data logging field support and collected site performance data to meet project measurement and evaluation (M&V) requirements.
- Collected data using portable loggers at several potential stages within a project, retrieved monitoring equipment, followed-up persistence monitoring deployment, and project managed with relevant stakeholders to ensure scope, schedule and budget were measured and tracked.
- Managed unpredictable and delayed assignment of projects to ensure all deliverables were collected and submitted to stakeholders by the appropriate deadlines.

Project Manager

Southern California Edison's Engineering Workpaper Development

- Supported the oversight of the development, design, and execution of engineering workpapers to support Southern California Edison's Commercial energy efficiency programs in order to meet shareholder performance goals, metrics and directives required by the CPUC.
- Led the development and integration of project scope, schedule, budget, and quality requirements to ensure alignment on work product deliverables and scope verification.
- Reviewed and analyzed CPUC and CalTF policy and decision language to ensure that workpapers adhered to all policy constraints.
- Maintains strategic relationships with CPUC stakeholders, industry leaders, government agencies, academia, trade alliances and other Energy Allies.
- Assessed and transitions emerging technologies and systems into the mainstream rebate and incentive programs.

Bob Hoffman
Energy Dynamix

306 Vista del Mar, Suite F
Redondo Beach, CA 90277
bob@energydynamix.net

office: 310-373-8222
mobile: 310-874-4084
www.linkedin.com/in/energydynamix

PROFILE

Innovative Business Development professional offering perspective to the evolving energy industry. Significant experience in the utility, independent power and deregulated energy industries. Focused on sustainable energy development, energy management, and resource optimization including gas-fired generation, combined heat and power, solar energy, wind energy, energy storage, distributed energy resources, energy usage and utility cost analysis and energy policy. Specific experience related to:

- wholesale power marketing
- utility interconnection
- acquisition due diligence
- utility regulations
- commercial structuring
- energy usage assessments
- RFP responses
- greenhouse gas compliance
- contract negotiation
- utility rate analysis
- financial modeling
- strategic energy planning

PROFESSIONAL EXPERIENCE

2001 to present **Energy Dynamix Corporation - President** Redondo Beach, CA

Consulting services related to power project development, utility services, acquisition and disposition, interconnections, power marketing, commercial structuring, negotiations, and strategic advisory services. Clients and related experience include:

- San Manuel Band of Mission Indians: 66kV Substation, CHP and microgrid development
- Northgate Gonzalez Markets: wholesale power procurement for a supermarket chain in CA
- Southwest Generation: battery energy storage development, utility interconnections in CA
- New-Indy Containerboard: support restructuring of a utility PPA and interconnection in CA
- Occidental Petroleum: Interconnection and power marketing for 550 MW combined cycle in CA
- Hunt Oil: LNG market studies, power plant studies, due diligence for power plant acquisitions
- Phelps Dodge: Power Contract negotiation and power asset valuations in New Mexico
- AES: development support for new gas fired power generation projects in California
- EDF Renewables: wind power development, interconnection, and regulatory support in CA
- Solar Integrated Technologies: Incentive coordination for building integrated Solar PV projects
- Rentech: development support and interconnect coordination for a synthetic bio-fuels project
- City of Anaheim: feasibility study of a 15 MW material recovery facility gasification project
- California Independent Petroleum Association: expert witness in PG&E General Rate Case

2005 to 2015 **California Resources Corp/Oxy - Director Energy Management** Long Beach, CA

Managed power marketing, power project development, and utility services optimization related to oil and gas production. Accomplishments included:

- Restructured CAISO interconnect for a 550 MW combined cycle in California
- 175 MW self-supply of power from company owned power generation asset
- 200 MW Power Purchase Agreement with Southern California Edison
- large scale MicroGrid integrating large oil field power supply, \$70 million/year cost savings
- Consolidated utility billing for over 400 MW across two utilities in California
- California Greenhouse Gas "Industry Assistance Credits" in excess of \$15 million

Proposal to Furnish the City of San Diego with Energy Consultant Services

2004 to 2013 Dock Watts LLC - President Redondo Beach, CA

Founded a start-up company to develop and own shore power (“cold ironing”) facilities to displace shipboard generators with grid power to reduce port air emissions. Services were to include managing the interface between ships, terminal operators, ports, utilities, public agencies, and power suppliers. Business model based on monetizing emission reduction credits, energy procurement and shore power facilities management.

ADDITIONAL PROFESSIONAL EXPERIENCE

1999 to 2000 AES Corporation - Vice President, Business Development Long Beach, CA

Development origination of power generation facilities in southwestern U.S. and Mexico, including response to competitive utility solicitation in Mexico (CFE). Explored development of a 100 MW 2xLM600 peaker at Camp Pendleton near San Diego, CA

1997 to 1999 New Energy Ventures, Inc. - Vice President, Planning & Development Los Angeles, CA

Founding Member of New Energy Ventures, Inc., an early pioneer in deregulated retail electric service in California. Responsible for wholesale electric supply, corporate risk management policy, corporate business plans, development, billing systems, retail electric services product development, distributed generation development. Retail direct access agreement for DOD facilities in California, including Camp Pendleton.

1995 to 1997 Nations Energy (Tucson Electric) - Director, Business Development Tucson, AZ

Power project development origination and acquisition efforts in the US, Mexico, and South America. Originated power project development opportunities in Louisiana, Arizona, California, Mexico, and Peru. Initiated development of an AC/DC Transmission project between Arizona and Sonora Mexico.

1989 to 1995 Mission Energy Company - Director of Development Irvine, CA

Business development in California and Latin America, including:

- Led Joint venture with BP in Colombia to develop power generation that monetize gas
- Led consortium attempting to acquire electric distribution and generation asset in Peru
- Developed cogeneration projects at a Los Angeles refineries and oil fields in Kern County, CA
- Initiated development of Campbell Soup cogeneration project in Sacramento, CA
- Exclusive business relationship with Mobil Oil to develop cogeneration projects in CA
- Participated in a joint task force with SCE in 1994 to establish a power marketing affiliate

1985 to 1989 Impell/Combustion Engineering (ABB) - Senior Financial Analyst Walnut Creek, CA

Performed conceptual engineering, financial analysis, power purchase agreement negotiations, and proposal writing for cogeneration projects ranging from 500 kW to 250 MW. Development support included heat balance analysis, equipment selection, capital cost estimates, O&M cost estimates, commercial structuring and financial modeling.

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1981 to 1985 Pacific Gas and Electric - Mechanical Engineer, Power Contracts San Francisco, CA

Negotiated power purchase agreements, supported utility in regulatory proceedings, participated in planning of non-regulated affiliates, including what became US Generating. Additional experience in load management, energy management programs and rate analysis.

EDUCATION AND CREDENTIALS

Bachelor of Mechanical Engineering
Bachelor of Arts, Business-Economics

Georgia Institute of Technology
State University College at Oneonta New York

Professional Engineer, State of California
City of Torrance Water Commission

License No. M22936
Commissioner, 2004-2008