Docket: **R. 12-03-014 (Track 4)**

Exhibit No.: _____

Commissioner: **Florio**

ALJ: **Gamson**

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	Rulemaking 12-03-014 (filed March 22, 2012)

TRACK 4 PREPARED TESTIMONY OF ERIC PENDERGRAFT ON BEHALF OF AES SOUTHLAND

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September 30, 2012

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Q. Please state your name and current employment.

A. My name is Eric Pendergraft. I am employed by AES Southland ("AES SL") as Vice President of Business Development. In this role I am responsible for developing and executing on AES SL's business opportunities in California, which include the redevelopment of the Huntington Beach, Alamitos and Redondo Beach electric generation station locations.

Q. What is your professional and educational background?

A. My professional and educational background is set out in Exhibit A.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to explain the viability and development schedule associated the proposed generation projects at the AES SL sites - Huntington Beach, Alamitos, and Redondo Beach generating stations. I will also explain the benefits of the AES SL projects to the system generally and the Western LA Basin in particular and why they are ideal solutions to help California meet its energy and environmental goals.

Q. Please describe the Huntington Beach, Alamitos and Redondo Beach generating stations.

A. These are three gas-fired electric generation stations that AES SL purchased from SCE in 1998. There are 12 generating units across the three sites with a combined capacity of 3,854 megawatts and two synchronous condensers. Alamitos (AL) has 6 units with a total capacity of 2,048 megawatts. Redondo Beach (RB) has 4 operating units and is capable of producing 1,356 megawatts and Huntington Beach (HB) has two units that total 450 megawatts of capacity plus the two synchronous condensing units that can produce 290 megavars of reactive power. All three facilities are located along the coast in the Western LA basin and use once-through cooling (OTC) technology. As a result, they are subject to the State Water Quality Control Board's Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy). The current compliance date for all the units is December 31, 2020. AES SL intends to comply with the policy by replacing its existing generation with modern air cooled combined cycle (CCGT) units. Although the synchronous condensers also currently use OTC, they are expected be retired prior to December 31, 2020 to enable the construction of a new CCGT.

I. PROJECT DEVELOPMENT STATUS OF THE NEW UNITS

Q. What is the development status of the new units?

A. AES SL has already spent several years working on the redevelopment of the three sites and invested a significant amount of its own capital to move the projects forward. The HB Application for Certification (AFC) was filed with the California Energy Commission (CEC) on June 27, 2012. The project will replace the existing units with two new CCGTs

capable of producing 939 megawatts, collectively. There has been relatively little opposition to the permitting effort and the Preliminary Staff Assessment (PSA) is expected this year. Based on testimony filed by the CAISO, SCE and Hala Ballouz, from EPE, HB is one of the most effective locations in the Western LA basin for mitigating transmission constraints and providing voltage support to the region. This means fewer megawatts of new generation would be required at HB to meet local reliability requirements as compared to less effective locations. The progress that has already been made on the permitting increases project viability and enables both new CCGT's to reach commercial operation within the current 2021 planning horizon, provided power purchase agreements can be obtained and approved by the end of 2015.

On November 20, 2012, the AFC for a new 496 MW CCGT at RB was filed, and the Energy Commission found the application data adequate on August 27, 2013. A decision on the RB application is expected sometime in 2015. Finally, AES SL is preparing the AL AFC for up to four new CCGTs, with an approximate total capacity of 1936 megawatts. AES SL expects to be in a position to file the permit application before the end of 2013.

If successful, the AFCs that AES SL has filed or plans to file represent nearly 3400 megawatts of highly efficient and flexible replacement capacity in the Western LA Basin. It is recognized that this is more than what is currently expected to be needed by the CAISO and SCE, but the additional permitted capacity will provide contingency and the ability to move relatively quickly to construct new gas-fired generation if additional capacity is needed beyond what is expected to be authorized in this proceeding.

Q. Multiple parties have testified about the difficulty of constructing new generation in Western Los Angeles due to the challenges associated with obtaining emission offsets in the South Coast Air Basin (SCAB) and general opposition to the construction of new generation. How will the AES SL Projects overcome these obstacles?

A. AES SL intends to obtain emissions offsets for the operation of the new units through the application of the South Coast Air Quality Management District (SCAQMD) Rule 1304, which is more fully described in the testimony of Stephen O'Kane. Rule 1304 provides the AES-SL projects with a proven path to emission reduction credits (ERCs) that has already been successfully utilized on multiple occasions in the past. The scarcity of ERCs in the SCAB will not constrain the AES -SL redevelopment projects.

In addition, in order to increase project viability and ensure that the new units can be in place within the timeframe contemplated under the OTC regulations, AES SL has been utilizing its own capital to move the permitting process for these new units forward. This includes actively working with the cities and communities in the vicinity of the planned units, as well as collaborating with labor groups and non-governmental organizations to build support for the projects. These efforts significantly increase the likelihood that the new units can be put into operation within the required timeline.

Finally, AES SL will construct the new CCGTs on brownfield sites that have been the home to power generation for over 50 years. In fact, in the case of RB there has been power generation on the site for more than a century. Brownfield sites do not face the same challenges that a greenfield project has to overcome when proposing a new power plant in an area that has not previously had one. AES SL is confident that it will be able to

successfully secure permits to build new generation at all three of its Western LA Basin sites and, with timely contracting, can have approximately 2000 megawatts in service by the summer of 2020.

II. BENEFITS OF LOCATING NEW GENERATION AT AES SL'S EXISTING SITES

Q. What are the benefits of locating new gas fired generation at AES SL's existing sites?

A. First, all three sites are in the identified area of need and at some of the most effective locations for mitigating the binding transmission constraints in the area and providing critical voltage support in the absence of the San Onofre Generating Station (SONGS). This is explained in detail in the Track 1 and Track 4 testimony of Hala Ballouz, a transmission expert with Electric Power Engineers, Inc. (EPE).

Constructing replacement generation at the existing AES SL sites is also likely to be the most economical solution and environmentally superior compared to greenfield development or new transmission. As shown in SCE's Track 4 testimony, new gas-fired generation was the least expensive alternative (SCE Track 4 Testimony at p. 43, 45), with the fewest greenhouse gas emissions of all the options studied. Brownfield development allows the reuse of existing infrastructure and does not require the construction of new transmission, gas or water lines, thus reducing the cost of constructing a new power plant. Furthermore, the redevelopment of the AES-SL sites satisfies multiple needs at the same time. These include providing local reliability, voltage support, flexibility to integrate renewables and reducing or eliminating the amount of new transmission that may be required.

In summary, the AES SL sites:

- Have already initiated permitting in order to reduce development uncertainty;
- Minimize the amount of new megawatts that need to be constructed due to their effectiveness at satisfying local reliability requirements;
- Can be built more economically since they are brownfield developments;
- Serve multiple needs at the same time, thus minimizing the additional resources that may be needed for voltage support, renewable integration and local reliability.

III. MARKET POWER

Q. At the prehearing conference in this matter, ALJ Gamson asked whether the Commission should consider methods to address potential market power in the SONGS area for gas-fired resources. What is your view on the need to address potential market power?

A. It is abundantly clear that the system needs Western LA Basin generation and certain geographical locations within the Western LA Basin provide more benefits than others. Furthermore, there is a strong argument that constructing new capacity at existing generation sites is the best solution given there is an existing path to air compliance, it is likely the most cost effective as discussed previously and it provides the greatest amount of benefits to the system. While it would be extremely unwise for any entity to assume they were participating in a solicitation without competitors, it is understood that the factors noted above may limit the potential universe of parties that can participate in a procurement effort. For these reasons, AES SL fully supports the concept of bilaterally negotiated, cost-of-service based contracts as one way to mitigate market power concerns and ensure just and reasonable electricity rates.

IV. CONTINGENCY PLANS

Q. At the prehearing conference in this matter, ALJ Gamson asked whether there should be any contingency plans in place in case expected levels of certain resources do not materialize in a timely manner. What is your view on the need for contingency plans?

A. The Commission has chosen to make very optimistic assumptions regarding both the quantity of preferred resources that will be procured and their ability to satisfy local reliability requirements. There is also tremendous uncertainty associated with the amount of economic growth, the ability to implement transmission solutions and the retirement schedule of existing units. Because the potential consequences of not having sufficient resources in place are so significant and the typical timeline for developing conventional gas-fired power plants is lengthy, the Commission should include contingency plans in its track 4 procurement authorization. With respect to the type of contingency plans that should be considered, the Commission should rely on independent developers to provide the contingency options rather than having the Investor Owned Utilities pursue these alternatives using ratepayer money.

Q. Are you familiar with SCE's Track 4 testimony regarding their proposed contingency plans for gas-fired generation?

A. Yes, I am. As I understand it, SCE proposed two different contingency options for new gas fired generation in the event that preferred resources do not appear or the proposed Mesa Loop-In transmission project is either not permitted or is delayed. The first proposed contingency option would involve SCE using ratepayer money to develop "construction ready" sites that are fully permitted for gas-fired generation, near SCE's Johanna and Santiago substations. In the event additional gas-fired generation was needed, SCE would run a competitive solicitation for the construction, ownership and operation of the new generation. SCE has stated it has no desire to own the generation

itself, but does intend to seek cost recovery for its development of these "contingent" sites.

Under the second proposed contingency option, SCE would seek to enter into option contracts with third party developers in order to allow new gas fired generation to be constructed more quickly in the event it is needed. If the generation was not ulti mately required, the option could be terminated by SCE, in exchange for a termination payment to the developer.

It should be noted that AES SL is already several years into its development effort, as described earlier in the testimony, and it is pursuing permits for more capacity than may ultimately be needed in this procurement cycle. AES SL is certainly willing to consider entering into option contracts for any of it existing sites. As I explained below, however, AES SL does not believe that it is appropriate for SCE to pursue its own permits.

Q. In your opinion, is it necessary for SCE to pursue its own permits and interconnection agreements?

A. There is absolutely no evidence that SCE needs to initiate its own project development efforts or that it could do it more cost effectively than third parties. Independent developers are already putting their own capital at risk to pursue projects and it is a near certainty that they will continue to do so. Authorizing SCE to use ratepayer funds to secure permits and interconnection agreements would not represent an effective use of those funds and would skew the competitive landscape since no other participant has the ability to develop projects without risk of recovering their investment.

As described above, AES SL has already begun extensive efforts to permit generation at its existing OTC sites and other developers are doing so as well. Contingency options should be pursued with these entities and not by authorizing utility development. It is not clear how SCE intends to satisfy air compliance regulations that require emission offsets. If SCE anticipates future rule changes, then those rule changes would certainly apply to independent developers as well, and those developers would be more than capable of developing these additional backstop procurement options. Finally, in order for SCE to pursue permits and interconnection agreements, under current regulations they would need to specify the exact technology and equipment that is permitted, which would eliminate other potential alternatives to meet the same need. For instance, if SCE chose to permit LMS 100 peakers manufactured by General Electric, they would eliminate other potentially cost effective and environmentally superior alternatives from meeting the need. It may be that advanced, quick-start combined-cycle generation, or other options that have a shorter permitting timeline, such as energy storage, are better solutions. The competitive process should be allowed to determine what resources should be utilized in the event that SCE's plans concerning preferred resources fail to materialize.

Q. Does this conclude your testimony?

A. Yes.

Exhibit A

Statement of Qualifications

ERIC PENDERGRAFT, Vice President of Business Development, AES Southland

PROFESSIONAL EXPERIENCE:

THE AES CORPORATION

Vice President of Business Development, AES Southland

Responsible for AES Southland's business development activities in California, including the redevelopment of its 3700 megawatt natural-gas fired fleet.

Regional Director, WECC and President, AES Southland

Complete profit and loss responsibility for 3700 megawatts of conventional thermal generation and 233 megawatts of wind businesses in the western United States.

President, AES Southland

Responsible for the safety, environmental, financial and operating performance of more than 4100 megawatts and 14 gas-fired generating units in the greater Los Angeles area.

Vice President, AES Pacific

Led the US Pacific region for AES, which included businesses in California (4,260 megawatts natural gas) and Hawaii (190 megwatts coal).

Plant Manager, AES Huntington Beach

Complete responsibility for an 880 megawatt, 4-unit natural gas fired power plant with 45 people.

Vice President of Regional Operations, AES Eletropaulo

Managed a geographical region of the electric utility serving the city of Sao Paulo in Brazil. Region had over 1 million customers and responsibilities included customer service, new market development, operations and maintenance and electrical network expansion.

Control Room Team Leader, AES Alamitos

Led a team of control operators and instrument and electrical technicians responsible for running two 480 MW, gas-fired generating units. Also managed the commercial relationship with Williams Energy, Marketing and Trading, our tolling agreement counterparty.

Asset Manager, AES Southland

Represented AES Southland's interests during the two-year transition period after Southern California Edison's divestiture of the Southland assets to AES.

SOUTHERN CALIFORNIA EDISON

Maintenance Manager, Alamitos Generating Station

Led a 16 person mechanical maintenance team that supported 2083 megawatts of gas-fired electricity generation at a 7-unit power plant.

Shift Supervisor, Alamitos Generating Station

Supervised an 8-person team control operators and plant equipment operators responsible for the safe, reliable and efficient operation of over 2000 megawatts of generation.

Various Engineering Positions, Alamitos Generating Station

Served as a general plant engineer and a performance engineer providing technical support and coordinating the plant's condition monitoring program.

EXERGETIC SYSTEMS

Project Engineer

Developed and installed a real-time performance monitoring system for electricity generating stations. Wrote a turbine cycle simulation software program that predicted plant performance.

EDUCATION:

B.S., Mechanical Engineering, University of California at Santa Barbara	1988
University of Virginia, Darden Graduate School of Business, Leaders Program	2008