INDEPENDENT EVALUATOR'S
QUESTIONNAIRE

The experience and qualifications of individuals being proposed for this RFP may be conveyed by responding to this questionnaire. Responses should be based upon the sum qualifications and experience of the proposed project team members currently on staff. Please provide resumes for proposed critical team personnel with the lead team member clearly identified. Insert responses directly in the box below. Boxes may be expanded as necessary. As a follow up, SDG&E, the PRG or the ED may request additional information based on these responses.

1. Summarize your professional background directly related to utility resource planning, portfolio optimization, and project management.

Merrimack Energy Group, Inc. (Merrimack Energy) has extensive experience in all phases of resource planning, power procurement, and natural gas commodity and transportation procurement in a number of power markets throughout the US and Canada. As the attached Attachment **1** indicates, Wayne Oliver, Project Manager for this assignment, has served as Independent Evaluator ("IE"), Independent Monitor or consultant 100 competitive power procurement assignments throughout the US and Canada, in 20 states and 3 Canadian Provinces. Mr. Oliver has served as Independent Evaluator or a similar function in approximately 70 competitive procurement assignments. In addition, he has managed a number of projects related to assisting utilities in the development and application of integrated resource planning processes, power market assessments, gas supply and transportation procurement, generation project benchmarking studies, and asset valuation and acquisition studies. Merrimack Energy has served as Independent Evaluator for all three California Investor-Owned utilities, including San Diego Gas & Electric for the past four years. Since 2007, Merrimack Energy has served as IE in California for a large number of different solicitation, including Energy Storage solicitation for PG&E, several large scale RPS renewable energy solicitations, Solar PV program solicitations, solicitations for RA and intermediate term conventional resources, Combined Heat and Power (CHP) solicitations, the Demand Response Auction Mechanism solicitation for all three utilities and a large number of bilateral contracts and contract amendment filings. In addition, Merrimack Energy has served as IE for solicitations involving a range of products (e.g. renewable resources, conventional generation, All Source solicitations, Demand-Side Management and Load Response, distributed resources) and contract structures (e.g. Power Purchase Agreements ("PPA"), Tolling Service Agreements ("TSA"), Engineering, Procurement, and Construction ("EPC") contracts, and Asset Purchase and Sale Agreements ("APSA")).

Mr. Oliver has either served directly or managed a team of consultants that has served as Independent Evaluator (IE), Independent Monitor, Independent Consultant or the like for nearly 100 competitive bidding assignments. Mr. Oliver first served as Independent Evaluator in 1989 and recently nearly all of his consulting assignments have involved serving in the role of IE for power procurement solicitations or assisting utilities and others with the design and development of competitive procurement processes. This experience has included design of Request for Proposals (including evaluation criteria and methodology) and associated power contracts, evaluation of proposals from a wide-range of technologies, development of several different contract structures (e.g. PPAs, TSA, EPC and Turnkey contracts) and monitoring of contract negotiations. He has also testified on behalf of Public Utility Commissions or utilities on a number of power procurement, resource planning and competitive bidding processes at both the federal

and state level.

For this assignment, Merrimack Energy is proposing a project team comprised of two Consultants. Wayne Oliver, Principal of Merrimack Energy will serve as Project Manager and key liaison with San Diego Gas and Electric (SDGE) personnel as well as with the PRG. He will be assisted by Mr. Edward Selgrade.Mr. Selgrade will focus primarily on power contract, environmental, transmission and regulatory issues.

Wayne Oliver has held senior level positions for both government agencies as a Senior Economist as well as private sector firms. Prior to founding Merrimack Energy in 2000, Mr. Oliver was founder and Senior Vice President of Reed Consulting Group and Director of Navigant Consulting where he managed the Electric Power practice area and was responsible for managing many of the Company's assignments associated with resource planning, power and fuel procurement, market assessments, generation asset valuation, and power market forecasting. Through these assignments he has worked with many production cost and portfolio optimization models as well as option pricing models and methodologies. He was a leader in the 1990's in working with utilities to integrate the use of option pricing techniques into resource planning efforts and competitive bidding processes to assess the value of flexibility during the movement toward electric market restructuring and stranded cost issues. Recently, he has been active in addressing issues and designing bidding processes associated with comparability between utility and third-party generation assets, capital cost indexing in power contracts, and assessment of credit and collateral requirements in the power industry. Mr. Oliver has also been an Assistant and Adjunct Professor and has taught MBA-level and undergraduate courses in Risk Management, Options and Futures, Energy Economics, International Economics and Statistics.

Mr. Selgrade is a former attorney with three degrees in Mathematics, Physics and a law degree from Harvard. He is a former Commissioner with the Massachusetts Department of Public Utilities. Mr. Selgrade has worked with Mr. Oliver on a number of competitive bidding assignments in the power contract, environmental assessment, and transmission area, including Merrimack Energy's recent assignment as IE for the PG&E Energy Storage RFO, for all California utilities associated with the Calpine Sutter contract and the current Demand Response Auction Mechanism, and with SDG&E on the Encina contract. For much of his career he has specialized in power contracting, environmental permitting and lenders due diligence for competitive power projects, including both renewable and conventional generation projects as well as DSM projects. He has assisted a variety of utilities in the development of power purchase contracts and demand-side management agreements, including Hydro-Quebec, Duke Power, Commonwealth Electric, Eastern Utilities, UNITIL, and Nevada Power. Mr. Selgrade has significant experience negotiating or performing due diligence review of various project contracts, including turbine purchase and installation agreements, balance of plant agreements, warranties, and operation and maintenance agreements. Recently, he has served as outside counsel to Northeast Utilities with a focus on securing approvals for the construction of transmission facilities in New England. He was also responsible for lender due diligence for a U.S. affiliate of an international energy and technology company whose U.S. business was concentrated on the financing of wind and landfall gas generation projects. He has participated in the negotiations of a number of renewable energy power purchase agreements and/or related project agreements throughout the U.S. and Canada. Mr. Selgrade will be responsible for issues associated with power contract negotiations, environmental issues (i.e. CO2 cost liability), financial issues such as credit support requirements, and regulatory issues.

Mr. Oliver and Mr. Selgrade have worked together on a number of competitive bidding assignments dating

back to the mid-1990's including Hydro-Quebec, Duke Power, Central and Southwest Services, and the Utah Public Service Commission for four PacifiCorp RFPs and Entergy solicitations.

Attachment 1 attached at the end of the Questionnaire provides a list of the Competitive Procurement Experience of Wayne Oliver and Merrimack Energy, including the specific competitive bidding process, role, client, resources solicited and timeframe.

2. Summarize your professional working experience directly related to the California IS0 energy, ancillary services, and ex-post markets.

As noted above, Merrimack Energy has served as IE for SDG&E, PG&E and SCE dating back to 2007 on a number of solicitations including RPS RFOs, RA and Intermediate Term Products (Generic RA and flexible capacity) primarily from conventional resources, Solar PV program solicitations, Energy Storage RFO, Demand Resource Auction Mechanism and CHP RFOs. In addition, Merrimack Energy has served as IE on a number of bilateral contract and contract amendment cases and has submitted IE reports along with utility advice letter filings. Merrimack Energy served as IE for SDG&E on both the Pio Pico and Calsbad Energy Center contracts. Through these assignments, Merrimack Energy has become very familiar with recent initiatives in the CAISO markets, interconnection requirements and issues, and market rules and provisions that affect generation markets, including Resource Adequacy counting rules and issues, MRTU market requirements, replacement requirements for scheduled generation outages, integration of intermittent renewable resources into the CAISO market. For example, Merrimack Energy has been involved in contracts associated with utility solicitations in California which focused on curtailment issues, generation interconnection issues, and full capacity deliverability status versus energy-only transmission arrangements. Merrimack Energy also served as IE for the Calpine Sutter contract negotiations on behalf of the three California IOUs, which involved Calpine's application for CPM status. In addition, Mr. Oliver has conducted seminars and studies for utilities on the design of power markets and ISO's throughout the US, including the restructuring of the CAISO market. Wayne Oliver recently prepared a presentation on the Energy Storage RFO process in California before the Energy Storage Workshop held in July 2015.

3. Address the following items directly related to your professional expertise and experience concerning the evaluation of Power Purchase Agreements (PPA's) and proposed new electrical generation facilities. Please specifically note any experience that you may have directly related to renewable energy projects and generation asset development.

a. Experience and level of responsibility in negotiating and evaluating energy contracts.

For most of the competitive bidding assignments we have been involved in dating back to the early 1990's, particularly as Independent Evaluator, we have reviewed and commented on Power Purchase Agreements ("PPA") and other contract options including Tolling Service Agreements ("TSA"), Asset Purchase and Sale Agreements ("APSA"), Engineering, Procurement, and Construction ("EPC") contracts and turnkey contracts to ensure they provide a reasonable balance of risk and are consistent with industry practices. Recently, we have become familiar with contract provisions associated with Energy Storage Agreements

("ESA") and Purchase and Sale Agreements ("PSA") associated with utility ownership of storage projects through our role as IE for PG&E's Energy Storage Solicitation. This has provided us with an interesting perspective on the changes in power contracting over the past 25 years. Given the large number of competitive procurement processes we have been involved in and the current state of the industry, we feel we have an excellent knowledge of industry practices associated with key contract provisions for both renewable and conventional resources. For many of these assignments we have been involved in monitoring the contract negotiation process to ensure the process is fair and consistent and conforms to industry standards.

As noted in the response to Question 1, Mr. Selgrade has a number of years of experience in the development and negotiations of power purchase agreements and other energy contracts on behalf of utilities and IPPS. These have included contracts for both conventional and renewable generation projects as well as Demand-side management contracts. Mr. Oliver has also provided input to utilities designing competitive bidding processes associated with the development of the commercial terms of power purchase agreements for conventional generation and renewable resources, including power purchase agreements, tolling agreements, EPC contracts, and Purchase and Sale Agreements.

Also, as IE for our assignments on solicitations undertaken by PG&E, SCE, and SDG&E we have been responsible for monitoring contract negotiations between the utility and short listed bidders for renewable and conventional resources, Energy Storage options and CHP resources and have written reports for Advice Letter filings for a number of contract approval proceedings. Our approach has been to serve the role as a monitor of the contract negotiation process and raise any issues we have directly with the utility rather than raising the issues during contract negotiation sessions.

As Independent Evaluator for PacifiCorp's current All Source RFP for 2016 Resources, the 2012 Baseload RFP and the 2008 All Source RFP, we reviewed and assessed the relative risk provisions in all of PacifiCorp's contracts included with the RFP including the PPA, Tolling Service Agreement (TSA), Asset Purchase and Sale Agreement, and EPC contract. Merrimack Energy also monitored negotiations between PacifiCorp and the EPC contractor selected to construct a 600 MW gas-fired combined cycle facility at a PacifiCorp site through the 2008 All Source RFP.

For a recent assignment for Public Service Company of Oklahoma (an AEP subsidiary) we were retained to assist in the design of the RFP and power contracts, among other requirements. Also, as another example, Mr. Oliver and Mr. Selgrade led a team that developed the PPAs for all of the RFPs undertaken by Central and SouthWest Services in the 1990's including PPAs for conventional resources and renewable resources.

Mr. Oliver has recently worked with Hawaiian Electric Company ("HECO") on the design of an RFP for Renewable Firm Dispatchable Generation Resources to meet load growth and to replace generation expected to be retired. For that process, Mr. Oliver was responsible for designing the RFP and information required of bidders and was also largely responsible for the initial drafting of both a PPA for firm capacity from third-parties as well as an Asset Purchase and Sale Term Sheet (i.e. Turnkey contract) for those entities interested in building and selling a project to Hawaiian Electric either on a bidder site or HECO site.

b. Expertise directly related to the analysis and structuring of data and complex issues associated with new generation facilities and with the associated regulatory and environmental requirements.

For competitive bidding processes in which we have served as IE, one of our focuses in reviewing the RFP development process is to ensure that the pricing information required by the utility of bidders is consistent with the pricing provisions in the PPA and the evaluation methodologies used by utilities to evaluate the bids received. This can involve capacity charges, fixed O&M costs, variable O&M costs, gas pipeline charges, fuel commodity costs, transmission costs and start-up costs. In addition, utilities sometimes include imputed debt costs in the bid evaluation process in cases where the fixed charges associated with a long-term contract are treated as debt on the utility's balance sheet and environmental emission costs such as CO2 cost impacts. Based on our extensive experience in competitive procurement processes, we are very familiar with the pricing structures and cost items considered in PPAs and the link between the PPA and bid pricing structures. In addition, in many of the competitive bidding processes in which we are involved as well as the benchmarking studies we undertake to support contract amendments, we conduct independent modeling of the pricing provisions based on the bid price formulas and the input assumptions developed by the utility. In fact, over the years we have modeled the pricing formulas in hundreds of power supply proposals and calculated the levelized or real levelized costs of the proposal.

Merrimack Energy has evaluated the price formulas in proposals in the context of RFPs where we have served as an Independent Evaluator, as consultants to the entity issuing the RFP, and in the quantitative evaluation of proposals. In the early days of PURPA and competitive bidding Mr. Oliver conducted a number of market pricing studies for clients looking to sell long-term power or gain a market perspective including conducting competitive price analysis through the evaluation of contracts (when public) in the Edgar case. We have also recognized and addressed the difficult issues associated with the current market uncertainty associated with changing generation equipment costs, the uncertainty of over the cost of transmission at the time the bidder submits its proposal relative to the actual cost based on transmission studies conducted by the ISO, uncertainty over the extension of the Production Tax Credit and Investment Tax Credits for renewable resources, the uncertainty regarding the cost of environmental compliance and regulatory uncertainty associated with contract approval and the implication on the cost risk associated with the project.

We have been at the forefront working with utilities to develop mechanisms to better manage these risks as well as ensure that the PPA, utility cost of service and APSA agreements are placed on a more level playing field from a risk perspective. These include the use of indexing of capital and capacity charges in PPAs, pricing formulas for tracking transmission costs, and milestone extensions to account to uncertainty over the extension of the PTC and ITC.

For competitive bidding processes in which we are retained as IE prior to the final design of the RFP, power contracts, and related documents we have generally undertaken a detailed assessment of the proposed contracts and assessed the risk shifting provisions in the contracts. For example, In one the more recent PacifiCorp RFPs (i.e. 2012 Baseload RFP and 2009 All Source RFP) we raised issues with regard to change of law risk associated with environmental requirements, credit provisions, force majeure provisions, etc. which could shift the balance of risk. In fact, the Utah Public Service Commission recognized the risk

of changes in environmental law and approved a requirement in PPAs that allows the seller to recover change of law costs, but with the requirement that the seller has to demonstrate that its proposed strategy for mitigating such costs is a least cost option. As a result, in this case a PPA option will be subject to regulatory oversight and the PPA seller will not have the ability to over-recover costs to the detriment of rate payers.

c. Expertise directly related to the identification and assessment of various cost components in terms of reasonableness, completeness, variability and risk in bids for PPA's, Investor-Owned Utilities (IOU) build and new turnkey generation facilities.

Merrimack Energy has been involved in a number of competitive procurement assignments for both conventional generation resources and renewable resources that have involved the assessment of various cost components and risk profiles attributable to the specific resource, contract structure, or product solicited. In addition, we have also reviewed the reasonableness of the cost structures and pricing parameters for proposed products. For several of our assignments, we have undertaken an independent evaluation of the bid price structure based on our interpretation of the price formulas as well as the utility's interpretation.

Through our role as IE or independent consultant on a range of competitive bidding assignments over the years we have reviewed and evaluated the pricing provisions for a range of options including PPAs, Tolling Service Agreements, Asset Purchase and Sale Agreements, DSM options, utility self-build options, and EPC contracts. One of the major focuses of our assessment is to ensure that all options contain the same basic cost information to ensure the evaluation is undertaken in a comprehensive and equitable manner. For example, PPA bidders generally submit pricing that includes payment for all costs incurred by the seller. For the seller of conventional generation this generally includes a capacity charge to compensate the seller for its return on and of investment, a fixed O&M charge, a variable O&M charge, and an energy cost component. In comparing a PPA to a utility self-build it is necessary to ensure that all applicable cost components are included in the self-build to ensure comparability in the evaluation. While a self-build option would include an estimated capital cost for the project and fuel acquisition, other cost components such as operation and maintenance charges, water costs, owners development costs, and on-going capital expenditures need to be scrutinized to ensure that all such costs are adequately accounted for.

We have recently undertaken several assignments where such cost issues have been important to assess. On the renewable resource side, Merrimack Energy has served as IE for several solicitations (PG&E's Solar PV Program for Utility-Owned Generation, El Paso Electric EPC contract for Solar PV at the utility site, and Arizona Public Service Company Arizona Sun Program involving utility-owned generation) involving the procurement of EPC contracts for solar PV projects to be owned and operated by a utility. We have also served as IE for the Avista Utilities 2009 Renewables RFP and PacifiCorp's 2008 Renewable RFP. In both these processes, eligible resource options included PPAs, Build-Own-Transfer options and Asset Purchase and Sale Agreements. For the Avista case, Avista was also considering the acquisition of wind turbines for developing a self-build option on a utility-acquired site. In both these cases, a focus of our assessment was to ensure that all options included the appropriate cost components and there were no biases associated with individual resource options.

On the conventional generation side, the PacifiCorp All Source RFP for 2016 Resources, the 2008 All Source RFP, and the 2012 Baseload RFP involved a range of eligible resource options including utility cost of service options (bid as a benchmark), EPC contracts, PPAs, tolling service agreements, and turnkey contracts. A major component of our assignment in each solicitation was to ensure all bids were fairly and consistently evaluated. We reviewed all the analysis prepared by PacifiCorp to assess the different options, worked with PacifiCorp and the bidders to develop term sheets to ensure both parties were in agreement on the pricing and operating provisions proposed by the bidder, and held several conference calls to review the results. In addition, to test the methodology PacifiCorp intended to use to evaluate proposals with different cost and project structures, Merrimack Energy developed test bids that included a cost of service option and a PPA. In addition, Utah bidding rules require the IE to review in detail and write a report on the reasonableness of the cost of the utility self-build or benchmark resource which includes the capital cost, O&M costs, fuel and operating costs. Merrimack Energy has undertaken such an assessment on three PacifiCorp RFPs. To undertake such an assessment we compare the proposed cost to a benchmark database we have developed for similar technologies to assess the reasonableness of each cost component, which includes a large sample of project costs including combined cycle units, combustion turbines, wind projects, biomass and solar technologies. The objective of this process as mandated by the Utah Commission is to ensure the utility is submitting a reasonable cost estimate for its own self-build option and is not proposing a low-ball cost to win the bid and then actually come in at a higher cost under a cost of service structure.

We also conducted a detailed review and assessment of the economic evaluation undertaken by Public Service Company of Oklahoma and Southwestern Electric Power Company for comparing self-build cost of service options with PPA bids. As Independent Monitor we worked closely with the utilities to develop a methodology that would allow the utilities to evaluate cost of service bids and PPAs on a consistent basis. We have also served as Independent Evaluator for the 2008 and 2011 RFPs undertaken by El Paso Electric to procure peaking resources. In both cases, the competitive options included a utility self-build option, Demand Response programs, ice storage, renewable resources, and short and long term PPAs. In conclusion, over the years Merrimack Energy has worked with utilities and public utility Commissions to develop methodologies and solicitation processes designed to assess and evaluate a range of resource options on a comparable basis.

Merrimack Energy also has demonstrated expertise in identification and assessment of various cost components and risks associated with bids for PPAs, utility-built plants, and turnkey generation facilities (new generation facilities where the utility owns or would purchase the development rights and would have the generation facilities built under an engineering, procurement, and construction (EPC) contract). Costs and risks include (a) construction cost overrun risk, (b) O&M cost risk, (c) project viability risk (the risk the plant will not be financed or constructed), (d) project delay risk, (e) project performance risk (project availability and/or capacity factor is lower than projected), (f) counterparty risk, (g) impacts on the cost of capital/accounting impacts, (h) risk of not receiving expected tax credits, and (i) change in law risk.

We are currently serving as Independent Monitor for two solicitations undertaken by Entergy in both Texas and Louisiana where the competition between a self-build option and third-party PPAs and tolling arrangements will be present.

d. Expertise in evaluating PPA's, turn-key plants and IOU build plants with different characteristics and constraints on a side-by-side basis.

The issue of comparing proposed generation projects with different contractual and regulatory profiles (PPAs, turnkey plants, and utility-owned plants) is a very challenging one in the industry. This issue referred to as "comparability" of resource types and evaluation is an important and challenging issue and one of the most contentious issues in power generation and resource procurement processes. This issue is focused on the challenges associated with comparing power assets with different characteristics, risk parameters and ownership structures.

As noted in this question, it is a challenge to compare and assess contracts and resource options with different characteristics such as PPAs, turnkey options and IOU cost of service options given the different risk profiles, pricing requirements and contract risk. A major focus of our pre-bid efforts in the PacifiCorp RFPs involved both contractual and evaluation methods to ensure comparability. Merrimack Energy has actually been at the forefront in working on competitive procurement processes for both conventional and renewable resources dealing with comparability issues. For example, in the PacifiCorp RFP assignments (in which Merrimack Energy was retained by the Utah Public Service Commission), our team conducted a detailed assessment of the contracts included in PacifiCorp's 2008 All Source RFP and the 2012 Baseload RFP. Our findings were presented in a report to the Utah Public Service Commission prior to approval of the RFP. We have subsequently conducted such an assessment in other competitive procurement processes. Contractually, we considered issues such as environmental compliance costs, availability provisions, performance requirements, milestone schedules, liquidated damage provisions, force majeure provisions, and change orders associated with turnkey or EPC contracts among others.

We recently addressed this issue in a solicitation for energy storage projects in which both third-party ESA bids and purchase and sale agreements for the storage project proposed by a third-party but owned by the utility were competing. For utility-owned options, the utility sought offers for Distribution Deferral projects at a utility-identified substation, storage projects associated with solar PV projects owned by the utility, and storage projects associated with existing facilities with which the utility has an existing power purchase agreement.

From the bid evaluation and pricing perspective, one option to move toward a more level playing field among contract structures is to allow all options to index capacity prices as well as traditional O&M and fuel costs. In the PacifiCorp case, we suggested that all bidders be allowed to index their capacity price or capital cost to pre-specified indices from the time of bid submission until the bidder executed its EPC contract or secured project financing. This suggestion was based on an approach used by Merrimack Energy and Hydro-Quebec to allow bidders into its Wind Call for Tenders to index components of their price to such indices as steel prices, copper prices, exchange rates, and interest rates given the increase in these cost components and the concern of bidders about their requirement to include a large risk premium into their bid price if the bidder had to absorb the capital cost risk.

Also, as IE, in several competitive procurement assignments we generally have the ability to request that the utility undertake risk assessment on cost components that we feel may be uncertain, yet could have a significant impact on the evaluation of PPAs, self-build cost of service options and Asset Purchase and

Sale Agreements (APSA). Under an APSA, once the utility takes ownership, the utility will be responsible for O&M of the facility and for all capital expenditures in the future. If these costs are not properly accounted for, the evaluation could be biased in favor of such options. Down the road, the utility will seek to recover such costs. If these costs end up being much higher than expected the consumer would be penalized. Our objective would be to address this issue in the evaluation process.

We were able to further develop our suggested approach for comparability in our report on PacifiCorp's 2008 All Source RFP, which was filed with the Utah Public Service Commission in April 2008. The approach we suggested was based on assessing the competitive economics of resource options through the evaluation process rather than requiring utilities to bid to a performance-based PPA as other IE's have suggested. The evaluation approach is designed to determine the break-even cost at which the utility project cost overrun would have to go to make the project uneconomic and assess the probability of the cost reaching that level based on the amount of the costs already fixed and those that may vary. Please let me know if you would like a copy of the report. The report is also publicly available on the Utah Public Service Commission website in Docket No. 07-035-94, December 21, 2007.

Mr. Oliver was also retained by Public Service Company of Oklahoma to address comparability issues associated with the development of its 2008 RFP for power supplies. In this case, a collaborative process was established by the Oklahoma Corporation Commission and the IE retained pushed aggressively for all bidders, including the utility self-build to submit proposals to a performance-based PPA. Merrimack Energy prepared a detailed report for PSO identifying the risks associated with each type of resource option (i.e. PPA vs utility cost of service option) based on all aspects of project development and operations. The report served as a basis to identify alternatives for comparability rather than require that all bids conform to a PPA structure.

With regard to renewable resources, Merrimack Energy was retained as IE by Avista Utilities, Arizona Public Service Company, and El Paso Electric. In these cases, issues associated with utility ownership versus PPA options were important considerations. In the Avista case, the utility had acquired a wind development site. The objective of the RFP was to solicit bids for third-party PPAs or Build, Own, Transfer options at the bidder site to compare against the utility self-build. Merrimack Energy worked with the project teams for both resource options to ensure the evaluation and selection process was fair and unbiased. Merrimack Energy has also recently served as IE for a wind-based RFP for Arizona wind projects conducted by Arizona Public Service Company (APS). APS solicited bids for both PPAs and turnkey options in the RFP.

There are several approaches that have been taken to enhance comparability between PPAs and utility-owned generation proposals. One approach is to set the ground rules in the procurement process to try to reduce the differences in the risk profile. For example, utility-owned projects are often viewed as having a longer useful life than the customary duration of a PPA. In one RFP process, utility projects were evaluated over a term that was based on the customary design life of the project but were also evaluated as having additional "residual value" to account for value at the end of the term. In some RFP processes bidders are given discretion regarding the length of the contract term, or if not, the ability to propose giving the utility the option to purchase power for an additional term or to sell the project to the utility at fair market value. In another RFP process, PPA bidders were given the discretion to include fuel cost-adjusted PPA energy prices as well as limited adjustments based on changes in construction commodity costs, provided that these adjustments were symmetrical (and in the case of construction cost adjustments,

the adjustments are capped). These types of RFP ground rules will reduce but not eliminate the risk profiles associated with utility-owned generation and PPAs.

With regard to evaluating PPAs against utility-owned generation with their different risk profiles, there are several ways to do this. One method involves scenario analysis based on different projections of construction and operating costs, availability and other factors, with the differing projections based on reasonable estimated variances in cost and performance. Another method is to risk-adjust the analysis based on an evaluation of the variances in cost and performance. A third method is to review the economic evaluation results and to make qualitative adjustments for differences in risk profiles.

Merrimack Energy has completed several reports and analyses associated with the comparability between PPAs and utility self-build or owned options and would be willing to provide those reports at SDG&E's request.

e. Experience in assessing the valuation of non-price components in new generation facilities, such as contractual legal and credit risk, site location, development risks, reliability, transmission access, etc.

In many of our assignments as IE or in a similar function, we generally review and comment on the non-price evaluation criteria included in the solicitation process and in many cases undertake an independent review of the proposals from a non-price perspective to ensure the proposals are fairly and consistently evaluated. Through our long-term experience with competitive procurement processes we have evaluated hundreds of proposals from a variety of resource options including a range of renewable and conventional technologies from both a non-price and price perspective. As a result of this experience, we feel our team possesses the expertise and experience to review and evaluate a range of proposals from a non-price perspective.

For example, for SCE's 2009, 2013 and 2014 Renewable Resources RFP, Merrimack Energy undertook a detailed independent evaluation and assessment of the non-price attributes for all or a sample of the proposals submitted using the Commission developed and approved Project Viability Calculator. We compared our results to the results derived by SCE and developed a methodology to use the results of the evaluation to rank the projects for short list selection.

For non-price evaluations, we generally recommend that the utility and IE each undertake the non-price assessment using the non-price criteria developed by the utility of all bids or a reasonable sample of bids, meet to compare the results of the evaluation, and "challenge" the utility's non-price evaluation team if the results seem inconsistent or are not adequately supported, and attempt to resolve as many of the differences as possible prior to completing the final non-price evaluation. Our objective is to ensure that the utility's evaluation is fair and consistent and is supported by the documentation of the results. In addition, we work with the utility to develop the appropriate criteria for resource assessment based on utility and solicitation objectives. This could involve developing objective vs subjective evaluation criteria. For example, in cases where a utility self-build is actually being evaluated along with other proposals, it may more palatable to develop more objective criteria to remove the subjectivity in the evaluation. Recent solicitation processes where we have conducted a detailed non-price evaluation of the bids along with the utility include: (1) PacifiCorp's 2016 All Source RFP; (2) SCE's 2014 Renewable RFP; (3) El Paso Electric's

2014 Solar PV RFP; (4) Nevada Power Company's 2014 and 2015 Renewable RFPs; (5) Public Service Company of Oklahoma 2005-2006 RFP; (6) Hydro-Quebec Wind and Biomass Call for Tenders; (7) Southwestern Electric Power Company 2005 RFP for Baseload, Intermediate and Peaking Resources; (8) Avista Utilities; (9) several PacifiCorp solicitations; (10) Pacific Gas & Electric's 2007 RPS RFO; and (11) Portland General Electric's RFP in 2003-2004.

Finally, we generally recommend that the IE undertake a detailed review of the non-price criteria to be applied and to undertake a detailed evaluation of the bids from a non-price perspective in cases where the utility is offering a self-build option.

In many of our assignments as IE or the like, we generally undertake an independent review of the non-price criteria used by the utility to evaluate bids and generally review the assumptions, methodology, and outputs associated with the price evaluation. We feel given our experience in reviewing and evaluating a wide range of different types of bids and technologies we are capable of undertaking a thorough non-price evaluation. We generally recommend that the utility and IE each undertake the non-price assessment of all bids or a reasonable sample of bids, meet to compare the results of the evaluation, "challenge" the utility non-price evaluation team if the results seem inconsistent or are not adequately supported, and attempt to resolve as many of the differences as possible based on supporting discussions prior to the utility completing its non-price evaluation. Our objective is to ensure that the utility's evaluation is fair and consistent and is supported via documentation of the results. In some cases, our scores and those of the utility have been different but the ranking of the bids has been the same, which supports the final shortlist results. Recent bidding processes where we have conducted such a detailed evaluation include: SCE 2014 Renewable Resource RFP (all bids); Pacific Gas & Electric 2007 RPS RFO (sample of bids), Public Service of Oklahoma (all bids), Southwestern Electric Power Company (all bids), Portland General Electric (a sample of bids), BC Hydro (all bids), and a number of others such as Hydro-Quebec, Duke Power, Carolina Power & Light, Commonwealth Edison, and Baltimore Gas and Electric, among others.

f. Expertise with various models and sophisticated quantitative methodologies used to evaluate power products, including energy, demand response, capacity and ancillary services.

Mr. Oliver has had significant experience using and building a number of power industry models. As noted, Mr. Oliver was formerly Senior Vice President of Reed Consulting Group and Director of Navigant Consulting. He was also director of Reed Consulting Group's Electric Industry Practice Area and managed a range of projects associated with competitive procurement, generation asset valuation, power price forecasting, assessment of ISO market structures, power and gas market studies, etc. Over the years, our team built spreadsheet models or contracted with vendors for production cost or generation expansion models such as PROSYM, the PROPHET model, and GE MAPS. Under Mr. Oliver's direction, the consulting team at Reed Consulting Group also built an option pricing evaluation model that was used in a number of competitive bidding assignments in the mid-to-late 1990's. In addition, Mr. Oliver developed Financial Pro Forma models to allow him to assess the pricing for various technologies necessary to achieve a specified internal rate of return. A version of this model (Capital Cost Recovery Model) has been used by Mr. Oliver in regulatory proceedings.

At Reed Consulting Group, Mr. Oliver also coordinated with members of the Operations Research Department at MIT to build a portfolio optimization model for the natural gas utility industry. This effort also led to an attempt to develop the same capability for electric utility portfolio optimization as well.

As Independent Evaluator, Mr. Oliver has worked with utilities to develop the bid evaluation and selection process and methodology and has reviewed and assessed the results from a number of industry standard models and methodologies as well as several large spreadsheet based models developed by the utility. For example, Merrimack Energy has reviewed and assessed the results from a number of production cost or generation expansion models in other RFPs including models such as Aurora, Promod, Egeas, Strategist, GE MAPS, Ventyx Energy LLC (formerly Global Energy Decision's) System Optimizer model (formerly called (Capacity Expansion Model (CEM)) and Planning and Risk (PaR) Models, GenTrader and others to assess the impacts of various proposals on total utility system costs or present worth revenue requirements.

As an example, Merrimack Energy recently served as IE for El Paso Electric's RFP for Electric Peaking Supply and Load Management Resources. For this RFP, El Paso Electric used the Strategist model to evaluate supply side resources (i.e. gas-fired peaking resources and renewable resources) in combination with demand-side (load management and demand response options) and battery storage options. Strategist was used to develop portfolios of resources and determine the least-cost portfolio of options.

In addition, Merrimack Energy is familiar with the modeling approaches and methodologies used by California IOUs through involvement in several procurement processes, including the methodologies and models for assessing the value of energy storage proposals, renewable resources, conventional resources for both dispatchable tolling arrangements and RA resources, and CHP resources.

We are also very familiar with the option pricing models used by utilities in California and elsewhere to assess the intrinsic and extrinsic value of resource characteristics. Under Mr. Oliver's guidance, consultants at Reed Consulting Group developed a binomial model to undertake option valuation for assessing resource options including contract buy-out provisions, project in-service delay provisions, project dispatch characteristics, options contracts, etc. The model was used for several resource assessments or solicitation processes involving options contracts or option pricing provisions embedded in proposals.

For all Mr. Oliver's assignments with Hydro Quebec, he is required to conduct a comparable quantitative evaluation to Hydro-Quebec to ensure the quantitative evaluation results are consistent.

Mr. Oliver has also undertaken a number of benchmark studies on the cost of conventional and renewable generation options either as part of his assignment as IE (Utah statutes require the IE to assess the project costs associated with the utility option – either as a self-build or EPC option) or as a third-party independent consultant for Hydro-Quebec (the regulatory body in Quebec, the Regie, requires Hydro-Quebec to provide a benchmark study to demonstrate whether the contract price for resources selected through the Call for Tenders process is competitive to the cost of power in neighboring Canadian and US markets. Merrimack Energy has been responsible for preparing such reports).

g. Experience in the performance of comprehensive credit and risk analysis.

In many of our competitive bidding assignments, credit and collateral issues are among the most controversial and challenging issues and yet there is no general industry standard associated either with the methodology for determining credit levels or the level of credit included in PPAs by utilities. However, Merrimack Energy has worked with several utilities or provided input with regard to the evaluation methodology proposed, including SCE, PacifiCorp, and Avista among others. Because of the importance of this issue, Merrimack Energy has prepared several summary documents that compare the credit assessment methodologies of various utilities for both conventional and renewable resources. Mr. Oliver submitted rebuttal testimony on behalf of Public Service Company of Oklahoma (PSO) regarding PSO's 2008 RFP, with a focus on credit assurance approaches used in the electric utility industry based on the experiences of other utilities. Mr. Oliver prepared a detailed Exhibit to his testimony which included a detailed summary of the approaches used by utilities in power procurement processes.

As an example of our experience with regard to credit analysis, Merrimack Energy was actively involved as IE for the Utah Public Service Commission in working with PacifiCorp to develop a methodology for establishing credit assurance requirements for bidders into PacifiCorp RFPs. Both Mr. Oliver and Mr. Selgrade worked with PacifiCorp to come up with a fair and reasonable credit methodology. Merrimack Energy's Project Manager, Mr. Oliver, also testified on the credit methodology proposed by PacifiCorp. PacifiCorp has continued to use the same general methodology for recent solicitations as well.

Merrimack Energy has also worked on several procurement processes where the utility undertakes a detailed credit risk assessment to assess the credit quality and credit thresholds for counterparties as a means for establishing the appropriate level of credit required from the counterparty.

h. Expertise directly related to the analysis and evaluation of Combined Heat and Power offers.

Merrimack Energy has been the primary IE associated with the analysis and evaluation of Combined Heat and Power offers in California. Merrimack Energy has served as IE for all three CHP RFO completed by PG&E and SCE over the past three years. In total, these two utilities have procured well over 2,000 MW of CHP capacity under the CHP Settlement.

In addition to serving as IE on the PG&E and SCE CHP procurement processes, Merrimack Energy served as independent consultant for a Cogeneration Call for Tenders undertaken by Hydro-Quebec. In addition, Mr. Oliver has served as a consultant to many Independent Power Producers developing cogeneration projects in the early to mid-1980's.

i. Expertise directly related to the analysis and evaluation of Energy Storage offers.

Merrimack Energy is currently serving as IE for PG&E's 2014 Energy Storage RFO, seeking

approximately 74 MW of transmission connected and distribution connected energy storage projects. PG&E's Energy Storage RFO sought offers for stand-alone Energy Storage Agreements ("ESA"), ESA's associated with existing renewable and conventional generation options, Distribution Deferral options to be procured by PG&E under a Purchase and Sale agreement ("PSA"), PSAs for stand-alone storage projects to be owned by PG&E, and PSA associated with solar PV projects owned by PG&E.

Merrimack Energy has also served as IE on other solicitations where storage options were proposed as a potential resource options as part of the solicitation process including El Paso Electric's 2011 Peaking Capacity RFP and SCE's 2014 RPS solicitation.

4. **Describe your qualifications and experience directly related to the task of reviewing and auditing the documentation, design, and administration of a solicitation process or similar vehicle, and providing recommendations to the IOU and Procurement Review Group that were adopted**

In many of our competitive bidding assignments we have been required to review the solicitation documents and protocols, the documentation developed by the utility for evaluating the proposals, the models and methodologies and input assumptions. These tasks are typical of the role of the IE in verifying that the evaluation and selection of the proposals are undertaken in a fair and equitable manner and that no undue biases are present either in the process itself or in the results of the evaluation. Examples of a few of the many solicitation processes in which we have served as IE are highlighted below:

In many of the solicitations in which we have served as IE for California Utilities, we have worked closely with the utility staff in our review of the Company's Protocol Documents and confidential detailed price and non-price evaluation protocols to ensure these documents are consistent with the publicly-issued RFP or RFO and in reviewing the Company's evaluation of bids (price, project viability and other non-price factors) for consistency with the Company's protocol. We also worked with the utility's transactors involved in the contract negotiation process and raised questions and made suggestions at different stages in the process. We have also been involved in all PRG meetings and provided updates on our assessment of the process, any issues that influenced the process, assessment of specific projects, and also provided industry updates based on our involvement in other competitive bidding processes throughout the US and Canada.

Merrimack Energy has served as IE for all three California utilities for a wide range of solicitation processes since 2007 (See the uploaded document entitled Competitive Procurement Experience of Merrimack Energy and Wayne J. Oliver Including Role as Independent Evaluator. An example of some of the solicitations we have worked on in California include the following solicitation processes (not including bilateral contracts or renegotiated or amended contracts):

- San Diego Gas & Electric Company – 3 RA RFO solicitations (past three years)
- PG&E Energy 2014 Energy Storage Request for Offers
- SCE 2013 and 2014 RPS RFPs
- San Diego Gas & Electric – Bilateral contracts with Carlsbad Energy Center and Pio Pico Energy

- PG&E's 2007 RPS RFO
- SCE 2009 RFP for Eligible Renewable Energy Resource Supplies
- PG&E's 2008 Intermediate Term RFO
- SCE Renewable Standard Contract Program RFO
- SCE Solar PV RFP in 2009-2010
- PG&E's 2010 ITRFO
- PG&E's Solar PV Program RFOs for the Utility-Owned Generation ("UOG") and IPP Program Components
- Pacific Gas & Electric Company Solicitations for Combined Heat and Power Request for Offers (3 solicitations)
- Southern California Edison Combined Heat and Power Facilities Request for Offers (3 solicitations
- IE for Three IOUs with regard to the Calpine Sutter Contract Negotiations
- San Diego Gas & Electric Company Bilateral Contract for RA Capacity for 2013 with NRG for the Encina Units

In all these solicitation processes, we have provided input in the development of the solicitation process and protocol design, addressed issues as they evolved during the various stages of the process, reviewed the evaluation of the bids received and short list selection, monitored contract negotiation sessions with bidders, and participated in calls with the PRG. It has been our approach to review the quantitative evaluation results completed by the utility in detail and to conduct a qualitative evaluation of the bids received, if warranted.

Merrimack Energy is currently serving as Independent Monitor for two RFPs being conducted by Entergy Services Inc. in Texas and Louisiana. Merrimack Energy has also served as Independent Evaluator for several PacifiCorp RFPs. In these processes, Merrimack Energy reports directly to the Utah Public Service Commission and Division of Public Utilities. However, other interest groups such as the Utah Committee of Consumer Services, Western Resources Advocates, Utah Association of Energy Users, and the Sierra Club are actively involved in the process and rely on Merrimack Energy as IE to provide insight on the process. Since the competitive bidding process is closely integrated with the Integrated Resource Planning process in Utah, these interests groups are active participants in both the design of the RFP (along with the IE) and evaluation and selection of the resource. In this process, one of our roles as IE is to review and assess all drafts of the RFP and power contracts during the design phase of the process, prepare a detailed report on RFP design as input into Commission approval of the RFP, monitor and participate in the administration of the RFP process, directly communicate with bidders as liaison with the Company, maintain the website for the process, review and assess the bid evaluation process for both short-listing as well as final evaluation, and monitor the contract negotiation process. We have written reports on the process and have delivered testimony of numerous occasions before the Utah Public Service Commission both before approval of the RFP as well as approval of the resource selected.

For the Portland General Electric 2003 RFP, Merrimack Energy was retained by the company with approval by the Commission. In the Portland General process, we were involved in the design of the bid evaluation criteria and methodology to be used, including the methodology for assessing and evaluating fixed price intermittent renewable energy resources relative to gas-fired generation options with variable pricing structures and many contract options including Tolling Service Agreements ("TSA"), Power Purchase Agreements ("PPA"), Asset Acquisition options, self-build option, and short term bids including

option contracts and swaps. One of the major issues with this RFP was an assessment of the transmission options and costs for proposals to ensure a consistent evaluation. Merrimack Energy spent considerable time with the Transmission team at Portland General to ensure the process was undertaken in a fair and consistent manner. Throughout the bid evaluation and selection process we provided several presentations to Portland General's IRP Advisory Group that was heavily involved in monitoring the bid evaluation process as well.

For the Hydro-Quebec assignments, our role is different than most US processes. We review and comment on the design of the Call for Tenders documents (Call for Tenders is basically a bidding process for a more standard product as opposed to an RFP, which generally contains more flexibility), the contracts, the bid evaluation protocol and process, evaluation criteria, models and methodologies to be used, transmission evaluation process, and other issues raised by bidders. During the bid evaluation process, at the request of Hydro-Quebec we conduct independent price and non-price assessments and compare our results to those of the Hydro-Quebec project team. Wayne Oliver of Merrimack Energy is also a member of the Call for Tenders Committee, which includes the President of Hydro-Quebec Distribution, Director of Electricity Supply, and other senior members of the bid evaluation team. The Committee meets at key decision points in the process (e.g. short list selection, final bid evaluation, and selection of projects for contract negotiation) to review the results and decide on the course of action. Merrimack Energy also conducts an independent Benchmarking Study to assess whether the prices in the contracts executed are competitive with similar resources from neighboring power markets. This analysis is required by the Regulator in Quebec.

As Independent Monitor for the Southwestern Electric Power Company RFPs for Baseload, Intermediate, and Peaking resources, Merrimack Energy was retained by the utility but reported to the Commission Staff in Louisiana. Throughout the process we worked very closely with the Commission staff in Louisiana and the Utility during the bid evaluation and selection process. In this process, Wayne Oliver submitted testimony with regard to the solicitation process in Louisiana, Texas and Arkansas.

5. Describe your qualifications and experience directly related to the task of reviewing solicitation documentation for the purpose of ensuring clarity of definition for price and non-price factors and products sought, to ensure that all bidders effectively responded to the solicitation.

For all our assignments as IE in California we have performed the task of reviewing and commenting on solicitation documents with a focus on the clarity of the documents, clear definition of products sought, information necessary to complete and submit a responsive proposal, and clear description of the bid evaluation and selection process. These tasks are typical of the role of the IE and tasks performed in most solicitation processes. For most of our competitive bidding assignments, one of our primary roles is to review the evaluation criteria, evaluation process, information requested of the bidders, power contracts, and evaluation methodology. Our focus is to ensure the information provided by the utility in the solicitation documents and responses to bidder questions is reasonably transparent and clear so that the bidders understand the requirements and can incorporate the information in their proposal. By reasonably transparent, we mean that all bidders have access to the same information at the same time and that the

utility provides basic information on which bidders can prepare their proposal without necessarily divulging the entire scoring and evaluation system or protocol or the models used to conduct the evaluation.

One of the criteria we look at in this regard is whether the RFP documentation, the response package or information requested of the bidder by the utility (i.e. price and other project information such as siting, environmental, financial, fuel supply, engineering/technology, operating characteristics, interconnection, transmission, etc.) to allow the utility to undertake the evaluation, and the power contracts are closely integrated and consistent. For example, we generally check whether and how the utility will use information requested of the bidder in conducting its evaluation. For the price evaluation, one area we are generally focused on is whether the information required by the utility regarding pricing formulas and operational characteristics of the project (i.e. dispatch levels, minimum operating levels, availability provisions, ramp rates, heat rate curves, etc.) are consistent between the model input requirements and the information requested of bidders. In cases where we are involved in working with a utility to design an RFP, this is one of our areas of focus.

In addition, we also encourage utilities to conduct test bids prior to receipt of the bids if the utility is initiating a new solicitation process or may be involved in a potentially contentious process. The test bid process, whereby the IE creates test bids based on the price and non-price information required by the utility, and the utility evaluates the bids using its evaluation process, often can identify areas or requirements that may be unclear or uncertain. The utility can then revise the RFP documents to ensure

6. Describe your professional experience in interacting with the PRG, CPUC, & Federal Energy Regulatory Commission (FERC) and the context of your interactions.

As noted, Merrimack Energy has served as Independent Evaluator for a large number of solicitations undertaken by Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric dating back to 2007 on a wide range of resource options. Merrimack Energy has served as IE in approximately 30 solicitation processes in California as well as IE on a number of bilateral transactions. In that role, we have participated in all PRG meetings and either provided presentations or participated via comments on the process during several PRG meetings or in response to PRG member questions. Our presentations have included both a discussion of our views regarding the utility's bidding process as well as a discussion of our view on industry trends.

With regard to the CPUC, we have coordinated with several members of the Division staff assigned to the various solicitation processes including Paul Douglas, Judith Ikle, Cheryl Lee, Sean Simon, and others. We have also participated in annual IE meetings held by the Energy Division, including providing presentations on specific topics. In addition, Merrimack Energy has prepared comments on several topic areas requested by the Energy Division staff including a memo on our view of the pros and cons of the least cost best fit methodology. As part of this memo we also provided a summary of the key components and advantages and disadvantages of the competitive procurement processes in California, Quebec and American Electric Power's processes for renewable resources in several states.

7. **Describe your experience testifying in the capacity of an expert witness before state and federal regulatory agencies. Please cite document references to applicable proceedings.**

Wayne Oliver has testified as expert witness in a number of proceedings before state and Federal commissions (i.e. Federal Energy Regulatory Commission), including testimony on competitive bidding and competitive procurement processes. Mr. Oliver has testified in the following states related specifically to a solicitation process: Utah, Oklahoma, Texas, Louisiana, Utah, New Mexico, Arkansas, Hawaii, as well as Quebec and British Columbia. Testimony has focused either on RFP design issues or support of the consulting report of the IE on the bidding process in proceedings involving approval of the resources selected. Mr. Oliver testified for four days in Hawaii associated with the design of a competitive bidding framework for new resource acquisition. He has also testified in other states on integrated resource planning and power contracting issues including Vermont, New York, Nevada, and Massachusetts. Mr. Oliver also testified before the Federal Energy Regulatory Commission and the National Energy Board of Canada on gas pipeline rate and certificate proceedings.

A list of Mr. Oliver's testimony experience is attached as Attachment 2. This attachment lists the proceeding and focus of the testimony. Should SDG&E wish to review a copy of the testimony from any of the identified proceedings, please contact Wayne Oliver at (781) 856-0007 or waynejoliver@aol.com.

8. **Identify each key member of the project team that may support you during the assignment period with the lead team member clearly identified, and summarize their expected role in the process.**

The primary team members identified for this project are Wayne Oliver and Edward Selgrade.. Wayne Oliver will serve as Project Manager and will be responsible for day-to-day liaison with the Company. As IE, Mr. Oliver will be responsible for participating in PRG meetings and conferences with Energy Division personnel. He will have the lead role in assessing RFP design as well as overseeing the bid evaluation process from both a price and non-price perspective. Over the past 25 years he has reviewed over a thousand power supply proposals from a variety of resource options (including gas-fired combined cycles, combustion turbines, various coal technologies, a wide range of renewable resources, distributed generation options, and behind the meter generation) and contract types (PPA, TSA, APSA, EPC contract, Turnkey options, options contracts and a range of short-term wholesale market arrangements).

Mr. Selgrade will have lead responsibility in power contracting issues including participating on comments associated with power contracts, transmission related issues, monitoring contract negotiations (along with Mr. Oliver), and related legal issues (e.g. site control and interconnection).

9. **Describe your level of experience preparing and orally delivering significant presentations to diverse audiences.**

Mr. Oliver has conducted a number of seminars and presentations to utility management, Utility Commissions and industry conferences on a wide-range of topics in the electric and natural gas industries over a 35 plus year career. He has conducted a number of seminars for utilities and industry associations on the design of competitive procurement processes, ISO market design issues, resource planning methodologies including option pricing techniques, gas procurement for power generation facilities, generation asset valuation, industry restructuring, etc. This includes a full two-day presentation on the design of a competitive procurement process for Hawaiian Electric Company. Although a list of presentations is not included on Mr. Oliver's resume, the list is extensive and broad-based, covering all aspects of the electric and natural gas industries.

Mr. Selgrade has also conducted numerous presentations on industry issues over his lengthy and illustrious career, including positions as an energy industry attorney and regulator.

10. **Provide two references with contact information concerning work assignments you have performed that demonstrate application of the range of skills, experience, and qualifications required for the Independent Evaluator assignment.**

The following are more recent references associated with assignments completed by Merrimack Energy who can attest to our experience and capabilities. Please let us know if you need additional references.

Artie Powell
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wpowell@utah.gov

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Director, Generation Bidding
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Thomas Ramey
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Arizona Public Service Company
400 North 5th Street
MS 9674
Phoenix, AZ 85004
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Steven Fate

Pierre Chabot

System Liaison Manager Public Service Co. of Oklahoma 212 East Sixth St. Tulsa, Oklahoma 74112 (918) 599-2123 slfate@aep.com	Director, Energy Supply Hydro-Quebec Distribution 75 Rene Levesque Boulevard Montreal, Quebec, Can. H2Z 1A4 (514) 289-3888 Chabot.pierre2@hydro.qc.ca
Todd Strauss Senior Director, Energy Policy Planning and Analysis Pacific Gas and Electric Company 77 Beale Street San Francisco, CA 94105 (415) 973-1033	Ricardo Acosta Resource Planning El Paso Electric Company 100 N. Stanton El Paso, Texas 79901-1442 (915) 543-2040 racosta@epelectric.com

11. What particular topics would you anticipate to be included in the terms and conditions of a) PPA and b) turn-key contract for a power plant?

Based on our experience a summary and description of the important terms and conditions of a PPA relative to a turn-key contract are provided below. Merrimack Energy has attempted to provide a reasonable summary of the major provisions but there are other less important provisions that would distinguish the contractual provisions in the two project structures as well. Merrimack Energy has been involved in several solicitations which have included both PPA and turn-key or EPC contracts including the following:

- PG&E 2014 Energy Storage RFO
- Entergy Texas 2015 RFP
- PacifiCorp All Source RFP for 2016 Resources
- El Paso Electric 2011 RFP for Peaking Resources
- PacifiCorp 2008 All Source RFP
- Arizona Public Service Company AZ Sun Program RFP – EPC contracts for Solar PV projects
- Avista Utilities Renewable Energy RFP
- Hawaiian Electric Renewable Firm Dispatchable Capacity RFP

Merrimack Energy actually was responsible for developing the PPA and Turn-key Term Sheet for the Hawaiian Electric RFP. For several of the assignments in which Merrimack Energy served as IE, we provided comments on the PPA and Turn-key contracts to ensure the balance in the risk profiles of the agreements was not biased. A detailed summary of the PPA and Turn-key provisions which are most important follows.

We have prepared analysis and summaries of the key contract provisions and risks associated with PPAs and turnkey contracts and would be willing to provide such information to SDG&E at your request.

A more detailed summary of those PPA and turnkey issues which are generally the most important and therefore, are also the toughest to negotiate follows.

- *Development milestones, milestone extensions and delays, treatment of force majeure (particularly permit force majeure) and remedies for milestone failures*: The structure of the milestones must be negotiated first and can vary considerably from simple "dates certain" (chosen at the time of contract execution) to a sequence of milestones which are a fixed duration after earlier milestones. The request or ability of the developer to extend deadlines for events of force majeure, and particularly for permit force majeure, is sometimes very difficult to address and resolve to the satisfaction of the counterparties. Buyers require certainty regarding the availability of a chosen resource to meet supply requirements, while developers do not want to take undue risks (and face the loss of large security requirements) in permit and licensing areas over which they have little control. Limited ability to extend milestones is sometimes granted and may require the forfeiture of some security or the posting, at risk, of additional security. Back-end "drop dead" deadlines are common, but can be qualified where construction has commenced and developers cover the excess power costs incurred by the buyer due to the delay. For delay remedies (to the negotiated extent delays are tolerated), liquidating the amount of delay damages is common. For long-term PPAs for new generating units, daily or monthly delay damages are often, but not always, a fraction of the development period security (for example, if allowable delays prior to termination are 12 months, one month of delay can result in liquidated damages equal to one-twelfth of development period security). In other types of contracts, delay damages can be negotiated based on market references for the cost of short-term replacement power. Developers will sometimes try to negotiate a limitation on the ability of the buyer to terminate for a failure to meet the commercial operation deadline in cases where the developer has commenced construction, has full financing, and continues to make diligent progress to completion. With PSAs, buyers sometimes show more flexibility about extending deadlines, particularly where buyer sites are being used and/or buyers have retained certain permit responsibilities.

- *Credit and Security Requirements:* Credit and security requirements are among the most contentious issues in a competitive procurement process. While credit departments often control the negotiation of these provisions, the theory under which full contract damages are calculated for purposes of setting credit and security amounts will be addressed in negotiations. Based on generally sound common law principles, developers will negotiate to limit the contractual damages theory to take into account the duty of damage mitigation. In this regard, developers will attempt to limit damage calculations to the amount required to cover damages for short-term replacement power during the period required to replace the failed PPA with a substitute PPA, plus the increase, if any, in the expected cost of power from the substitute PPA.

  The negotiation of credit and security requirements revolve around the stated requirements or range of allowable credit and security set forth in a competitive procurement, developer's requests (in many cases) to soften these requirements, and the involvement of utility credit

departments and the application of their standards. Sometimes, credit and security issues are negotiated with contractual damage provisions, such as any limitation on the seller's liability for failure to develop and construct the project despite using commercially reasonable efforts based on the amount of development period security or some other stated amount usually in excess of the amount of development period security. Other issues involve the type of security, with developers seeking to provide corporate guarantees (required credit ratings are then subject to negotiation) or sometimes second liens on the power project in lieu of a letter of credit. We have recently seen proposals from developers to only post security if the project fails to meet milestones, and allow the utility step-in rights in case of failed performance.

There are considerable differences in industry practice, especially involving the amounts of required and negotiated development period and operational period security, across states, utilities, and types of PPAs and other contractual arrangements.

Due to the complexity of this issue, Merrimack Energy prepared a detailed matrix that identifies the collateral requirements of over 15 utilities included in either their competitive procurement processes or PPAs. Mr. Oliver previously filed rebuttal testimony in Oklahoma on collateral requirements in competitive procurement processes based on this information on behalf of Public Service Company of Oklahoma. Merrimack Energy could provide the testimony and back-up matrix with this information to San Diego Gas and Electric Company upon request.

- *Commercial Operation Date and/or Closing:* For both PPAs and turnkey contracts, these definitions are detailed and can involve extended negotiations. For both, detailed testing requirements to prove the project meets Commercial Operations are required and are included in the contract. For turnkey contracts, additional requirements, associated with the acquisition of good and clear title, can be complicated.

- *Capacity or Purchase Pricing:* For PPAs, fixed capacity pricing (fixed in terms of a single number or fixed escalation over the term of the contract) is the general rule. For turnkey contracts, a fixed capital cost is generally required. However, recently the fixed price nature of contract pricing has come under pressure due to commodity cost uncertainty and financing uncertainty. This has led both PPA options and turnkey options to request price adjustment mechanisms prior to execution of an EPC contract or prior to financial closing. These pricing pressures have also arisen from the following factors: (1) the longer lead times between bid submission and the expected commercial operation date or Closing date (during which time steel, copper, and other commodity prices may vary considerably); (2) ability of the EPC contractor to fix its price for a certain period of time and (3) environmental change of law risk regarding emission level requirements. In addition, for turnkey contracts, there will be a degree of design review and control associated with the anticipated plant ownership by the buyers. We have also seen the buyer become more sensitive to Notice to Proceed provisions with the ability to terminate the contract with limited penalties if prices change. Control of design results in sometimes complex "Change Order" provisions. The latter provisions would allow the prospective owner to control the final design in exchange for an agreement to pay the resulting costs of design change. Since a specific asset is being purchased under the turnkey contract (in contrast to the functional power delivery product in the PPAs), turnkey sellers will restrict their

obligation to build only the plant whose specifications are included in the relevant exhibits. Such sellers will therefore expect Change Order provisions which protect the turnkey sellers from all change in law risk, including the critical environmental change in law risk for coal or even gas plants. Negotiating the requested power pricing and purchase pricing flexibility could potentially be time consuming and difficult if the procurement process allows such negotiations.

- *Fuel and O&M PPA Pricing:* While PPA and TSA sellers generally take performance risks which they can control (such as heat rate, availability and capacity ratings), the commodity price risk for fuel will generally be addressed with some market-reference price or escalator tied to the market reference price. In the case of a TSA, the seller takes the operating risk but the fuel risk is transferred to the buyer. We have seen in recent RFPs more interest in long-term TSAs (for conventional resources) as opposed to traditional PPAs, largely due to the ability and willingness of the buyer to absorb the fuel supply risk. Indexing some or all of the O&M costs to a general inflation index may also be requested. Negotiating the right escalator can be difficult. Indexing some part of O&M costs to a general inflation index may also be requested.

- *Change in Law Risk:* In the past, PPA sellers have generally taken all change in law risk, both during development and during operations of the project. The prospect of significant changes in the environmental laws governing power plant emissions is causing this allocation of risk to come under challenge. For APSA sellers, there is great reluctance to take this risk since APSA sellers desire to price and deliver a seller-defined asset at competitive prices. For some technologies, it should be expected that negotiation of change in law provisions for PPAs will be difficult and time consuming. PPAs and APSAs may evolve toward a more common treatment of change in law risk for certain, but not all, environmental laws. For renewable energy projects, especially solar and wind, change in law risk is less sensitive, except for continuation of the production tax credit, investment tax credit, and existing state laws which provide beneficial treatment to developers, such as continuation of property tax exemptions, sales tax exemptions and state production tax credits.

- *Force Majeure:* This provision for each type of contract will involve some negotiation and will inevitably address the extent to which change in law shall be treated as a general or special event of force majeure. Except to the extent, other price adjustment provisions are explicitly triggered, changes in input pricing generally can be expected to be specifically excluded from the Force Majeure definition. Other governmental actions or inaction will be the subject of negotiations as well. Whether extended events of Force Majeure entitle one or both counterparties to terminate, and what consequences flow from any such terminations, should be addressed. Most attention will be directed to the effect of Force Majeure during development and construction. For turnkeys, there is no application of the clause after the Closing Date.

- *Operational Performance Standards:* For PPAs, performance standards offer significant risk avoidance to PPA buyers in the area of heat rate, availability and capacity ratings. However, at least for emerging technologies, buyers should expect to see attempts by PPA sellers to avoid unrealistic or rigid performance standards until the technology becomes more

mature. Limitations which PPA sellers experience from their technology vendors will be the subject of "pass-through" negotiations with PPA buyers. Turnkey sellers will attempt to achieve the same protections regarding any plant guarantees which survive the Closing Date.

- *Events of Default, Cure Rights and Lender Coordination Provisions:* Defined events of default, plus any other specific termination provisons, are generally the only basis on which PPA or turnkey sellers can be terminated. All such events should realistically reflect the technology involved and be accompanied by realistic cure periods, during which the sellers can be protected from termination and at the same time, be exposed to damages which cover the consequences of their associated performance shortfalls (within any negotiated grace allowances). Damage theories will generally differ between PPAs and turnkey since on the one hand, a functional power product is being delivered over an extended term and on the other hand, a specific asset is being constructed and transferred as of the Closing Date. The degree to which basic cure periods are extendable, and any limit on such extensions, can be troublesome provisions to negotiate. Involved negotiations might also be expected to incorporate lender cure and coordination provisions. While some basic lender protection provisions help PPA developers attract potential lenders, extended negotiation of non-disturbance and step in provisions can be unrealistic in the absence of actual lenders at the time of PPA execution. For operating defaults under PPAs, the conditions under which lenders can be expected to forego their customary and plenary rights of superiority to allow PPA buyers to remain power customers after lender take-overs under the PPA or more dramatically, to allow such buyers to step in and operate plants after seller failures to perform may simply be unrealistic at these early stages. However, counterparties should be mindful of the need to anticipate lender concerns which will materialize later.

12. In your opinion, what contract terms and conditions are toughest to evaluate, and why? Cite examples from your experience, as appropriate (use generic descriptions to avoid disclosing confidential information).

The large number of significant provisions in PPAs for both conventional generation resources (short and long-term) and renewable resources as well as turnkey contracts defy a complete listing and analysis here. We have attempted to identify the most important and by extension, the most difficult provisions to negotiate in our response to an above question where we listed and discussed specific contract provisions. In each case, the reason for such difficulty is the objective of each counterparty to shift contractual risk to the other party or limit the assignment of risk itself. From both sides of the negotiations, the Merrimack Energy team has had numerous instances of negotiating or monitoring the negotiations of each of such major terms during the many years of their power contract experience.

Some of our recent assignments have highlighted such challenges in negotiating contracts. For example, Merrimack Energy has assisted Hawaiian Electric with the development of both a PPA for firm generation and a turnkey contract for a potential project option at a bidder site for Hawaiian Electric as potential competition for a self-build cost of service option. In addition to drafting the PPA, we have also responded to inquiries by HECO attorneys to conduct research on such issues as contract buyout provisions, liens, and step-in rights in case of potential project default. Given the nature of the Hawaii and the need for firm

capacity such provisions are very important to maintain the integrity of the market.

Based on our experience in other solicitations, we have found that the most difficult and challenging terms and conditions to negotiate for turnkey contracts include change order provisions, default provisions, limited notice to proceed provisions, final notice to proceed provisions, equipment warranty provisions, force majeure, liquidated damages, limitations on liability, termination rights and regulatory issues.

For PPAs and TSAs some of the more difficult provisions to negotiate include default provisions, credit assurance and security, milestone schedules and associated liquidated damage penalties, plat operating provisions such as plant availability, capacity testing, and performance provisions, and change in law provisions.

For renewable PPAs, the most challenging provisions are associated with the impacts of extension of the Production Tax Credit and Investment Tax Credit on project schedule, which affects termination rights, ability to secure DOE loan guarantees, default provisions, liquidated damage provisions, and force majeure. In addition, we have encountered situations where a project developer attempted to include failure to secure permits in a timely manner as a force majeure condition. Finally, another challenging provision involves the timing of securing interconnection for the project to the grid in conjunction with the proposed in-service date and cost of interconnections. This issue has been particularly prevalent in California contracts.

All the provisions listed above are challenging because these are the provisions that involve the greatest level of risk allocation between the counterparties.

In addition, other contract provisions that warrant attention during negotiations but are challenging are associated with revisions in the ISO rules that affect product value as well as change of law or compliance risk associated with environmental rules and regulations.

13. In your opinion, which cost components are difficult to evaluate while making cross-comparison between PPAs and turn-key contracts for power plants, and why?

Merrimack Energy has been involved in a number of competitive procurement assignments for both conventional generation resources and renewable resources that have involved the assessment of various cost components and risk profiles attributable to the specific resource, contract structure, or product solicited. In addition, we have also reviewed the reasonableness of the cost structures and pricing parameters for a range of proposed products and resources including PPAs, TSAs and utility self-build cost of service options for both conventional and renewable resources. For example, Merrimack Energy recently served as IE for solicitations undertaken by PacifiCorp and El Paso Electric where utility self-builds and EPC contracts (both of which would be treated as a cost of service option) were competing with PPAs and TSAs where the developer was at risk for its proposed costs. We were also IE for an Arizona Public Service Company process where APS was soliciting turnkey bids for a solar PV project to be built at an APS site for which APS would own and operate the project.

Based on our experience, there are several cost issues that warrant close scrutiny with regard to a cost comparison between PPA and turnkey projects. The first cost issue is the capital cost of the project. While PPA bidders generally bid to a performance-based contract and include a fixed capacity price or fixed escalating capacity price that is locked in for the term of the contract, turnkey options are generally treated as cost of service based options where the actual costs could be higher or lower than the estimated costs. While some processes require the turnkey option to be a fixed price when bid, in a number of states these options are treated as cost of service options with the actual cost included in rate base if the utility can demonstrate the costs are prudently incurred. In some cases a utility could shift the cost risk to the developer by paying for the project once it is complete and the "keys" are turned over to the utility. The turnkey contractor bids a price at which it will build the project and the utility pays that price when complete. In many of these cases the utility offers a site and specifications for the plant. Merrimack Energy has been at the forefront in the industry in attempting to develop a process which places PPAs and turnkey projects on more of a level playing field (often referred to as "comparability"). While some IEs have advocated that the utility self-build option or turnkey option should bid to a performance-based contract such as a PPA, we have taken different approaches which include capital cost and capacity price indexing as well as utilizing the bid evaluation methodology to assess if a turnkey option would still be preferred under various cost overrun scenarios.

Another cost item that is somewhat controversial is operations and maintenance costs (both fixed and variable). For some projects, PPA bidders have argued that the utility could low-ball the O&M costs for their projects while the actual O&M costs over the life of the project could be quite a bit higher. In these cases, we have conducted benchmark studies of utility O&M cost estimates to assess the reasonableness of such O&M costs for specific technologies. Merrimack Energy maintains benchmark capital and operating costs for a number of technologies which we have used in several assignments in California and other jurisdictions. In California, in particular, these benchmark costs have been utilized in assessing the reasonableness of proposed price amendments for Commission-approved contracts.

Another area of scrutiny is fuel costs for natural gas fired projects, although these costs are less controversial since many projects are actually tolling agreements where the utility purchases the fuel and converts the fuel to power in the third-parties facility.

A final issue is operating characteristics of plants including heat rates, operating parameters, and degradation. Differences in these projected characteristics relative to actual performance could influence project economics at the margin. While PPA projects are required to perform as specified under the contract, turnkey options are not required to meet the same contractual standards.

Through our role as IE or independent consultant on a range of competitive bidding assignments over the years we have reviewed and evaluated the pricing provisions for a range of options including PPAs, Tolling Service Agreements, Asset Purchase and Sale Agreements, DSM options, utility self-build options, and EPC contracts. One of the major focuses of our assessment is to ensure that all options contain the same basic cost information to ensure the evaluation is undertaken in a comprehensive and equitable manner. For example, PPA bidders generally submit pricing that includes payment for all costs incurred by the seller. For the seller of conventional generation this generally includes a capacity charge to compensate the seller for its return on and of investment, a fixed O&M charge, a variable O&M charge, and an energy cost component. In comparing a PPA to a utility self-build it is necessary to ensure that all applicable cost

components are included in the self-build to ensure comparability in the evaluation. While a self-build option would include an estimated capital cost for the project and fuel acquisition, other cost components such as operation and maintenance charges, water costs, and on-going capital expenditures need to be scrutinized to ensure that all such costs are adequately accounted for.

On the conventional generation side, the PacifiCorp All Source RFP for 2016 Resources, PacifiCorp's 2008 All Source RFP (in which an EPC contract to construct a 600 MW gas-fired combined cycle on a PacifiCorp site was selected), and the 2012 Baseload RFP involved a range of eligible resource options including utility cost of service options (bid as a benchmark), PPAs, tolling service agreements, and turnkey contracts. A major component of our assignment in each solicitation was to ensure all bids were fairly and consistently evaluated. We reviewed all the analysis prepared by PacifiCorp to assess the different options, worked with PacifiCorp and the bidders to develop term sheets to ensure both parties were in agreement on the pricing and operating provisions proposed by the bidder, and held several conference calls to review the results. In addition, to test the methodology PacifiCorp intended to use to evaluate proposals with different cost and project structures, Merrimack Energy developed test bids that included a cost of service option and a PPA. In addition, Utah bidding rules require the IE to review in detail and write a report on the reasonableness of the cost of the benchmark resource which includes the capital cost, O&M costs, fuel and operating costs. Merrimack Energy has undertaken such an assessment on three PacifiCorp RFPs. To undertake such an assessment we compare the proposed cost to a benchmark database we have developed for similar technologies to assess the reasonableness of each cost component, which includes a large sample of project costs including combined cycle units, combustion turbines, wind projects, biomass and solar technologies. The objective of this process as mandated by the Utah Commission is to ensure the utility is submitting a reasonable cost estimate for its own self-build option and is not proposing a low-ball cost to win the bid and then actually come in at a higher cost under a cost of service structure.

We also conducted a detailed review and assessment of the economic evaluation undertaken by both Public Service Company of Oklahoma and Southwestern Electric Power Company for comparing self-build cost of service options with PPA bids. As Independent Monitor we worked closely with the utilities to develop a methodology that would allow the utilities to evaluate cost of service bids and PPAs on a consistent basis.

We have also served as Independent Evaluator for the 2008, 2010 and 2011 RFPs undertaken by El Paso Electric to procure peaking resources. In all cases, the competitive options included a utility self-build option, Demand Response programs, ice storage, renewable resources, and short and long term PPAs.

Merrimack Energy is currently serving as Independent Monitor for two Entergy RFPs in Louisiana and Texas. In both cases, the Entergy company soliciting bids has also developed a self-build benchmark that Entergy is prepared to build and own if selected.

On the renewable resource side we served as IE for the Avista Utilities 2009 Renewables RFP and PacifiCorp's 2008 Renewable RFP. In both these processes, eligible resource options included PPAs, Build-Own-Transfer options and Asset Purchase and Sale Agreements. For the Avista case, Avista was also considering the acquisition of wind turbines for developing a self-build option on a utility-acquired site. In both these cases, a focus of our assessment was to ensure that all options included the appropriate cost components and there were no biases associated with individual resource options.

In conclusion, over the years Merrimack Energy has worked with utilities and public utility Commissions

to develop methodologies and solicitation processes designed to assess and evaluate a range of resource options on a comparable basis.

Merrimack Energy has written several publicly available reports on comparability between PPA and turnkey options and would make those reports available to SDG&E upon request.

14. Capital expenses associated with new power plant construction are anticipated to be a significant element in determining the cost for both PPA Offers and utility turn-key Offers. What capability and experience does your proposed project team have in determining whether such capital expenses are reasonable as presented in the Offers received by SDG&E?

Merrimack Energy has been very active in power procurement processes involving the costs for both third-party PPA options and turnkey options competing in the same solicitation. As noted above, Merrimack Energy possesses a significant database of cost information for various technologies that we have used for several assignments, including preparation of IE reports for contract price amendments. In addition, we have prepared several benchmark studies for various utilities on the cost of building and operating several different types of power projects, including gas-fired combined cycles, combustion turbines, wind projects, solar projects, and biomass. Actually, for all our assignments with Hydro-Quebec Merrimack Energy has been tasked with preparing benchmark studies for the technologies selected to assess whether the cost of the resources selected by Hydro-Quebec through the Call for Tenders (similar to an RFP) is competitive with the cost of building and operating the same technology in neighboring markets.

Over the past several years, Merrimack Energy has served as IE on several processes involving turnkey solar projects built by an EPC contractor but owned by the utility. Through this process we have become very familiar with the capital and operating costs for a utility-owned solar project. We actually undertook a modeling process to assess the economics of utility ownership vs PPAs for a solar project based on our involvement in both types of solicitations. Merrimack Energy has been retained by PG&E to serve as IE for both the PPA component and Utility-owned Generation component of its Solar PV program.

PacifiCorp has undertaken several RFPs (on which Merrimack Energy has served as IE) that have involved competition between PPAs, TSAs, EPC contracts, and self-build options. Actually, in some cases, PacifiCorp's self-build option price is based on an EPC agreement for the plant. Also, one of our roles as IE on several PacifiCorp RFPs under Utah law requires the IE to conduct a detailed assessment of the cost of the benchmark resource or self-build option proposed by PacifiCorp. As a result of this requirement we have conducted detailed line by line cost assessments for a range of technologies based on several PacifiCorp RFPs in which we have served as IE. Actually, our work as IE on the PacifiCorp RFPs has focused on ensuring that all costs to develop and construct a plant are accounted for in the evaluation including contingency costs, owners development costs, capital expenditures and upgrades, etc. For the PacifiCorp RFP processes, the competition has largely evolved to EPC contracts to build gas-fired combined cycle projects on a PacifiCorp site. As a result, it is imperative that all bidders provide the same cost information and that all reasonable costs are reflected in the evaluation.

In addition to comparing PPA options with turnkey options for the PacifiCorp RFPs, Merrimack Energy has served as IE on several El Paso Electric solicitations where PPAs, TSAs, and self-build options are competing head to head. Merrimack Energy had to ensure all costs were accurately accounted for to ensure the evaluation was undertaken in a fair and unbiased manner. In fact, because of our concern that the slef-build team had understated the cost of the utility project, in one solicitation we asked the utility to rerun the capital cost of the self-build option at a higher cost to assess the outcome.

Merrimack Energy was able to use this experience and capability to assess the reasonableness of the going forward costs of the Calpine Sutter project in our work as IE for all three California utilities during the Sutter contract negotiation process. One of the tasks allocated to the IE by the CPUC was for the IE to assess the reasonableness of the costs to operate the plant during the second half of 2012.

15. Operating characteristics of power plants are anticipated to be a significant element of each Offer. a) What capability and experience does your proposed project team have with how operating characteristics are specified in contracts of the type SDG&E may execute? b) What capability and experience does your proposed project team have with how operating characteristics specified in an Offer and/or contract may be represented in models used to assess the value of the Offer and/or contract?

In all the competitive procurement processes (particularly those pertaining to conventional generation resources) we have been involved in, project operating characteristics are one of the key elements of the evaluation and one of the elements that distinguish the value of a specific proposal. In the current utility market, the operating characteristics of power projects are important factors in the evaluation including such provisions as availability provisions, ramp rates, ramp rates, must-run limitations, cycling characteristics, AGC capability, duct firing capability, etc. Due to the intermittent nature of many renewable resources, the increase in the amount of renewable resources in a portfolio enhances the value of operating flexibility. Some utilities we have worked with treat operating characteristics as both a price and non-price factor, which complicates the evaluation process. While some of the operating characteristics can be modeled by the utility as a quantitative factor, other characteristics are more akin to non-price evaluation. Members of the Merrimack Energy team have considerable experience with these types of contracts and contract provisions. One of our primary focuses is to ensure that the operating provisions specified in the contract and RFP are closely linked and that such provisions are also consistent with the economic modeling capability of the utility if warranted.

(a) **Operating Provisions in Contracts** - The contractual provisions pertaining to operating characteristics depends on the type of the contract. For dispatchable PPAs or tolling agreements with natural gas-fired generation plants, the contract will set forth such provisions as minimum operating level, guaranteed heat rates at different loading points, minimum ramp rates, provisions regarding cold, warm, and hot starts, output limitations due to environmental permitting restrictions, availability provisions, forced outage rates, minimum run times and minimum down times. Members of the Merrimack Energy team have considerable experience with these types of contracts and contract provisions. As we discuss in other sections of this Questionnaire, both Ed Selgrade and Wayne Oliver have teamed on a number of assignments to assist utilities design the PPA or Tolling agreements that are included in an RFP. As a result, we have designed both the

legal and commercial aspects of contract provisions pertaining to operational parameters in a power contract. As a result, One of our primary focuses is to ensure that the operating provisions specified in the contract and RFP are closely linked and that such provisions are also consistent with the economic modeling capability of the utility if warranted.

With regard to the contract issues, we feel one of the most important attributes of a good bidding process is to ensure that the RFP documents, the Response Package or information requested of bidders and the model power contracts are closely linked. Certainly, operating characteristics such as target availability, dispatch and/or scheduling rights, minimum operating levels, etc, have to be matched in both the proposal and the contract. If a bidder guarantees a certain level of availability in its proposal and is evaluated economically based on the level specified, then failure to meet the proposed availability should be subject to price adjustments or other adverse consequences in the contract. Processes where bidders have the opportunity to offer aggressive availability targets to benefit their economic evaluation without the threat of contractual price adjustments or other adverse consequences are not effective processes.

(b) **Modeling of Operational Parameters** - In all the competitive bidding processes we have been involved in, project operating characteristics are one of the key elements of the evaluation. Some utilities treat operating characteristics as both price and non-price factors, with non-price factors addressing those characteristics that cannot be easily modeled, such as ramp rates, must-run limitations, scheduling, etc.

Most of the large scale production cost models contain significant capability for modeling the impacts of operating characteristics as part of the pricing analysis. Models such as Strategist, Aurora, CEM/PROSYM have the capability of modeling operating characteristics of various bids. In fact, we always encourage utilities to request information from bidders about operating characteristics that conforms to the types of information that can be utilized in the models the utility intends to use. We have recently been involved in competitive bidding processes in which each of the above models have been used.

As noted in our experience statements, Merrimack Energy has served as IE on a number of conventional generation RFPs, including several recent RFPs for baseload, intermediate and peaking resources. For example, over the past two years we have served as IE for PacifiCorp's All Source RFPs in which gas-fired combined cycle projects as well as combustion turbine and reciprocating engines have competed. We also served as IE for two El Paso Electric RFPs for combine cycle and peaking resources, which generated a range of conventional resources, storage technologies, and Demand Response options.

16. Describe the ability and experience of your proposed project team in verifying transmission characteristics that may affect the suitability of certain bids.

In many areas of the country, the cost and availability of transmission service has a significant influence on the rankings for various projects offered through a competitive bidding process. One of our key objectives as Independent Evaluator is to ensure the methodology used by the utility to evaluate transmission impacts (i.e. perform interconnection studies for bidders or identify sections of the system where cost impacts could be most significant) is reasonably transparent to the bidders. In addition, we seek to fully understand the process the utility will undertake to evaluate transmission impacts. This generally involves several

meetings with the bid evaluation team members responsible for transmission or the Company's transmission group (if separate from the utility) to discuss the methodology and understand the system better. As IE we also review the results of the bid evaluation to ensure the transmission impact assessment is reasonable and to challenge the results if they appear to be inconsistent. In all cases, we have not undertaken an independent evaluation of the transmission impacts but have reviewed the evaluations and conducted several follow-up meeting with Company transmission personnel.

Based on our role as IE for several major solicitation processes on behalf of California utilities we are certainly aware of the many transmission issues in California or issues driven by transmission constraints such as the procurement of out-of-state resources, the implications of full capacity deliverability versus energy-only transmission status, and the timing for conducting interconnection studies as well as the PPA provisions included to address these issues. In addition, we are familiar with the approaches used by California utilities to evaluate transmission-related costs including the use of network upgrade cost information from actual interconnection studies, System Impact studies and Facilities studies, as well as Fast Track or Independent Study screens.

We have experienced challenges associated with transmission cost impacts in other RFPs as well. For example, in the PacifiCorp RFPs, PacifiCorp Transmission Group provides what is called Attachment 13 in the RFP document. Attachment 13 provides high level estimates of the costs to upgrade the system at key delivery or interconnection points on the PacifiCorp system so that bidders know where constraints and costs are greatest. PacifiCorp Transmission then undertakes a more detailed assessment when the actual proposals are received. We found that the transmission-related costs had increased dramatically from the original Attachment 13 to the estimated costs when the actual bids were evaluated. As a result of that experience, we suggested that PacifiCorp hold a transmission workshop for bidders for subsequent solicitations to review transmission constraints on the PacifiCorp system, discuss the implications of any new or proposed transmission projects, and provide a description of the factors that could influence transmission availability and costs at key delivery points. The suggestion was approved by the Utah Public Service Commission and the process has been more informative to bidders since that time.

Arizona Public Service has attempted to develop its procurement process to encourage bidders to have interconnection studies completed before submitting a proposal to provide more detailed information about the interconnection and transmission related costs for each project as part of its evaluation. As another example, Portland General Electric spent approximately three weeks after the bids were received verifying the transmission options identified by bidders and estimating the cost to deliver the power to its system. During that time we met regularly with the transmission group to review the results and the basis for the cost and availability estimates and suggested options for addressing transmission issues and assessment of these issues.

Finally, Merrimack Energy was retained by BC Hydro in 2011 to reassess its power procurement processes. Part of the process included conducting a "Best Practices" assessment of other utilities. One of the key aspects of the assignment was related to the interconnection study process and evaluation of transmission related costs by BC Hydro relative to other utilities including Hydro Quebec, Ontario Power Authority, APS, California Utilities, AEP, and PacifiCorp. Merrimack Energy reviewed the approaches taken by a number of utilities and recommended an approach for BC Hydro. Both Wayne Oliver and Ed Selgrade were consultants on this assignment.

17. Describe the ability and experience of your proposed team to evaluate different types of renewable resources.

Merrimack Energy has served as IE for a number of renewable resource RFPs that have included a wide range of renewable technologies, including wind, several solar technologies, geothermal, biomass, landfill gas, ocean thermal, small-scale hydro and off-shore wind. Merrimack Energy has served as IE for SCE's recent 2013 and 2014 RPS RFPs for renewable resources, which have resulted in the execution of a number of contracts. Merrimack Energy also recently served as IE for NV Energy's 2014 and 2015 Renewable Energy RFPs for 200 MW of renewable generation. Merrimack Energy has also served as IE for six separate utility solicitations involving either EPC contracts for renewable resources that would be owned and operated by the host utility or cases where third-party PPA options are competing against utility ownership options. We have also had experience with several different evaluation methodologies used by various utilities. In addition, we have experience in processes where the utilities have also included detailed integration cost assessments and terminal value assessment in the solicitation processes. In all these cases, one of the roles of the IE was to either review the evaluation of the resources submitted by the bidders or to conduct our own independent evaluation. Through these processes, we have also conducted financial due diligence analysis or utilized a revenue requirements analysis for purposes of evaluating utility turnkey options.

As noted, we have served as IE for PG&E's 2007 RPS RFO and SCE's 2009 Renewable RFP, in addition to the recent experience in California. In both these processes we have reviewed proposals for a wide-range of renewable resource options. Merrimack Energy has also served as Independent Consultant for all of Hydro-Quebec's Call for Tenders for Renewable Resources including four wind Call for Tenders (totaling approximately 4,000 MW), two biomass Call for Tenders totaling nearly 200 MW and a Cogeneration Call for tenders. We have also served as Independent Monitor for seven Arizona Public Service Company Renewable Resource RFPs including a renewable Distributed Generation RFP, two small renewable generation RFPs, a wind-only RFP, two RFPs for an EPC contract for a solar PV project on a utility site and three RFPs for the installation of 1,500 residential solar systems to be owned by APS. We have also served as IE on two Avista renewable RFPs, and several others over the years. Merrimack Energy has also served as consultant to Hawaiian Electric Company on the development and implementation of two renewable energy RFPs including one RFP for a combination of renewable resources and an undersea transmission cable to deliver power to Oahu and two separate RFPs for renewable firm dispatchable resources (likely biofuels) for Oahu and Maui. Merrimack Energy also assisted Hawaiian Electric with the development of its Feed-in Tariff program for renewable resources.

Merrimack Energy also served as independent consultant to the Utah Public Service Commission with regard to a renewable resource solicitation process undertaken by PacifiCorp, which included wind, biomass and geothermal resources.

Merrimack Energy also was retained by the Massachusetts Division of Energy Resources to serve as its consultant with regard to the requirements in Massachusetts for utilities to issue RFPs for long-term contracts to procure renewable resources. We also served in a similar role in Delaware that involved off-shore wind resources.

18. In your experience, what evaluation criteria and methodologies have been used in assessing and selecting among Offers in long-term Requests for Offer (RFO) and Request for Proposal (RFP)?

Utilities have undertaken a number of approaches for conducting the bid evaluation and selection process, including the criteria applied. The most common approaches include: (1) multi-stage evaluation process; (2) pre-qualification process; (3) competitive negotiations and (4) indicative bid process.

The most common process is the multi-stage approach. Under this approach, bids are subject to several stages of evaluation. For example, once bids are received they are generally subject to an initial review to ensure they conform to the eligibility requirements of the RFO or RFP. These requirements may include: (1) the bid is received on time; (2) bidders meet the product requirements; (3) the bid is signed by a Corporate Officer; (4) bidders meet certain credit requirements, etc. In some cases, the utility may realize upon the initial review that the bidder has not provided complete information or there may be a need to seek clarification of the information provided. Some utilities will ask follow-up questions of the bidders at this stage to ensure complete and thorough information is provided by all bidders.

The second stage is generally the Threshold Evaluation Stage. In this stage, bids are reviewed to ensure they comply with the threshold requirements outlined in the RFO or RFP. Although the threshold requirements can vary by utility or market, common threshold criteria include (1) the bidder has control over a site for its project, (2) the bidder meets the experience requirements for the project proposed based on past successful experience with similar technologies, (3) the bidder meets the established credit requirements, (4) the technology proposed is a mature technology. Some utilities include other threshold criteria but the above are the most common.

The third step generally involves an initial price and non-price evaluation of the bids that meet the thresholds. Although the evaluation criteria differ depending on the resource types solicited (i.e. conventional gas-fired generation or renewable resources) there are a range of non-price criteria utilized. However, the criteria generally fall within the following categories: (1) Project Development Feasibility or the expectation that the bidder can successfully develop the project on the schedule as proposed. Criteria of importance include status of permitting, critical path schedule, engineering design/equipment specs, fuel plan or energy generation information or profile (if renewable resource), siting arrangements, financing plan, development experience etc.; (2) Project Operational Viability or the expected ability of the project sponsor to operate the project as proposed. The criteria of importance in this category include viability of the fuel plan relative to the operations of the project, O&M plan, financial integrity of the project/proforma, capital additions expected, environmental compliance, etc.; (3) Operational Characteristics including the flexibility of project operations. The criteria of importance include level of dispatching or scheduling, guaranteed availability, ramp rates, minimum load conditions, voltage support, etc.; (4) Environmental Impacts including the estimated environmental emission for different technologies, strategies to remain in environmental compliance, etc. (5) Conformance to the proposed model contracts. The last category involves the bidder's exceptions to the power contract.

For the initial price evaluation, there are a number of approaches undertaken by utilities. For example, Hydro-Quebec uses a real levelized cost methodology for evaluating like resources to distinguish the best bids for similar projects (i.e. wind vs wind options). A common approach used by utilities for renewable resource RFPs involves a comparison of the cost of the proposal (and certain adders) against the expected market price of power. The costs included the bid price, integration costs, transmission costs and debt equivalence adjustment relative to the market price of energy and capacity. Bids are then ranked based on their market value or ratio of benefits to costs. Other utilities use more sophisticated spreadsheet (PacifiCorp first stage evaluation), production cost models (Aurora, GenTrader) or portfolio optimization models (Strategist, System Optimizer) to conduct the evaluation. The more sophisticated models are generally used for undertaking evaluation of All Source solicitations or solicitations for conventional generation options.

The selection of a short list can vary depending on the approach followed by the utility. Some utilities include specific weights for price and qualitative factors, score all bids relative to the weights, and rank bids by scores. Others rely more on price as the basis for short list selection as long as the bids meet some minimum thresholds or qualitative criteria. Others use the qualitative evaluation as a tie breaker, using more subjectivity in selecting short listed bids.

Once the short-list is determined, then the utility may either move toward negotiations with the short listed projects or develop portfolios of bids and evaluates the portfolios using either deterministic or stochastic modeling approaches, depending on the types of resources solicited. At this stage, some utilities also conduct sensitivity analysis and/or a risk assessment based on market prices, fuel prices, project costs, O&M costs, capital additions, etc. if comparing a PPA proposal against a utility self-build options or Asset Purchase and Sale option. In fact, as IE, in some of our assignments we are encouraged to identify risk assessment evaluations that we want the utility to undertake to ensure that the third-party bids are compared equally against the Asset Purchase and Sale options. Models such as PaR, Strategist and others are used at this stage of the process.

Some utilities include a pre-qualification phase in the front-end of the evaluation to ensure bidders are financially viable and possess the necessary experience to develop the proposed project. We find this process to be more valuable in cases where high capital cost and newer technologies are being considered (i.e. Integrated Gasification Combined-Cycle Options). After pre-qualification, various steps and processes included under the multi-stage approach are the same.

A competitive negotiations process is more common for renewable resources than for convention resource options given the unique characteristics or the different renewable resources that may bid. Under this approach, the utility selects a short-list and begins the negotiation process with multiple projects with the objective of maximizing the value to the utility and its customers.

19. SDG&E has proposed to use Least Cost Valuation and Portfolio Best Fit as two evaluation criteria in their RFO's. (Least Cost Valuation means how a bid's total costs compare to the other bid's total cost. Portfolio Fit means how well a bid's features match SDG&E's portfolio needs.) How would you independently verify the analysis performed by SDG&E?

Merrimack Energy is very familiar with the Least Cost Best Fit methodology used by California utilities based on our past experience serving as IE on a wide range of procurement processes for all three IOUs in California. In all solicitations for California utilities as well as in other solicitations, one of the key roles of the IE is to independently verify the results of the analysis performed by the utility. As we will discuss below, the type of process used by the IE can vary depending on the solicitation process. As a result, we identify a typical role or process followed by Merrimack Energy but note that the process could vary depending on the sophistication of the process and resources required.

In undertaking our role as IE to independently verify the analysis performed by the utility, Merrimack Energy focuses on both pre-bid receipt activities associated with a detailed understanding of the utilities modeling process and evaluation criteria and post-receipt activities associated with the evaluation of the bids themselves. Merrimack Energy has generally incorporated a process for independently verifying the analysis performed by a utility by undertaking a combination of detailed review of the utility's evaluation results combined with our own independent analysis to test the utility's results. A decision as to whether to conduct an independent assessment of least cost valuation and portfolio best fit usually depends on the complexity of the analysis. Merrimack Energy does not believe it is efficient or cost effective to replicate the utility's quantitative evaluation methodology for complex processes, such as least cost determination or modeling of projects that involve intricate operational parameters or portfolio optimization using sophisticated industry models. For example, many models and methodologies have been tested in the industry and have been vetted via regulatory processes and independent scrutiny. Instead, we have applied several other techniques and processes to better assess the quality of the utility's quantitative evaluation methodologies. For example, we have prepared "test bids" based on the information requested from bidders for a particular solicitation prior to receipt of bids and ask the utility to run the "test bids" through its own methodology to better understand the inputs and outputs of the methodology. We then review the results and meet with the utility to review the model methodology, the inputs and assumptions, and the methodology for evaluating the bids received. In our view, if we have an understanding of the methodology and process prior to receipt of bids, the bid evaluation review can be expedited.

We also frequently develop a list of questions for the utility as well as request the utility to develop a protocol describing the modeling process. We feel this combination for the most part provides an in-depth understanding of the working of the methodology and any potential analysis issues, strengths and weaknesses. Certainly, if there are issues that we uncover in the test bid process we would bring the issues to the utility's attention and rectify the shortcomings prior to bid receipt.

We also feel it is important to fully understand the rationale used by the utility for analyzing the bids themselves and interpreting the bids prior to conducting the evaluation. We usually meet with the quantitative analysis group at the utility and walk through the input assumptions and review of the bid parameters as submitted by the Participant. Finally, we have developed a series of checks and balances for reviewing and evaluating the results of the evaluation process and reasonableness of the results. For dispatchable projects, for example, we have asked the utility to develop a spreadsheet (or developed the spreadsheet ourselves based on the amount of information available) to assess the expected capacity factor of a project based on its variable fuel and O&M costs, heat rates, and operating constraints to assess whether the results appear consistent and reasonable.

We have applied all these processes in our role as IE for PG&E's 2014 Energy Storage RFO and three CHP RFO processes. Given the complexities of the evaluation process and methodologies, applying these

approaches proved valuable and effective in conducting our review of PG&E's evaluation results. In both of these processes, Merrimack Energy worked closely with PG&E to identify our requirements to be able to assess the offers submitted. In response, PG&E developed an integration model for the IE which allows the IE to review the input and output files for each offer as the basis for conducting its review of the valuation results for each offer submitted.

As Independent Evaluator for Pacific Gas & Electric's 2007 RPS RFO and SCE's 2009 Renewable RFP, we independently reviewed and commented on the Least Cost Best Fit methodology used by PG&E and SCE. For example, PG&E has traditionally used a net market value metric which compares a projects benefits to its costs from a market perspective. SCE uses a renewable premium methodology to generate the metric it uses to evaluate and rank project bids. In that role, we met with the utility project team to discuss the modeling methodology and assumptions used as well as other key inputs into the model. We met several times with the utility staff during the evaluation process and reviewed the results of the evaluation and selection of the short-list of bids. As a result, we became very familiar with the Least-cost Best-fit evaluation approach.

For the 2009, 2013 and 2014 SCE Renewable RFPs we were also required to review the bids relative to the Project Viability Calculator proposed by the Division. In that case, we completed an evaluation of all proposals received. We would recommend for future processes that only a sample of projects be evaluated as a first cut with perhaps other bids reviewed if deemed necessary.

As noted above, we have been involved in a number of competitive bidding processes as Independent Evaluator. In the vast majority of these cases, we do not conduct an independent price evaluation of each bid. However, we have developed our own spreadsheet models to test the utility results in cases required by regulations or if agreed to by the IE and utility. Instead, our approach for the market valuation assessment has generally been one of reviewing the results of the utility's analysis and "challenging" the results. This is because the utility possesses the detailed models and has developed a detailed database of its system (and the regional market in a number of cases). For a third-party to replicate the database and conduct the evaluation would be a time consuming and very expensive proposition. In addition, utilities use proprietary models developed by private companies which are not directly accessible to bidders.

For more complex bids, one process we have followed is to review the pricing formulas proposed to ensure the utility's interpretation of the bid pricing formulas and our interpretation are consistent. Depending on the number of bids received and timing we would suggest either selecting a sample of bids or all the bids and discuss the basis for the bid evaluation. In some cases, we have developed term sheets based on the proposal information to ensure consistency in interpreting the pricing mechanisms.

Merrimack Energy has developed spreadsheet model to test utility bid evaluations. For example, Hydro-Quebec requires Merrimack Energy to conduct an independent price evaluation of bids using our own spreadsheet models to ensure the bid results are consistent. For the PG&E process, we conducted a spreadsheet evaluation of a sample of bids to ensure our ranking and the ranking of PG&E was consistent..

In addition to the PG&E and SCE processes for all RFOs and RFPs in which we have served as IE, Merrimack Energy has also worked with a number of other utilities that utilize methodologies similar to the least-cost best-fit approach used by the California utilities. Arizona Public Service Company, for

example, uses a methodology that calculates a ratio of benefits to costs associated with each bid as the basis for comparison and ranking of proposals.

In addition, we have served as IE in other processes that have utilized large scale industry generation expansion or production cost models, such as the Ventyx models. For example, PacifiCorp uses the System Optimizer Capacity Expansion Model to produce an optimized portfolio of resources under various gas price and CO2 cases and Planning and Risk (PaR) Model to assess stochastic risk in its IRP and bid evaluation processes. Other utilities we have worked with including El Paso Electric and Hawaiian Electric use Ventyx Strategist Model to conduct bid evaluation to determine the least cost resource plans based on bid results and future resources. We are therefore familiar with the methodology and outputs of the models.

With respect to portfolio fit, as one example PG&E defined it in the ITRFO for which we were IE based on generation profile (generation during periods where the utility is short is preferable during periods where the utility is long) and relative degrees of firmness and flexibility (dispatchable generation is preferable to schedulable generation which is preferable to intermittent, as-available generation). Our review consisted of independently scoring the bids and then comparing them to PG&E's review to assess the reasonableness of PG&E's evaluation in some cases and in other cases simply reviewing PG&E's evaluation for reasonableness.

20. How would you determine whether or not the RFO process is transparent and fair?

There are several aspects of fairness and transparency. The first is that bidders that are similarly situated should be treated in the same manner. Hence, specific bidders should neither be given an unreasonable preference or be treated in an unreasonable adverse manner. Secondly, the RFP design, including the evaluation criteria, should be reasonably fair and obvious to all bidders, including third-party bids for power purchase agreements and utility-owned generation options (where such bids would be considered under the RFP). Another aspect of fairness is equivalent access to information – all bidders should have access to the same information at the same time. The transparency of the a competitive procurement process would be assessed based on whether the products being solicited are clearly identified and the evaluation criteria are clearly described, including the approximate weighting or ranking (if applicable or required by regulations) of the evaluation criteria. In this way, prospective bidders will have a reasonable basis to know what the utility is looking for, what characteristics are preferred, what they need to provide the utility so that their bid can be properly evaluated, and ultimately whether they will have the opportunity to be successful in the RFP process. It is not necessary, however, in our opinion, that bidders have access to utility models and inputs as well as the detailed evaluation protocol in order for the RFP process to be reasonably transparent.

In addition, transparency of the RFP process is greatly enhanced by inclusion of a Model Power Purchase Agreement and any other applicable model agreement (such as a build-own-transfer agreement and associated EPC agreement) so that the utility's desired risk allocation framework is clearly communicated to prospective bidders.

Some of the key criteria we consider when assessing if the RFO process is transparent and fair include the following:

i. Do all bidders have access to the same information at the same time?
ii. Does the process contain any undue biases favoring a specific technology, resource type, bid term, etc?
iii. Do the Protocol documents contain adequate information to allow bidders to structure their proposals to meet utility requirements?

We feel for a fair and transparent process a bidder should be able to effective assess how it can be a successful bidder. In a transparent process bidders have to know what they need to do to be a successful bidder, albeit within the parameters of the competitive solicitation process and offers of other similarly situated bidders.

21. Conflict of Interest: [NOTE TO RESPONDENTS: The existence of a conflict of interest in response to the questions listed under Section 21(a) and (b) and Section 22 shall not necessarily disqualify a Respondent. Furthermore, the threshold amounts contained in question (a)(iii)(1) and (2) below shall be considered triggers for additional inquiry as to conflict of interest and shall not be considered thresholds for disqualification.]

a) Do you have an existing contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for any other California utilities; please identify any contracts with California utilities) in the California energy markets? ii) Does any member of your proposed project team have an existing contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for any other California utility) in the California energy markets? iii) Does the business entity that would be the contracting party for the Independent Evaluator engagement, or any of its affiliates or subsidiaries or directly related companies, have an existing contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for any other California utility) (1) in an aggregate amount of more than One Million Dollars or (2) having more than 20 percent of contract revenue with any entity buying or selling energy in California, excluding work conducted as an approved Independent Evaluator (as such term is used in referenced in Decision 07-12-052)? iv) Are there any other business or personal relationships that you, a family member, your employees or your company has that could possibly influence your judgment or create an appearance of impropriety in executing the duties of the Independent Evaluator?

Other than our work as IE for all three utilities in California, no member of our proposed project team has any contractual relationship with or financial interest in any market participant in the California energy market. All of our work in California has been as IE. This ensures that we are totally independent from any special interests in the process and can operate in a fair, unbiased and effective manner in carrying out our

role as *Independent* Evaluator. Merrimack Energy has served as IE under contract with Pacific Gas & Electric Company and Southern California Edison, in addition to San Diego Gas & Electric.
(ii) No. No member of our team has a contractual relationship or financial interest in a market participant in the California energy market
(iii) No. Merrimack Energy Group, Inc. as the contracting party for the IE engagement does not have any existing contractual relationship with or financial interest in a market participant in the California energy market.
(iv) No. We have no business or personal relationships that could influence our judgment or create an appearance of impropriety in executing the duties of the Independent Evaluator.

b) For a period of five years prior to the issuance of this RFP, did you have a contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for other California utilities; please identify any contracts with California utilities) in the California energy markets? ii) For a period of five years prior to the issuance of this RFP, did any member of your proposed project team have a contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for other California utilities) in the California energy markets? iii) For a period of five years prior to the issuance of this RFP, did the business entity that would be contracting party for the Independent Evaluator engagement, or any of its affiliates or subsidiaries or directly related companies, have a contractual relationship with, or financial interest in, a market participant (including SDG&E and any other Sempra affiliate, but excluding Independent Evaluator work performed for other California utilities) (1) in an aggregate amount of more than One Million Dollars or (2) having more than 20 percent of contract revenue with any entity buying or selling energy in California, excluding work conducted as an approved Independent Evaluator (as such term is used in referenced in Decision 07-12-052) in the California energy markets?

No to all above. Merrimack Energy and members of its project team have not provided any services to market participants in California over the past five years (and more) other than serving as IE for all three California Investor-owned utilities.

22. Do you, any member of your proposed project team, the business entity that would be contracting party for the Independent Evaluator engagement, or any of its affiliates or subsidiaries or directly related companies, own or operate power facilities or otherwise participate in any manner in the California energy market?

No. All of Merrimack Energy's work in California has been as Independent Evaluator for power procurement processes. In fact, between 95-100% of our work over the past several years has either been as Independent Evaluator for power procurement processes similar to our role in California or has involved providing consulting services to utilities to either develop or implement a power procurement process. We

have no conflicts with any power generator who may compete in a competitive procurement process. No member of our project team, Merrimack Energy as the contracting entity for this engagement, or any affiliates or subsidiaries own or operate power facilities or participate in any manner in the California energy market.