

Application No.: 07-05-_____

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Witness: Michael M. Schneider

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Exhibit No. SDGE-4

SAN DIEGO GAS & ELECTRIC COMPANY
PREPARED DIRECT TESTIMONY OF
MICHAEL M. SCHNEIDER

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

May 8, 2007

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1 **PREPARED DIRECT TESTIMONY OF**

2 **MICHAEL M. SCHNEIDER**

3 **ON BEHALF OF SDG&E**

4 **I. PURPOSE**

5 The purpose of my testimony is to provide an overview of San Diego Gas & Electric
6 Company's (SDG&E's) business and regulatory risks and an analysis of risks vis-à-vis a proxy
7 group of similar companies, in support of the recommended authorized rate of return, including
8 return on equity (ROE). Further, I outline our proposed cost recovery mechanism to address
9 debt equivalence and Financial Accounting Standards Board (FASB) Interpretation Number
10 46(R) (FIN 46(R)).

11 SDG&E's business and regulatory risk can be grouped into three distinct categories:
12 (1) investment risk, (2) energy market uncertainty and power procurement risk, and (3)
13 regulatory and legislation uncertainty. In addition to providing an overview of SDG&E's
14 changing business structure which inherently contains more risk, I assess business and regulatory
15 risks across a proxy group of utility companies to define SDG&E's risk profile as compared to
16 the group.

17 Finally, I address SDG&E's equity rebalancing proposal which mitigates the negative
18 impacts that certain power purchase agreements (PPAs) and business arrangements have on
19 SDG&E's creditworthiness.¹ This proposal is critical to protect SDG&E's creditworthiness
20 given the increased PPAs that SDG&E will enter into as a result of replacing the California
21 Department of Water Resources (CDWR) energy contracts and meeting the State-wide

¹ This proposal was adopted by the CPUC in its approval of Calpine. It was reintroduced in SDG&E's long term procurement plan and later moved to this proceeding.

1 renewable standard. The combination of these events will increase SDG&E's PPA portfolio.
2 Additionally, FIN46(R) accounting rules require SDG&E to consolidate financial statements of
3 certain counterparties. The proposed equity rebalancing mechanism mitigates negative impacts
4 on SDG&E's credit ratios caused by consolidation under current accounting rules and rating
5 agency treatment of PPAs.

6 The risks and uncertainties presented below are interrelated and should be considered in
7 the aggregate when determining an appropriate ROE for SDG&E. The testimony shows that
8 SDG&E is exposed to considerable and varied risks, similar to the other California electric
9 investor owned utilities (IOUs).

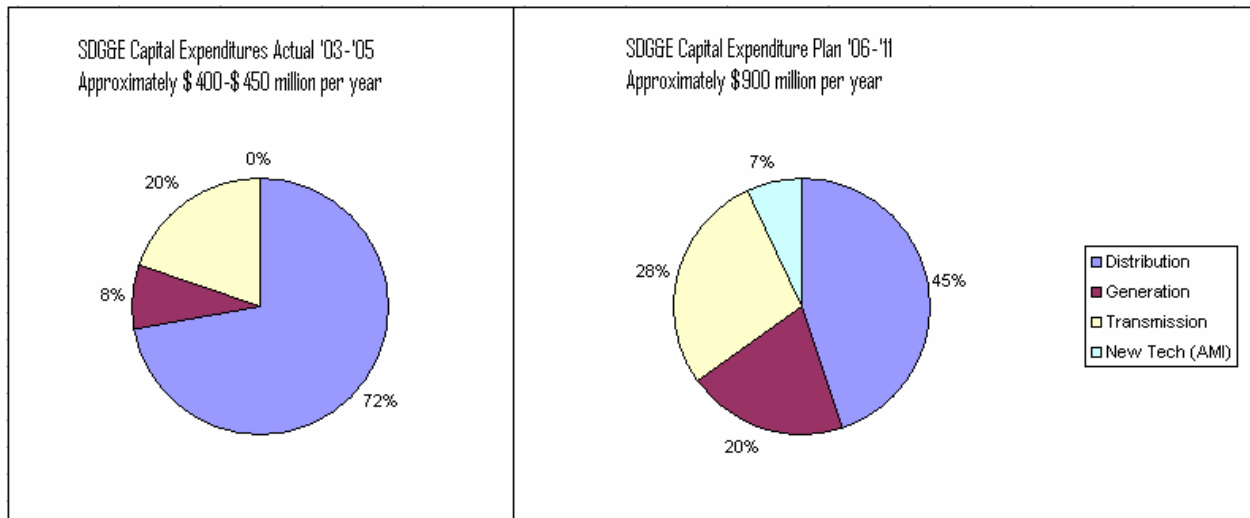
10 **II. BUSINESS STRUCTURE AND INVESTMENT RISK FACTORS**

11 **A. Business Structure and Investment Risk**

12 SDG&E is in the midst of a major capital investment program which includes significant
13 and necessary investments in utility infrastructure. Over the next five years, SDG&E plans to
14 spend approximately \$4 billion in capital investments, which includes approximately \$2.5
15 billion in CPUC-jurisdictional investments. This capital investment program which averages
16 about \$900 million per year is more than double SDG&E's historic investment level of between
17 \$400 and \$450 million and is necessary to improve and expand its infrastructure, and expand its
18 services to better serve a growing customer base. This expansion of services includes reentering
19 the electric generation power plant business, making transmission investments necessary to
20 relieve congestion and provide needed transmission access into San Diego, investing in
21 renewables and other supply and demand resources to ensure the future energy needs are met in
22 the San Diego region, and investing in new technologies like the Advanced Metering
23 Infrastructure (AMI). This comprehensive investment program will not only help increase

1 energy reliability and support customer growth, but also help mitigate future cost increases for
2 customers.

3 SDG&E is a full service provider and has moved back into an integrated utility business
4 structure similar to pre-electric industry restructuring with an investment scale and mix as
5 presented in the chart below.



8 **1. Near-Term Generation Investments**

9 SDG&E was ordered to sell off most of its generation assets and in 1999, substantially
10 exited the electric generation business with the sale of its Encina and South Bay power plants.
11 SDG&E reentered the generation business in 2006, purchasing the 46 megawatt (MW) Miramar
12 Energy Peaking Facility and the 550MW combined cycle power plant at the Palomar Energy
13 Center. This combined \$528 million investment required a \$200 million equity infusion from
14 SDG&E's parent company and was more than SDG&E's entire 2004 capital spending level,
15 exemplifying new risks to SDG&E in magnitude of investment.

16 Entering into the generation business brings with it substantially different risks than those
17 realized in transmission and distribution (T&D), which must be adequately reflected in
18 SDG&E's overall cost of capital. These include: risk associated with operating modern and

1 complex technology, the uncertainty of how the Commission will ensure full recovery of capital
2 and operating costs, and the discrete and substantial risk related to generation investments of this
3 size. For example, one minor event can cause expensive repairs and substantial downtime, and
4 the associated replacement power costs.

5 A combination of baseload and peaking generation is expected to be acquired under a
6 combination of PPAs and direct ownership, the former negatively impacting SDG&E's credit
7 ratios, and the latter increasing SDG&E's operational responsibilities. The new Miramar and
8 Palomar generation facilities represent modern technologies and differ significantly from the
9 Encina and South Bay steam plants built in the 1960s. SDG&E has two operational groups, one
10 for the Palomar Energy Center and one responsible to operate the peaking facilities. While
11 deriving synergy with its operation of the Miramar Energy Facility, maintaining and operating
12 the peaking facilities is a different risk profile than operating the large baseload Palomar facility.
13 Peaking facilities do not run very often, yet when called upon, must be highly reliable despite
14 having very stringent and complex environmental emission controls. Pursuant to the recently
15 announced settlement agreement with the State of California, SDG&E will have the option to
16 acquire the Sempra El Dorado 480 MW combined cycle plant in Boulder City, Nevada in 2011.
17 This facility adds additional risk from two perspectives. First, it creates another regulatory risk
18 since it is under the State of Nevada's jurisdiction. Second, it employs dry cooling. While much
19 of the facility is similar in design as the Palomar Energy Center, dry cooling offers an additional
20 challenge since dry cooling is not the industry standard for these facilities.

21 SDG&E has entered into a ten year agreement with Calpine to procure energy from the
22 Otay Mesa Energy Center (OMEC) facility under a PPA beginning in 2009, after which time
23 (year 2019) SDG&E may purchase the plant subject to the terms of a put or call arrangement.

1 OMEC is expected to begin construction of the 573 MW plant mid-year 2007 with an expected
2 completion date of May 2009. Based on the signed contract, SDG&E will purchase all 573 MW
3 of power produced at a fixed PPA price. The Commission has previously approved FIN46(R)
4 cost recovery similar to the one recommended in this proceeding to mitigate the credit exposure
5 impact related to this agreement. At the end of the ten year period, OMEC could exercise its put
6 option to sell the plant to SDG&E for a fixed price, or SDG&E could exercise its call option to
7 purchase the plant from OMEC for a fixed price. By entering into such an agreement, SDG&E
8 has shielded its customers from the construction risks of building such a plant, and the
9 potentially high market price of purchasing a similar plant in 2019. This facility is of the same
10 configuration as the Palomar Energy Center, but like El Dorado, will be dry cooled.

11 **2. Transmission Investments**

12 A significant portion of the renewable resources SDG&E currently forecasts it will need
13 to meet its renewable portfolio standards (RPS) requirement are contingent on transmission
14 expansion. This adds uncertainty to SDG&E's ability to meet its RPS goal since much of the
15 identified renewable resources are located in remote areas with little or no existing transmission
16 infrastructure. Accessing these resources will require major transmission upgrades or additions.

17 Because SDG&E does not anticipate that in-service area renewable resources alone will
18 be adequate to meet its RPS goal, SDG&E will need to procure a significant portion of its
19 renewable resources from other areas in California. Given SDG&E's current import capability
20 and the high level of use of this capability by other market participants, SDG&E's ability to
21 access out of area resources at an acceptable price will require an expansion of import capability.
22 By enhancing the ability to import power into the San Diego load center and tapping renewable
23 potential in northern and eastern portions of Southern California, the overall cost of meeting the

1 State's renewable resource goals should be reduced. The scale of the infrastructure required to
2 meet the State's renewable resource goal, and short timetable allowed to meet those goals add to
3 the uncertainty and risk of the required capital investment.

4 SDG&E plans to invest \$1.3 to \$2.0 billion in Federal Energy Regulatory Commission
5 (FERC) jurisdictional transmission investments in the near future, including Sunrise Power Link
6 and the Otay Power Loop. These investments are necessary to ensure adequate transmission
7 capacity so that SDG&E can meet its RPS goals. These other required investments will be
8 competing with distribution and generation related projects in SDG&E's capital budgeting
9 process. In planning its capital budgets, SDG&E must give priority to projects determined
10 necessary to meet its obligation to serve. It must allocate capital to essential projects while
11 maintaining its CPUC-approved capital structure over time. In the case of Palomar, for example,
12 dividends were suspended to help achieve a balanced capital structure after the investment. With
13 many essential projects competing for limited financial and human capital, and the huge
14 expected capital outlay in the near future, the financial markets will view SDG&E as facing
15 increased risk.

16 **3. Nuclear Risk-San Onofre Nuclear Generating Station**

17 SDG&E's investment risk also includes continued minority ownership of San Onofre
18 Nuclear Generating Station (SONGS). Southern California Edison Company (SCE), the
19 majority owner and operating agent has requested CPUC authority to invest approximately \$926
20 million in a steam generation replacement project (SGRP). SDG&E has agreed to participate in
21 SGRP, but recognizes significant risks associated with the investment due to the cost caps
22 adopted by the CPUC. Specifically, there is considerable construction and cost control risk as
23 the upgrade requires moving 600 ton steam generators via barge from Long Beach, up the beach,

1 and into the containment structures through holes cut in their concrete walls - a process that has
2 never been done before. The prospect of being required to participate in future capital projects
3 represents significant cost management risks for SDG&E over which it has little control. In the
4 SGRP proceeding, SDG&E requested that SCE's authorized ROE of 11.60% be applied to
5 SDG&E's investment in SONGS to reflect this additional risk. In approving SDG&E's
6 participation in the project, the CPUC indicated a preference to address this request in this cost
7 of capital proceeding.

8 **4. Resource Portfolio Standard (RPS) Goals and Renewables**

9 In addition to SDG&E's current investments in electric generation, SDG&E also plans to
10 acquire significant additional renewable resources through a combination of PPAs and potential
11 ownership in renewable resource projects, including wind, geothermal, solar and other
12 technologies. Currently, state law requires that SDG&E meet a 20% renewable resource mix by
13 2010. In order to achieve the 20% goal by 2010, SDG&E will need to procure approximately
14 3,515 gigawatt hours (GWh) of renewable energy. Currently, SDG&E has under contract
15 through 2010 approximately 2,552 GWh of renewable energy, which is 14.5% of the baseline
16 retail energy supply needs for 2010. Only 8.4%, or 1,085 GWh, are currently in operation and
17 the additional 6.1% are planned for operation by 2010. Achieving a 20% goal by 2010 requires
18 SDG&E to procure an additional 963 GWh of renewable energy. If it fails to meet the 20% RPS
19 requirement by 2010, SDG&E could be subject to penalties of \$50/MWh up to a maximum
20 amount of \$25 million per year. These penalties would be borne by SDG&E's shareholders and
21 pose a risk considering the challenges associated with transmission constraints and uncertainty
22 surrounding emerging technologies.

1 For much of the planned renewables capacity already under contract, project construction
2 has not begun and construction financing has not been secured. Many of these projects are at
3 risk of not being completed in time to meet our 2010 RPS goals. Having to secure significantly
4 more renewable resources than SDG&E presently has under contract entails significantly more
5 risk. Unlike traditional large-scale generation projects, renewable resource projects often involve
6 smaller counterparties that are less creditworthy, imposing greater project risk on SDG&E.
7 Renewable resource projects can often involve new or emerging technologies, which are not
8 fully proven or reliable. This causes SDG&E to incur additional risks related to potential
9 nonperformance or inadequate performance. For example, Pacific Wind, which was expected to
10 deliver 603 GWh, was recently delayed until 2011, forcing SDG&E to acquire an additional 3%
11 toward the 2010 goal. Other renewable resource contracts have delivered below expectations as
12 well.

13 In addition, a significant portion of the renewable resources SDG&E currently forecasts it
14 will need to meet its RPS requirements are contingent on transmission expansion. At best, this
15 adds to the uncertainty of SDG&E meeting its RPS goals. At worst, this raises the probability of
16 not being able to meet the RPS goals. These risks arise from the fact that much of the identified
17 renewable resource potential for SDG&E's service area is located in remote areas with minimal
18 or no existing transmission infrastructure. Accessing these resources will require major
19 transmission upgrades or additions, and involve difficult siting, licensing and construction
20 activities. These activities increase SDG&E's risk related to project costs, completion and
21 performance. The scale of the infrastructure that will be required to meet the State's renewable
22 resource goals, and the fact that these goals must be met in less than three years, adds to the
23 uncertainty and risk of the required capital investments.

1 **5. Advanced Metering Infrastructure**

2 In (D.)07-04-043, the Commission authorized SDG&E to spend over \$570 million in
3 AMI technology over the next five years. Over 2.3 million electric and gas meters will be
4 replaced or retrofitted with solid-state, communicating metrology. This investment in emerging
5 technology represents significant performance, installation, and operating risks to SDG&E.

6 AMI will impact all customers and almost all business processes at SDG&E. AMI
7 requires significant planning and start-up phases prior to meter deployment. Key start-up
8 activities include business process redesign, significant personnel management, and installation
9 of a two-way communication network and information technology infrastructure. AMI requires
10 redesign of many crucial business processes including meter workflow management, customer
11 services, billing and revenue collections, and meter procurement, potentially disrupting those
12 processes. This adds both cost management and revenue collection risks.

13 **6. Comparability to other California Electric IOUs**

14 SDG&E faces the same regulatory environment, competes in the same capital markets,
15 faces comparable procurement challenges, and has similar planned investments in emerging and
16 unproven technologies as compared to the other California IOUs. Therefore, SDG&E should
17 receive an authorized ROE commensurate with the other California electric IOUs.

18 Representatives of SDG&E have been asked directly by equity investors why its authorized ROE
19 is much lower than the other California electric IOUs, indicating that SDG&E has a similar risk
20 profile.

1 **B. Energy Market Uncertainty**

2 **1. Electricity Market Design**

3 There are a number of unresolved issues regarding electricity market redesign that
4 represent a potential for increased or uncertain costs and risks to SDG&E’s customers and
5 certain of SDG&E’s assets. One such area includes the repeated delays and uncertainty
6 surrounding the California Independent System Operator’s (ISO) proposed market redesign, the
7 Market Redesign Technology Update (MRTU). The eventual resolution of these market design
8 issues will impact the value of assets held by market participants in ways that are difficult to
9 predict and also result in new and uncertain cost allocations. Additional risks include uncertain
10 standards for meeting resource adequacy requirements and the potential market for merchant
11 generation capacity.

12 **C. Regulatory and Legislative Risks**

13 Regulatory risks encompass the uncertainty of various future regulatory actions. In this
14 regard, SDG&E faces uncertainty related to its decisions made prior to receiving clear decision-
15 making authority from regulatory and or legislation bodies. One form of this risk is the lag
16 between the time SDG&E begins development of long-lead energy projects (including
17 generation, transmission rights-of-way, and AMI) and when it receives related Commission
18 approval. SDG&E also faces potential uncertainty associated with multiple agency oversight
19 and decision-making authority. Finally, regulatory risks include uncertainty of government
20 interaction in energy policy making and implementation issues, including outstanding legislative
21 actions that would change, expand or eliminate current energy laws.

1 **1. Direct Access (DA)**

2 On April 16, 2007, the Alliance for Retail Energy Markets, *et al.*, filed a Petition in
3 Docket P.06-12-002 requesting that the Commission commence a rulemaking or open an
4 investigation to adopt a regulation and establish rules with respect to how and when the Direct
5 Access DA retail market should be reopened in California. The petition seeks to reopen DA in
6 California by January 1, 2008. There is considerable uncertainty concerning whether the
7 Commission has the requisite statutory authority to reinstate DA on its own initiative at this time
8 or whether additional legislation would be required. The petition also acknowledges the need to
9 resolve a variety of additional issues to ensure the viability of a DA retail market including
10 determining an appropriate market structure, rules regarding switching between competitive
11 service and default service, and the application of cost responsibility for recovery of bonds and
12 public purpose programs.

13 On April 24, 2007, Commissioner Peevey issued a proposed decision (PD), in Docket
14 P.06-12-002, granting the petition for a rulemaking and instituting a rulemaking to determine
15 whether, when, or how DA should be restored. In the PD, Commissioner Peevey indicated that
16 the rulemaking proceeding will be separated into three phases. Phase 1 will address the
17 Commission’s legal authority to lift the DA suspension. Phase 2 will address the public policy
18 merits and prerequisites for lifting the DA suspension; and, Phase 3 will address the rules
19 applicable to a reinstatement of the DA program.

20 Should DA be reinstated without first attempting to correct remaining market flaws that
21 caused the energy crisis, SDG&E would face an increased possibility of stranded cost with
22 uncertain recovery. Pursuant to the PD, SDG&E could be required to take on a portion of the
23 existing CDWR energy contracts further increasing SDG&E’s debt equivalence level imputed by
24 rating agencies.

1 **2. Environmental Regulations**

2 SDG&E faces rising costs related to environmental regulation in the form of traditional
3 regulation of air and water quality, and similar environmental issues, as well as climate change
4 and greenhouse gas regulation.

5 Annually, dozens of new laws are proposed relating to the environment. These proposals
6 have covered a range of areas including defining new environmental violations, increasing
7 penalties for violations, increasing reporting and notice requirements, and making more stringent
8 the requirements necessary to comply with environmental requirements. As these laws and
9 regulations increase, the work needed to ensure continued compliance with the spirit and letter of
10 environmental laws must increase accordingly. It also increases the cost of new technology
11 needed to maintain compliance. And, it increases the potential for third party litigation alleging
12 SDG&E’s implication in claimed environmental violations.

13 Regulation relating to climate change is only now evolving, but it is likely to have far-
14 reaching impacts on SDG&E’s business decisions and obligations. Additionally, the Climate
15 Action Team's recent report on sources of greenhouse gas reductions in California has already
16 foreshadowed the potential that utilities will be asked to reduce greenhouse gas emissions by a
17 disproportionate share. Moreover, since there are some sectors of the economy that are harder to
18 reach, it may be that the State will ask other sectors to pick up an additional share of greenhouse
19 gas reduction burdens. It is difficult to estimate the scope of change to normal business activities
20 that new climate change requirements could impose on SDG&E. However, the impacts will
21 spread across SDG&E, not just in resource acquisition, energy efficiency, and demand reduction,
22 but also in a range of operational areas, as well as in ongoing reporting and participation in a
23 range of regulatory rulemaking processes to define the best way to manage greenhouse gas

1 emissions. Further, SDG&E faces not only State greenhouse gas regulation, but will likely face
2 federal greenhouse gas regulation, which may not be consistent in scope.

3 **3. Future Regulatory Actions**

4 SDG&E has made necessary commitments to generation, including renewable resources,
5 before the Commission has decided key issues, the most important of which is the customer base
6 to be served by these resources. For SDG&E's most recent generation purchases, it has been
7 necessary for SDG&E to commit capital and move forward with investment prior to final
8 Commission approval of the revenue requirements for capital and O&M, and the cost recovery
9 framework to apply to these investments. While the Commission has worked diligently to
10 address outstanding issues in electricity regulation, the need to make commitments before all key
11 elements of the regulatory environment are decided increases the risk that SDG&E may not
12 recover its full costs.

13 As described above, SDG&E is facing large and increasing investment requirements for
14 AMI, renewable energy, generation overall, and transmission to deliver the energy to load and
15 assure the reliability of electricity service. To meet Commission goals for demand response,
16 renewable energy, resource adequacy, and to ensure reliable electric service to our customers,
17 SDG&E has had to move forward with commitments on a very large scale and scope relative to
18 the size of the company. The regulatory approval lag between related parts of the delivery system
19 could leave some investments at risk. For example, Sunrise Power Link (SRP) is necessary to
20 import much of the renewable energy required under the 2010 RPS goals, and SDG&E is making
21 significant commitments to renewable energy without approval. Construction is beginning on
22 renewable generation where transmission capacity may not be available. The result is that over
23 the next several years SDG&E is entering a new business environment, with a large and material

1 portion of its ratebase and cash flow commitments in areas where regulatory policy is not yet
2 fully developed. Accordingly, it is difficult for SDG&E and the investment community to assess
3 the risk of adverse regulatory outcomes. For example, it is not clear how the Commission might
4 address poor or mediocre performance by renewable developers that result in higher energy costs
5 and/or lower than promised energy output.

6 **4. Multiple Agency Oversight**

7 There are pending changes to market structure, resource adequacy requirements, and
8 tradability of generation capacity and renewable energy credits. Multiple agencies are involved
9 in these determinations: ISO, Commission, California Energy Commission (CEC), FERC, and in
10 some cases the legislature. Action by one agency could create complications or conflicts with the
11 standards of another agency, with the utilities caught in the middle. Even coordinated action may
12 substantially impact the costs and risk to portfolio positions, and may impact the value of
13 electricity contracts and assets.

14 **5. Political and Policy Uncertainty**

15 The utility business requires sound and stable energy policy supporting long-term
16 investments and decisions necessary to promote stable, low cost energy and infrastructure. An
17 unstable market environment creates significant uncertainty regarding the recovery of
18 investments and areas of focus necessary to promote a long-term energy marketplace. The
19 energy crisis and the State's response to it created exactly such an environment.

20 California continues to struggle to implement post-energy crisis energy strategies. The
21 State continues to wait for the implementation of market reform by the ISO. It continues to
22 explore the development of capacity markets and structures that could readily accommodate load
23 migration – something the State failed to even consider when it first implemented DA. While

1 California has shown interest in re-opening competitive retail markets, and has already opened
2 them for Community Choice Aggregation, the crucial prerequisites – working wholesale markets
3 and ensuring resource adequacy without stranding costs with load migration – are not yet in
4 place. The growing pains of incomplete post-energy crisis policies combined with pressures to
5 evolve those energy markets create significant uncertainty for the State.

6 The political environment that exists in California has magnified this uncertainty. As
7 legislative policy makers develop new approaches for supporting various policies, the State has
8 applied those policies unevenly to energy suppliers. For example, the State has had an RPS for
9 years, imposing obligations on certain retail electricity suppliers to increase the level of
10 renewable energy in their portfolios. However, that RPS does not apply to all retail sellers in the
11 State – it explicitly excludes municipal utilities from RPS obligations. Likewise, the State has
12 numerous laws favoring certain energy-related public policies, and has new proposals each year.
13 However, many of these policies also do not apply uniformly to all retail suppliers – e.g., the Self
14 Generation Incentive Program, endorsed by AB970 several years ago, Resource Adequacy
15 requirements under Public Utilities Code Section 380, DA, net metering, AB1X rate caps,
16 California Alternate Rates for Energy (CARE) programs, etc.

17 The consequence of this uneven application of the obligations of state policies to
18 different retail suppliers is to create inadvertent incentives to seek means to bypass the costs
19 associated with those obligations. This creates an unnecessarily unstable environment for
20 making future investment and business decisions. This was one of the major problems with the
21 structures that led to the energy crisis, and it is a lingering problem post-energy crisis.

1 **D. Business Risk Summary**
2

3 SDG&E is engaged in an aggressive capital investment program by investing in modern
4 and in some cases emerging technologies to continue to meet the growing energy demands in the
5 San Diego region. SDG&E will be investing at unprecedented levels and in a varied portfolio
6 of generation, T&D and emerging technologies.

7 SDG&E must plan to meets its RPS goal of 20% renewable sources by 2010. To meet its
8 RPS goal, SDG&E plans to acquire substantial additional renewable resources, which often
9 involve new and emerging technologies exposing SDG&E to risks of non performance. In
10 addition, renewable resources are typically located in remote areas far away from urban load
11 centers. This fact will necessitate new transmission infrastructure be planned and built by 2010.
12 SDG&E plans to acquire these renewable resources through a combination of PPAs and potential
13 ownership in renewable resource projects. Further, SDG&E is planning to invest significant
14 capital in the SONGS SGRP project with substantial construction risks, and AMI with sizable
15 technology risks.

16 Finally, SDG&E continues to face an uncertain regulatory and legislative environment.
17 DA is gaining momentum in the California regulatory arena, and increasingly stringent
18 environmental laws are being regularly proposed and passed. Multiple agency oversight and
19 continued state energy policy uncertainty will add risk to SDG&E.

20 **III. PROXY GROUP RISK ANALYSIS**

21 In his accompanying testimony, Company witness Gary Hayes determined that based
22 purely on a series of equity-return analyses, SDG&E should earn an 11.60% ROE. By
23 interpreting Mr. Hayes' results in light of various business risks with which I am familiar and
24 bringing to bear certain data not found in Mr. Hayes' study, I am able to corroborate that a fair

1 and reasonable ROE for SDG&E cannot possibly be any lower than the recommended 11.60%.
2 The following analyses compare SDG&E with the proxy group across a variety of publicly
3 available and widely accepted risk metrics, whenever sufficient data was available to make a
4 reasonable comparison.

5 **A. State Regulatory Environment**

6 Two state regulatory ranking systems were evaluated to compare SDG&E's regulatory
7 environment with those of the proxy group: Value Line's and Regulatory Research Associates'
8 (RRA). (See Appendix A.)

9 While RRA recently upgraded its view of the California regulatory environment from
10 Average/2 to Average/1 (slightly less risky than average), Value Line continues to rank
11 California as Below Average. Taken in combination, SDG&E faces average regulatory risk as
12 compared to the proxy group; this clearly supports an ROE at the midpoint of Mr. Hayes' zone
13 of reasonableness.

14 **B. RPS Goals**

15 As discussed above, California's approaching RPS goals pose significant and varied risks
16 to SDG&E. Of the 22 states that currently have RPS goals, California's are the most aggressive.

17 To evaluate the impact of RPS goals on expected returns, the proxy group presented by
18 Mr. Hayes was segmented based on pending RPS goals. (See appendix B).

19 The proxy group was segmented by those companies facing RPS goals in any state of
20 operation versus those not facing any RPS goals. The resulting capital weighted average ROE²

² Capital weighted average refers to the average ROE weighted by the market capitalization.

1 for those companies facing any RPS goals is 11.80%, 160 basis points higher than for the
2 segment facing no RPS goals. This suggests that SDG&E's ROE lies in the middle to upper
3 zone of Mr. Hayes' range of results.

4 **C. Relative Scale of Capital Expenditures**

5 SDG&E is engaging in an unprecedented capital spending program, as discussed above.
6 In 2006, SDG&E had negative free cash flow, defined as cash flow from or used by operations
7 and investment, of \$670 MM, representing outflows equal to 17.7% of its total book
8 capitalization. (See appendix C). This negative trend is expected to continue into the near
9 future, as SDG&E continues its planned investments program.

10 In the aggregate, the proxy group's 2006 free cash inflows of positive \$10.2 billion
11 represent approximately 2.3% of its total book capitalization. Only 17 of the 44 proxy
12 companies had free cash outflows in 2006, with SDG&E having the largest as a percent of its
13 total book capitalization. These findings suggest that SDG&E's ROE lies in the middle to upper
14 zone of Mr. Hayes' range of results.

15 **IV. COST RECOVERY PROPOSAL FOR MITIGATING ADVERSE CREDIT** 16 **IMPACTS OF DEBT EQUIVALENCE AND FIN 46(R)**

17 In this section, SDG&E proposes a mechanism to calculate and recover costs associated
18 with mitigating the adverse credit impacts of both debt equivalence and FIN 46(R) arising from
19 future PPA contracts. The cost recovery mechanism for mitigating the impact of debt
20 equivalence is based upon the direction provided in D.04-12-048 (Ordering Paragraph No. 26 f),
21 "Debt equivalency will be considered when evaluating PPA bids," and will be updated using
22 S&P's current calculation methodology. In addition, SDG&E provides an overview of the

1 accounting and financial reporting requirements associated with FIN 46(R) financial
2 consolidation of certain PPA counterparties,^{3/} and presents SDG&E's cost recovery proposal for
3 rebalancing its consolidated capital structure to the authorized structure. SDG&E initially made
4 these cost recovery proposals in its Long Term Procurement Plan (LTPP) proceeding, but on
5 May 2, 2007, Administrative Law Judge (ALJ) Brown granted Division of Ratepayer Advocates
6 (DRA) motion to strike that portion of the testimony and instructed SDG&E to address its
7 proposals in this proceeding.

8 AB 57 states that, "the commission may not approve a feature or mechanism for an
9 electrical corporation if it finds that the feature or mechanism would impair the restoration of an
10 electrical corporation's creditworthiness or would lead to the deterioration of an electrical
11 corporation's creditworthiness." Therefore, SDG&E requests that the Commission adopt the
12 cost recovery proposals presented below to provide a mechanism to ensure timely recovery of
13 the costs associated with the incremental equity capital required (1) to mitigate the adverse credit
14 impacts of PPA debt equivalence; or (2) to rebalance SDG&E's capital structure to the
15 authorized capital structure to mitigate any adverse credit impacts of FIN 46(R) consolidation.
16 This mechanism should be effective as of the date of this application.

17 **A. Debt Equivalence**

18 **1. Definition and Applicability**

19 Rating agencies include long-term fixed obligations such as PPAs in their credit risk
20 analysis in order to conduct a meaningful comparison between utilities that build generation and

^{3/} Credit rating agencies consider either FIN 46(R) consolidated financials or assess debt equivalents associated with PPAs, not both.

1 utilities that enter into PPAs. These obligations are treated as additional debt during the financial
2 ratio assessment.

3 As part of its credit review, S&P evaluates three ratios as critical components of a
4 company's credit profile: (1) Funds From Operations (FFO) / Debt, which measures how many
5 years it would take for a company to repay all of its debt with internally generated cash flows;
6 (2) FFO / Interest Expense, which measures the "headroom" a company has in fulfilling its
7 current interest payments; and (3) Debt / Capitalization, which is a financial leverage indicator
8 and measures how much cushion equity provides in fulfilling a company's total debt obligations.
9 Debt equivalence negatively impacts all three ratios. Thus, unless mitigated, a PPA will
10 negatively impact SDG&E's credit profile evidenced by degraded credit ratios. On November 1,
11 2006, S&P published refinements to its methodology for calculating debt equivalence associated
12 with PPAs, as described in further detail below.

13 **2. S&P Methodology for Calculating Debt Equivalence**

14 S&P determines the debt equivalence that it will add to a utility's balance sheet as a result
15 of entering into a PPA by calculating the net present value (NPV) of the annual capacity
16 payments over the life of a contract. Where the annual capacity payments are specified in the
17 contract, S&P employs that information to calculate debt equivalence. Where the PPA contract
18 payments are unspecified or stated as a single, all-in energy price, S&P uses a proxy capacity
19 charge, stated in dollars per kW/yr, and multiplies that charge by the kW under contract. S&P
20 determines the proxy capacity charge, which is based on the prevailing cost to develop and
21 finance a combustion turbine, considered the marginal unit of energy. S&P discounts the
22 remaining capacity payments using the average cost of debt to determine the NPV of the
23 remaining fixed payments. The NPV of the remaining fixed payments is multiplied by a risk

1 factor assigned by S&P to determine the debt equivalence associated with a PPA. S&P assigns
2 different risk factors to represent its view of the likelihood that the utility may not fully recover
3 PPA costs on a timely basis. For purposes of evaluating SDG&E’s PPA contracts, S&P uses a
4 risk factor of 25%.

5 **3. Cost Recovery for Debt Equivalence**

6 In D.05-12-043, the Commission stated that “we must ensure that the utilities’ adopted
7 equity ratios are sufficient to maintain reasonable credit ratings and to attract capital” (p. 4) and
8 that SDG&E’s currently authorized capital structure is “...balanced, intended to maintain an
9 investment grade rating, to attract capital, consistent with the law, in the public interest...” (pp.
10 11-12). Although the Commission recognized in D.04-12-048 that debt equivalence imposes a
11 real cost on the utilities and should be taken into consideration in the economic evaluation of
12 bids, up to this point the Commission has not prescribed an explicit methodology for the utilities
13 to evaluate and recoup costs associated with mitigating the adverse impact of debt equivalence
14 that ensures timely cost recovery.

15 As SDG&E continuous to operate under its MICAM, it is appropriate that the
16 Commission address debt equivalence mitigation for a PPA at the time the PPA is presented to
17 the Commission for approval. This will allow for timely review and implementation of
18 appropriate mitigation measures.

19 This proposal is consistent with the legislative direction to the Commission expressed in
20 AB 57 that a utility be ensured “timely recovery of prospective procurement costs” through
21 “upfront standards and criteria by which the acceptability and eligibility for rate recovery of a
22 proposed procurement transaction will be known by the electrical corporation prior to execution
23 of the transaction” and be protected from any feature or mechanism that “would lead to a

1 deterioration of an electrical corporation's creditworthiness." Waiting until SDG&E's next Cost
2 of Capital (COC) proceeding to implement credit mitigation will not ensure in most cases
3 SDG&E's ability to recover its costs associated with approved PPAs in a timely manner,
4 especially when the next COC proceeding is significantly beyond the approval date of a new
5 contract.

6 Therefore, SDG&E strongly recommends that the revenue requirements associated with
7 debt equivalency mitigation as set forth herein be adopted for contracts submitted to the CPUC
8 for approval as of May 8, 2007, which would allow use of the most recent S&P methodology for
9 calculating debt equivalence. By adding equity in an amount equal to the authorized equity
10 factor (proposed to remain 49%) of the imputed debt equivalent and reducing debt by the same
11 amount, SDG&E will effectively resume the authorized capital structure for credit purposes.
12 Using the authorized cost of common equity (proposed 11.60%), factoring in the gross-up for
13 income tax expense and the authorized cost of debt (proposed 5.55%), SDG&E can calculate the
14 revenue requirements associated with this effective rebalancing. In the event of changes to the
15 authorized capital structure and cost of capital, SDG&E would substitute the future authorized
16 levels in the debt equivalence mitigation calculation. Appendix D describes the calculation of
17 revenue requirements associated with debt equivalence mitigation and an illustration calculation
18 is shown in Appendix E.

19 **B. FIN 46(R)**

20 **1. Definition and Applicability of FIN 46(R)**

21 The FASB issued FIN 46(R), *Consolidation of Variable Interest Entities, an*
22 *Interpretation of ARB No. 51*, in 2003 to provide guidance on the identification of and financial
23 reporting for entities over which control is achieved through means other than voting rights.

1 Such entities are known as variable-interest entities (VIEs). In accordance with the requirements
2 of FIN 46(R), the financial statements of a power provider that meets the definition of a VIE
3 needs to be consolidated with the financial statements of the power purchaser if it is determined
4 that the power purchaser is the primary beneficiary.

5 In accordance with FIN 46(R), an entity is considered a VIE if any of the following
6 factors are present:

- 7 • The equity investors lack the risks or rewards of ownership (a cap or floor exists
8 on expected losses or gains); or
- 9 • The equity investors have not invested enough for the entity to stand on its own
10 without additional support.

11 In such cases, FIN 46(R) requires that the “primary beneficiary” of a VIE’s activities
12 consolidate the financial statements of the VIE when issuing the primary beneficiary’s financial
13 statements. The primary beneficiary is defined as the enterprise that absorbs the majority of the
14 negative and positive variability (expected losses and expected residual returns) in a VIE.

15 If an entity is a VIE, then it is determined whether SDG&E is the primary beneficiary.
16 FIN 46(R) defines the primary beneficiary as the party that (1) absorbs a majority of the expected
17 losses; (2) receives a majority of the expected residual returns; or (3) both. In other words, the
18 Primary Beneficiary absorbs a majority of the negative or positive variability in cash flows
19 generated by a VIE.

20 It is the general interpretation by independent accounting firms that Paragraph B13 of
21 FIN 46(R) stipulates that a contract to purchase the entire output of a single-plant entity at
22 something other than a fixed price constitutes a “variable interest” in that entity. Most entities
23 with which SDG&E negotiates procurement contracts are VIEs because PPAs typically involve

1 purchasing the entire output of a plant over a number of years, often via a tolling arrangement
2 where SDG&E absorbs the risk and responsibility for procuring fuel.

3 In addition, SDG&E has found through its experience in negotiating PPAs that most of
4 these VIEs are highly leveraged, and can be unwilling to negotiate lower debt to equity ratios
5 without increasing the contract prices.

6 **2. Financial Consolidation Impacts and Costs**

7 If SDG&E is determined to be the primary beneficiary of a VIE, SDG&E will be required
8 to consolidate the financial statements of that entity when filing annual and quarterly reports with
9 the Security and Exchange Commission (SEC). The effective date of the consolidation may be
10 as early as the date when the new agreement becomes effective, enforceable and no longer
11 subject to any conditions precedent to performance.

12 As a result of this requirement to consolidate the financial statements of an entity with the
13 financial statements of SDG&E, the total assets, liabilities and minority interest on SDG&E's
14 consolidated balance sheet are expected to increase. Minority interest will be shown as a new
15 line item reflecting the entity's equity amount, which will change over time based on operating
16 results and the amount of investment capital at risk. SDG&E is required to reflect all changes in
17 the entity's assets and liabilities on its balance sheet on an ongoing basis when reporting its
18 financial position on a consolidated basis.

19 SDG&E's capital structure on a consolidated basis would be misaligned with its
20 authorized capital structure after consolidating an entity that is highly leveraged into its financial
21 statements. To support SDG&E's creditworthiness and realign its capital structure to the
22 authorized one, SDG&E would need to increase its equity to offset the impact of the additional
23 debt. Rebalancing its capital structure to the authorized structure would result in additional costs

1 to be recovered in rates. The Commission recognized this requirement in D.06-09-021, and
2 authorized SDG&E to “recover the costs associated with the equity rebalancing SDG&E
3 deems necessary due to filing and reporting requirements of FIN 46(R) and the consolidation of
4 OMEC financial data with SDG&E’s quarterly and annual financial statements to the Securities
5 and Exchange Commission” (Ordering Paragraph No. 4, pages 18-19). SDG&E’s cost recovery
6 proposal applicable to FIN 46(R) is illustrated in Appendix F.

7 **3. Contractual Mitigation Option**

8 For contracts subject to FIN 46(R) consolidation, SDG&E plans to pursue contractual
9 mitigation measures to minimize negative impacts to SDG&E’s balance sheet. If a counterparty
10 agrees to finance its project in a manner consistent with SDG&E’s capital structure, FIN 46(R)
11 impacts will be immaterial because the minority interest is treated as part of capital by the rating
12 agencies. Consequently, SDG&E plans to request contractual limits on the percentage and/or
13 amount of leverage. If a counterparty cannot lower its leverage, then SDG&E would request
14 recovery of the additional costs due to consolidation at the time the contract is submitted for
15 Commission approval.

16 **4. Cost Recovery Proposal for FIN 46(R)**

17 The illustrative calculation in Appendix G shows that SDG&E, while treating minority
18 interest as equity, needs to further increase equity to offset the additional debt in order to
19 rebalance its capital structure to the authorized structure. By adding equity in an amount equal to
20 the authorized equity factor (proposed to remain 49%) and reducing debt by the same amount,
21 SDG&E will resume the authorized capital structure. Using the authorized cost of common
22 equity (proposed 11.60%), factoring in the gross-up for income tax expense and the authorized

1 cost of debt (proposed 5.55%), SDG&E can calculate the revenue requirements associated with
2 rebalancing. In the event of changes to the authorized capital structure and cost of capital,
3 SDG&E would substitute the future authorized levels in the FIN 46(R) mitigation revenue
4 requirement calculation.

5 SDG&E may be required to consolidate an entity's financial statements with its own
6 financial statements as early as the date when the new contractual agreements become effective,
7 enforceable and no longer subject to any conditions precedent to performance. As a result, as the
8 counterparties ramp up their debt levels during the plant construction period, SDG&E
9 simultaneously would require additional equity to mitigate any negative credit impacts
10 associated with the additional debt amounts reported in its consolidated financial statements. In
11 that event, SDG&E proposes to calculate and accrue the costs associated with rebalancing its
12 capital structure during the construction period and recover those costs once the PPA term
13 begins. SDG&E is not proposing to recover the associated costs from customers until
14 construction of the plant is complete and energy begins to flow under the terms of the contract.
15 SDG&E believes that it is just and reasonable to recover rebalancing costs in rates once these
16 projects go into service and begin to benefit customers. SDG&E requests that the Commission
17 authorize SDG&E to include revenue requirements associated with rebalancing its capital
18 structure to the authorized capital structure as a result of mitigating FIN 46(R) consolidation for
19 contracts submitted to the CPUC for approval as of the date of this application.

20 It is imperative that SDG&E preserve its credit profile and maintain a solid balance sheet
21 to support planned infrastructure growth while entering into renewable PPAs to reach its RPS
22 goals, replacing CDWR contracts due to expire, and securing contracts to meet projected growth
23 in energy demand. As SDG&E continues to enter into PPAs, the potential for consolidation

1 under FIN 46(R) imposes significant, growing risk of degrading SDG&E's credit ratios. The
2 Commission approved SDG&E's ratemaking proposal for costs associated with rebalancing its
3 capital structure due to FIN 46(R) consolidation in D.06-09-021. The Commission did not,
4 however, authorize this mitigation measure for all future projects, which exposes SDG&E to cost
5 recovery risk when negotiating future transactions. Therefore, SDG&E proposes to include the
6 revenue requirement associated with mitigating FIN 46(R) consolidation in the advice letter
7 filings for approval of PPA contracts and described herein in order to ensure timely and equitable
8 assurance of cost recovery and preserve SDG&E's credit profile.

9 **V. SUMMARY**

10 SDG&E is necessarily engaged in an aggressive capital investment program by investing
11 in modern and in some cases emerging technologies to continue to meet the growing energy
12 demands in the San Diego region. To ensure it can meet its customer service and regulatory
13 requirements now and into the future, SDG&E must continue to make significant investments in
14 utility infrastructure, new businesses, and emerging technologies. It must do this in a dynamic
15 and changing market and an uncertain regulatory environment.

16 SDG&E recently reentered the electric generation business, and plans for large
17 investments in generation capacity. Reentering the generation business brings with it
18 substantially different risks than T&D, including operating unfamiliar modern technology, and
19 uncertainty of cost recovery, energy policy and SDG&E's retail base.

20 While it grows its generation assets, SDG&E must plan to meets its RPS goal of 20%
21 renewable sources by 2010. To meets its RPS goal, SDG&E plans to acquire substantial
22 additional renewable resources, which often involve new and emerging technologies exposing
23 SDG&E to risk of non performance. In addition, renewable resources are typically located in
24 remote areas far away from urban load centers. This fact will necessitate new transmission

1 infrastructure be planned and built by 2010. SDG&E plans to acquire these renewable resources
2 through a combination of PPAs and potential ownership in renewable resource projects.

3 Obligations under PPAs often extend out several years, and rating agencies calculate debt
4 equivalence associated with this future obligation. Entering into PPAs therefore degrades
5 SDG&E's credit profile. When a PPA requires consolidation under FIN 46(R), SDG&E must
6 consolidate the financial statements of the power provider with its own financials. This can
7 further degrade SDG&E's credit profile and expose SDG&E to the cost of increasing equity to
8 mitigate the adverse effects on its balance sheet.

9 While making large infrastructure investments, SDG&E will continue to invest in other
10 large and risky projects. SDG&E is planning to invest significant capital in the SONGS SGRP
11 project with substantial construction risks, and AMI with sizable technology risks.

12 The size and number of essential projects SDG&E is planning is unprecedented. SDG&E
13 faces a challenging capital planning process which requires the utility to allocate capital to
14 essential projects while maintaining a CPUC approved capital structure.

15 The business and regulatory risks that have been identified in my testimony justify a
16 commensurate return be provided to investors. I strongly support the 11.60% ROE proposed in
17 this filing.

18 This concludes my prepared direct testimony.

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1 **VI. STATEMENT OF QUALIFICATIONS**

2 My name is Michael M. Schneider. I am employed by SDG&E as the Treasurer and
3 Director of Finance for SDG&E and Southern California Gas Company. My business address is
4 8330 Century Park Court, San Diego, California 92123-1530.

5 I received a Bachelor of Economics degree from the University of Arizona in 1987. I
6 received a Masters of Business Administration from George Mason University with an emphasis
7 in finance and accounting in 1990. I have been employed by SDG&E since 1992. I have held
8 various positions throughout my 15 years with SDG&E, including Regulatory Case Manager,
9 Pricing Manager, Director of Business Analysis, and Director of Business Planning and Budgets.

10 In my current capacity as Treasurer and Director of Finance, I am responsible for the
11 utilities' 5-year financial plan, financial standards, financial and economic analysis, revenue
12 requirements for major capital investments, and cash flow forecasting. I have previously testified
13 before both the Federal Energy Regulatory Commission and California Public Utilities
14 Commission.

1 **Appendix A – State Regulatory Environment**

2 **A. State Regulatory Environment**

3 Two state regulatory ranking systems were evaluated to compare SDG&E’s regulatory
4 environment with those of the proxy group: Value Line’s and Regulatory Research Associates’
5 (RRA). (See Appendix A.)

6 While RRA recently upgraded its view of the California regulatory environment from
7 Average/2 to Average/1 (slightly less risky than average), Value Line continues to rank
8 California as Below Average. Taken in combination, SDG&E faces average regulatory risk as
9 compared to the proxy group; this clearly supports an ROE at the midpoint of Mr. Hayes’ zone
10 of reasonableness.

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1 Appendix A – State Regulatory Environment

Company Name	Value Line State Regulatory Ranking State of Operation	State	Score	Score
San Diego Gas & Electric	CA	CA	Below Average	3
Exelon Corporation	IL,PA	IL	Below Average	3
Northeast Utilities	CT,MA,NH	CT	Below Average	3
DTE Energy Company	MI	MI	Below Average	3
Edison International	CA	CA	Below Average	3
PG&E Corporation	CA	CA	Below Average	3
Southern California Gas Company	CA	CA	Below Average	3
CenterPoint Energy, Inc.		TX	Average	2
Ameren Corporation	IL,MO	MO	Average	2
Cleco Corporation	LA	LA	Average	2
Entergy Corporation	AR,LA,MS,TX	LA	Average	2
Great Plains Energy, Inc.	KS	MO	Average	2
Pinnacle West Capital Corporation	AZ,NV	AZ	Average	2
PNM Resources, Inc.	NM	NM	Average	2
PPL Corporation	MD,PA	PA	Average	2
UniSource Energy Corporation	AZ	AZ	Average	2
Westar Energy, Inc.	KS,OK	KS	Average	2
ALLETE, Inc.	MN,WI	MN	Average	2
Consolidated Edison, Inc.	NJ,NY,PA	NY	Average	2
Constellation Energy Group, Inc.	MD	MD	Average	2
Energy East Corporation	CT,MA,ME,NH,NY	ME	Average	2
OGE Energy Corp.	AR,OK,TX	OK	Average	2
Otter Tail Corporation	MN,ND,SD	MN	Average	2
Pepco Holdings, Inc.		DC	Average	2
Public Service Enterprise Group Incorporated	NJ	NJ	Average	2
Xcel Energy, Inc.	AZ,CO,KS,MI,MN,ND,NM,OK,SD,TX,WI,WY	MN	Average	2
Avista Corporation	CA,ID,MT,OR,WA	WA	Average	2
SCANA Corporation	SC	SC	Average	2
Southern Company	AL,FL,GA,MS	GA	Average	2
Dominion Resources, Inc.	LA,NC,OH,PA,VA,WV	VA	Average	2
Progress Energy, Inc.	FL,NC,SC	NC	Average	2
IDACORP, Inc.	ID	ID	Above Average	1
American Electric Power Company, Inc.	AR,IN,KY,LA,MI,OH,OK,TN,TX,VA,WV	OH	Above Average	1
Black Hills Corporation	MT,SD,WY	SD	Above Average	1
DPL Inc.	OH	OH	Above Average	1
FirstEnergy Corp.	NJ,NY,OH,PA	OH	Above Average	1
Hawaiian Electric Industries, Inc.	HI	HI	Above Average	1
NSTAR	MA	MA	Above Average	1
Alliant Energy Corporation	IA,IL,MN,WI	WI	Above Average	1
FPL Group, Inc.	FL	FL	Above Average	1
NiSource Inc.	IN,MA,MD,ME,NH,OH	IN	Above Average	1
TECO Energy, Inc.	FL	FL	Above Average	1
Vectren Corporation	IN,OH	IN	Above Average	1
Wisconsin Energy Corporation	MI,WI	WI	Above Average	1
Sorted in order of most risky to least risky				
			Mean	1.8
			Median	2.0

The “Numeric Score” column is a translation of the Value Line Score, as defined below:

Below Average = 3 Average = 2 Above Average = 1

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Appendix A – State Regulatory Environment (Continued)

Company Name	RRA State Regulatory Ranking		Score	Numeric Score
	State of Operation	State		
Exelon Corporation	IL,PA	IL	Below Average / 2	2.75
CenterPoint Energy, Inc.		TX	Below Average / 1	2.50
Ameren Corporation	IL,MO	MO	Average / 3	2.25
Cleco Corporation	LA	LA	Average / 3	2.25
Entergy Corporation	AR,LA,MS,TX	LA	Average / 3	2.25
Great Plains Energy, Inc.	KS	MO	Average / 3	2.25
IDACORP, Inc.	ID	ID	Average / 3	2.25
Northeast Utilities	CT,MA,NH	CT	Average / 3	2.25
Pinnacle West Capital Corporation	AZ,NV	AZ	Average / 3	2.25
PNM Resources, Inc.	NM	NM	Average / 3	2.25
PPL Corporation	MD,PA	PA	Average / 3	2.25
UniSource Energy Corporation	AZ	AZ	Average / 3	2.25
Westar Energy, Inc.	KS,OK	KS	Average / 3	2.25
ALLETE, Inc.	MN,WI	MN	Average / 2	2.00
American Electric Power Company, Inc.	AR,IN,KY,LA,MI,OH,OK,TN,VA,WV	OH	Average / 2	2.00
Black Hills Corporation	MT,SD,WY	SD	Average / 2	2.00
Consolidated Edison, Inc.	NJ,NY,PA	NY	Average / 2	2.00
Constellation Energy Group, Inc.	MD	MD	Average / 2	2.00
DPL Inc.	OH	OH	Average / 2	2.00
DTE Energy Company	MI	MI	Average / 2	2.00
Energy East Corporation	CT,MA,ME,NH,NY	ME	Average / 2	2.00
FirstEnergy Corp.	NJ,NY,OH,PA	OH	Average / 2	2.00
Hawaiian Electric Industries, Inc.	HI	HI	Average / 2	2.00
OGE Energy Corp.	AR,OK,TX	OK	Average / 2	2.00
Otter Tail Corporation	MN,ND,SD	MN	Average / 2	2.00
Pepco Holdings, Inc.		DC	Average / 2	2.00
Public Service Enterprise Group Incorporated	NJ	NJ	Average / 2	2.00
Xcel Energy, Inc.	AZ,CO,KS,MI,MN,ND,NM,OK,SD,TX,WI,WY	MN	Average / 2	2.00
San Diego Gas & Electric	CA	CA	Average / 1	1.75
Avista Corporation	CA,ID,MT,OR,WA	WA	Average / 1	1.75
Edison International	CA	CA	Average / 1	1.75
NSTAR	MA	MA	Average / 1	1.75
PG&E Corporation	CA	CA	Average / 1	1.75
SCANA Corporation	SC	SC	Average / 1	1.75
Southern Company	AL,FL,GA,MS	GA	Average / 1	1.75
Dominion Resources, Inc.	LA,NC,OH,PA,VA,WV	VA	Above Average / 3	1.50
Alliant Energy Corporation	IA,IL,MN,WI	WI	Above Average / 2	1.25
FPL Group, Inc.	FL	FL	Above Average / 2	1.25
NiSource Inc.	IN,MA,MD,ME,NH,OH	IN	Above Average / 2	1.25
Progress Energy, Inc.	FL,NC,SC	NC	Above Average / 2	1.25
TECO Energy, Inc.	FL	FL	Above Average / 2	1.25
Vectren Corporation	IN,OH	IN	Above Average / 2	1.25
Wisconsin Energy Corporation	MI,WI	WI	Above Average / 2	1.25
Sorted in order of most risky to least risky				
			Mean	1.92
			Median	2.00

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RRA maintains three principal rating categories for regulatory climates: Above Average, Average, and Below Average. Within the principal rating categories, the numbers 1, 2, and 3 indicate relative position. The designation 1 indicates a stronger rating; 2, a mid-range rating; and, 3, a weaker rating. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by the jurisdiction’s utilities. The evaluation reflects RRA’s assessment of the probable level and quality of the earnings to be realized by the state’s utilities as a result of regulatory, legislative, and court actions.

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The “Numeric Score” column is a translation of the RRA Score, as defined below:

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Below Average/3 = 3.00 Average/3 = 2.25 Above Average/3 = 1.50

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Below Average/2 = 2.75 Average/2 = 2.00 Above Average/2 = 1.25

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Below Average/1 = 2.50 Average/1 = 1.75 Above Average/1 = 1.00

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Appendix A – State Regulatory Environment (Continued)

Company Name	Composite State Regulatory Ranking		State	Numeric Score
	State of Operation			
Exelon Corporation	IL,PA		IL	2.88
Northeast Utilities	CT,MA,NH		CT	2.63
DTE Energy Company	MI		MI	2.50
San Diego Gas & Electric	CA		CA	2.38
Edison International	CA		CA	2.38
PG&E Corporation	CA		CA	2.38
CenterPoint Energy, Inc.			TX	2.25
Ameren Corporation	IL,MO		MO	2.13
Cleco Corporation	LA		LA	2.13
Entergy Corporation	AR,LA,MS,TX		LA	2.13
Great Plains Energy, Inc.	KS		MO	2.13
Pinnacle West Capital Corporation	AZ,NV		AZ	2.13
PNM Resources, Inc.	NM		NM	2.13
PPL Corporation	MD,PA		PA	2.13
UniSource Energy Corporation	AZ		AZ	2.13
Westar Energy, Inc.	KS,OK		KS	2.13
ALLETE, Inc.	MN,WI		MN	2.00
Consolidated Edison, Inc.	NJ,NY,PA		NY	2.00
Constellation Energy Group, Inc.	MD		MD	2.00
Energy East Corporation	CT,MA,ME,NH,NY		ME	2.00
OGE Energy Corp.	AR,OK,TX		OK	2.00
Otter Tail Corporation	MN,ND,SD		MN	2.00
Pepco Holdings, Inc.			DC	2.00
Public Service Enterprise Group Incorporated	NJ		NJ	2.00
Xcel Energy, Inc.	AZ,CO,KS,MI,MN,ND,NM,OK,SD,TX,WI,WY		MN	2.00
Avista Corporation	CA,ID,MT,OR,WA		WA	1.88
SCANA Corporation	SC		SC	1.88
Southern Company	AL,FL,GA,MS		GA	1.88
Dominion Resources, Inc.	LA,NC,OH,PA,VA,WV		VA	1.75
IDACORP, Inc.	ID		ID	1.63
Progress Energy, Inc.	FL,NC,SC		NC	1.63
American Electric Power Company, Inc.	AR,IN,KY,LA,MI,OH,OK,TN,TX,VA,WV		OH	1.50
Black Hills Corporation	MT,SD,WY		SD	1.50
DPL Inc.	OH		OH	1.50
FirstEnergy Corp.	NJ,NY,OH,PA		OH	1.50
Hawaiian Electric Industries, Inc.	HI		HI	1.50
NSTAR	MA		MA	1.38
Alliant Energy Corporation	IA,IL,MN,WI		WI	1.13
FPL Group, Inc.	FL		FL	1.13
NiSource Inc.	IN,MA,MD,ME,NH,OH		IN	1.13
TECO Energy, Inc.	FL		FL	1.13
Vectren Corporation	IN,OH		IN	1.13
Wisconsin Energy Corporation	MI,WI		WI	1.13
Sorted in order of most risky to least risky			Mean	1.85
			Mediar	2.00

Numeric Score is the average of the RRA Numeric Score and the Value Line Numeric Score.

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1 **Appendix B – Renewable Standards – RPS Goals**

2 **B. RPS Goals**

3 As discussed above, California’s approaching RPS goals pose significant and varied risks
4 to SDG&E. Of the 22 states that currently have RPS goals, California’s are the most aggressive.

5 To evaluate the impact of RPS goals on expected returns, the proxy group presented by
6 Mr. Hayes was segmented based on pending RPS goals. (See appendix B).

7 The proxy group was segmented by those companies facing RPS goals in any state of
8 operation versus those not facing any RPS goals. The resulting capital weighted average ROE
9 for those companies facing any RPS goals is 11.80%, 160 basis points higher than for the
10 segment facing no RPS goals. This suggests that SDG&E’s ROE lies in the middle to upper
11 zone of Mr. Hayes’ range of results.

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1 Appendix B – Renewable Standards – RPS Goals

Company Name	State	Goal	Date	Goal	Date	Company Name	State	Goal	Date	Goal	Date
ALLETE, Inc.	MN	10%	2015			NiSource Inc.	IN				
	WI	10%	2015				MA	4%	2009		
Alliant Energy Corporation	IA	10%	2010				MD				*
	IL						ME	30%	2007		*
	MN	10%	2015				NH				
	WI	10%	2015				OH				
Ameren Corporation	NONE					Northeast Utilities	CT	10%	2010	14%	2010
American Electric Power Company, Inc.	TX						MA	4%	2009		
Avista Corporation	CA	20%	2010	33%	2020		NH				
	ID					NSTAR	MA	4%	2009		
	MT	5%	2008	10%	2010	OGE Energy Corp.	TX				*
	OR					Otter Tail Corporation	MN	10%	2015		*
	WA						ND				
Black Hills Corporation	MT	5%	2008	10%	2010	Otter Tail Corporation	NONE				
	SD					Pepco Holdings, Inc.	DC	11%	2022		
	WY					PG&E Corporation	CA	20%	2010	33%	2020
CenterPoint Energy, Inc.	TX					Pinnacle West Capital Corporation	AZ	15%	2025		
Cleco Corporation	LA						NV			20%	2015
Consolidated Edison, Inc.	NJ	23%	2021			PNM Resources, Inc.	NM	10%	2011		
	NY	25%	2013			PPL Corporation	MD				*
	PA	18%	2020				PA	18%	2020		
Constellation Energy Group, Inc.	MD					Progress Energy, Inc.	NONE				
Dominion Resources, Inc.	LA					Public Service Enterprise Group Incorporated	NJ	23%	2021		
	NC					San Diego Gas & Electric	CA	20%	2010	33%	2020
	OH					SCANA Corporation	SC				
	PA	18%	2020			Sempra Energy	CA	20%	2010	33%	2020
	VA					Southern California Gas Company	CA	20%	2010	33%	2020
Dominion Resources, Inc.	NONE					Southern Company	NONE				
DPL Inc.	NONE					TECO Energy, Inc.	FL				
DTE Energy Company	NONE					UniSource Energy Corporation	AZ	15%	2025		
Edison International	CA	20%	2010	33%	2020	Vectren Corporation	NONE				
Energy East Corporation	CT	10%	2010	14%	2010	Westar Energy, Inc.	NONE				
	MA	4%	2009			Wisconsin Energy Corporation	MI				
	ME	30%	2007				WI	10%	2015		
	NH						AZ	15%	2025		
	NY	25%	2013			Xcel Energy, Inc.	CO	3%	2007	10%	2015
Entergy Corporation	TX						KS				
Exelon Corporation	IL						MI				
	PA	18%	2020				MN	10%	2015		*
FirstEnergy Corp.	NJ	23%	2021				ND				
	NY	25%	2013				NM	10%	2011		
	OH						OK				
	PA	18%	2020				SD				
FPL Group, Inc.	FL						TX				*
Great Plains Energy, Inc.	KS						WI	10%	2015		
Hawaiian Electric Industries, Inc.	HI	15%	2015	20%	2020		WY				
IDACORP, Inc.	ID										

* - State Notes

TX satisfied through any renewable technology, but the most recent

MD and municipal solid waste-to-energy projects. Maryland P

NV Each major utility's resource mix must include eligible renewable energy resources starting at 6% and rising by 3% every two years to 20% by 2015.

MN Only a good faith effort required

IA 105 mW Shared between 2 IOUs; 2010 (In legislature)

ME No penalty for non-compliance

None Company has no RPS goals in any state of operation

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Appendix B – Renewable Standards (Continued)

Proxy Segment facing any RPS Goals

Company	MVE	ROE**	RPS Goal*
AEP	19.00	12.84%	TRUE
Allete	1.40	11.41%	TRUE
Alliant Energy	5.30	11.84%	TRUE
Avista Corporation	1.20	12.22%	TRUE
Black Hills Corporation	1.20	12.20%	TRUE
Centerpoint Energy	5.70	15.78%	TRUE
CLECO Corporation	1.50	15.15%	TRUE
Consolidated Edison	12.60	9.84%	TRUE
Constellation Energy Group	14.00	12.25%	TRUE
Dominion Resources	30.00	12.50%	TRUE
Edison International	14.80	12.61%	TRUE
Energy East Corp	3.70	10.95%	TRUE
Energy Corporation	21.10	11.15%	TRUE
Exelon Corp	43.00	11.34%	TRUE
FirstEnergy	20.00	10.65%	TRUE
FPL Group	24.20	11.35%	TRUE
Great Plains Energy	2.60	10.56%	TRUE
Hawaiian Electric	2.20	10.40%	TRUE
Idacorp	1.60	11.43%	TRUE
NiSource	6.60	11.07%	TRUE
Northeast Utilities	4.50	12.84%	TRUE
NSTAR	3.70	10.43%	TRUE
OGE Energy	3.50	11.15%	TRUE
Pepco Holdings	5.10	11.13%	TRUE
PG&E Corporation	17.20	12.93%	TRUE
Pinnacle West	4.90	11.91%	TRUE
PNM Resources	2.10	11.93%	TRUE
PPL Corporation	14.00	11.53%	TRUE
Progress Energy	12.70	11.15%	TRUE
PSEG	18.80	12.92%	TRUE
Scana Corporation	4.90	9.94%	TRUE
Sempra Energy	15.00	11.45%	TRUE
TECO Energy	3.50	12.29%	TRUE
Unisource Energy	1.30	11.50%	TRUE
Wisconsin Energy	5.70	10.82%	TRUE
Xcel Energy	9.50	13.44%	TRUE
Cap Weighted proxy segment average		11.80%	

Proxy Segment not facing RPS Goals

Company	MVE	ROE	RPS Goal*
Ameren	10.40	10.71%	FALSE
DPL	3.40	13.84%	FALSE
DTE Energy	8.40	10.81%	FALSE
Otter Tail Corporation	1.00	10.10%	FALSE
Southern Corporation	27.00	9.25%	FALSE
Vectren Corporation	2.20	10.51%	FALSE
Westar Energy	2.40	11.17%	FALSE
Cap Weighted proxy segment average		10.20%	

* TRUE if a company faces an RPS goals in any state of operation.

** ROE is the average ROE of all methods employed by Mr. Hayes.

1 **Appendix C – Free Cash flow to Total Book Capitalization Relative Scale of Capital**
2 **Expenditures**
3 2006

4 **C. Relative Scale of Capital Expenditures**

5 SDG&E is engaging in an unprecedented capital spending program, as discussed above.

6 In 2006, SDG&E had negative free cash flow, defined as cash flow from or used by operations
7 and investment, of \$670 MM, representing outflows equal to 17.7% of its total book
8 capitalization. (See appendix C). This negative trend is expected to continue into the near
9 future, as SDG&E continues its planned investments program.

10 In the aggregate, the proxy group's 2006 free cash inflows of positive \$10.2 billion
11 represent approximately 2.3% of its total book capitalization. Only 17 of the 44 proxy
12 companies had free cash outflows in 2006, with SDG&E having the largest as a percent of its
13 total book capitalization. These findings suggest that SDG&E's ROE lies in the middle to upper
14 zone of Mr. Hayes' range of results

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1 **Appendix C – Free Cash flow to Total Book Capitalization Relative Scale of Capital**
2 **Expenditures**
3 **2006**

Company Name	Operating Cash Flow (\$000)	Investing Cash Flow (\$000)	FCF (\$000)	Total Capitalization, at	FCF/Total Capitalization
San Diego Gas & Electric	397,000	(1,067,000)	(670,000)	3,787,000	-17.69%
PNM Resources, Inc.	244,424	(799,575)	(555,151)	4,235,077	-13.11%
Cleco Corporation	91,443	(251,022)	(159,579)	1,565,664	-10.19%
Great Plains Energy, Inc.	308,982	(475,707)	(166,725)	2,679,202	-6.22%
FPL Group, Inc.	2,498,000	(3,807,000)	(1,309,000)	22,263,000	-5.88%
American Electric Power Company, Inc.	2,732,000	(3,743,000)	(1,011,000)	23,480,000	-4.31%
IDACORP, Inc.	169,778	(253,040)	(83,262)	2,276,956	-3.66%
Consolidated Edison, Inc.	1,354,000	(1,918,000)	(564,000)	17,041,000	-3.31%
Wisconsin Energy Corporation	729,800	(939,300)	(209,500)	7,201,400	-2.91%
Pinnacle West Capital Corporation	393,502	(568,733)	(175,231)	6,716,095	-2.61%
ALLETE, Inc.	142,500	(154,700)	(12,200)	1,055,300	-1.16%
Westar Energy, Inc.	255,986	(290,328)	(34,342)	3,307,675	-1.04%
Vectren Corporation	310,200	(337,400)	(27,200)	2,891,200	-0.94%
CenterPoint Energy, Inc.	991,000	(1,056,000)	(65,000)	10,743,000	-0.61%
Black Hills Energy	259,695	(268,097)	(8,402)	1,580,987	-0.53%
Pepero Holdings, Inc.	202,600	(229,100)	(26,500)	9,216,600	-0.29%
Southern Company	2,820,000	(2,834,000)	(14,000)	27,977,000	-0.05%
Ameren Corporation	1,279,000	(1,266,000)	13,000	13,149,000	0.10%
PPL Corporation	1,758,000	(1,617,000)	141,000	13,310,000	1.06%
UniSource Energy Corporation	282,659	(246,081)	36,578	2,529,180	1.45%
Dominion Resources, Inc.	4,005,000	(3,494,000)	511,000	32,771,000	1.56%
PG&E Corporation	2,714,000	(2,427,000)	287,000	18,366,000	1.56%
DTE Energy Company	1,456,000	(1,194,000)	262,000	14,808,000	1.77%
Otter Tail Corporation	80,246	(65,581)	14,665	803,731	1.82%
Energy East Corporation	379,494	(227,759)	151,735	6,985,779	2.17%
NSTAR	533,461	(411,518)	121,943	4,598,820	2.65%
Xcel Energy, Inc.	1,923,996	(1,550,110)	373,886	13,334,151	2.80%
OGE Energy Corp.	569,500	(483,500)	86,000	2,953,100	2.91%
Avista Corporation	201,466	(139,715)	61,751	2,036,958	3.03%
DPL Inc.	308,700	(229,500)	79,200	2,512,700	3.15%
Edison International	3,593,000	(2,992,000)	601,000	18,213,000	3.30%
SCANA Corporation	753,000	(531,000)	222,000	6,557,000	3.39%
NiSource Inc.	1,156,200	(732,500)	423,700	11,446,100	3.70%
TECO Energy, Inc.	566,900	(351,700)	215,200	5,629,000	3.82%
FirstEnergy Corp.	1,939,000	(1,109,000)	830,000	20,545,000	4.04%
Hawaiian Electric Industries, Inc.	286,052	(140,677)	145,375	3,168,990	4.59%
Sempra Energy	1,629,000	(866,000)	763,000	13,165,000	5.80%
Northeast Utilities	407,074	117,064	524,138	7,071,274	7.41%
Entergy Corporation	3,419,415	(1,899,149)	1,520,266	17,899,281	8.49%
Exelon Corporation	4,835,000	(2,762,000)	2,073,000	23,139,000	8.96%
Public Service Enterprise Group Incorporated	1,929,000	(241,000)	1,688,000	18,475,000	9.14%
Constellation Energy Group, Inc.	525,300	560,100	1,085,400	9,900,400	10.96%
Progress Energy, Inc.	1,912,000	271,000	2,183,000	17,610,000	12.40%
Alliant Energy Corporation	420,700	468,000	888,700	4,594,800	19.34%
Total	52,764,073	(42,552,628)	10,211,445	453,589,420	2.25%
Mean	1,199,183	(967,105)	232,078	10,308,850	1.29%
Median	568,200	(507,250)	82,600	7,136,337	1.67%

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Appendix C Continued

Parent Company Name	Utility Company Name	Electric Distribution	Gas Distribution	Operating Cash Flow (\$000)	Investing Cash Flow (\$000)	FCF (\$000)	Total Capitalization, at Book (\$000)	FCF % of Total Capitalization
Sempra Energy	San Diego Gas & Electric Co.	Yes	Yes	397,000	-1,067,000	-670,000	3,787,000	-17.7%
American Electric Power Company, Inc.	AEP Texas Central Company	Yes	No	224,113	-692,361	-468,248	3,430,748	-13.6%
Cleco Corporation	Cleco Power LLC	Yes	No	102,717	-251,767	-149,050	1,215,745	-12.3%
Northeast Utilities	Connecticut Light and Power Company	Yes	No	251,367	-607,263	-355,896	3,903,757	-9.1%
American Electric Power Company, Inc.	Appalachian Power Company	Yes	No	468,275	-880,397	-412,122	4,699,435	-8.8%
American Electric Power Company, Inc.	Ohio Power Company	Yes	No	626,246	-986,095	-359,849	4,644,163	-7.7%
American Electric Power Company, Inc.	Public Service Company of Oklahoma	Yes	No	142,367	-240,006	-97,639	1,341,837	-7.3%
Great Plains Energy, Inc.	Kansas City Power & Light	Yes	No	299,235	-470,062	-170,827	2,517,522	-6.8%
American Electric Power Company, Inc.	Southwestern Electric Power Company	Yes	No	210,136	-323,193	-113,057	1,845,728	-6.1%
Pepeco Holdings, Inc.	Delmarva Power & Light Company	Yes	Yes	41,600	-132,900	-91,300	1,499,700	-6.1%
Pinnacle West Capital Corporation	Arizona Public Service Company	Yes	No	393,713	-713,991	-320,278	6,086,943	-5.3%
PNM Resources, Inc.	Public Service Company of New Mexico	Yes	Yes	97,528	-219,167	-121,639	2,429,836	-5.0%
Consolidated Edison, Inc.	Consolidated Edison Company of New York, Inc.	Yes	Yes	1,163,000	-1,839,000	-676,000	14,630,000	-4.6%
IDACORP, Inc.	Idaho Power Co.	Yes	No	131,119	-223,251	-92,132	2,061,025	-4.5%
Northeast Utilities	Western Massachusetts Electric Company	Yes	No	16,337	-42,815	-26,478	610,971	-4.3%
Constellation Energy Group, Inc.	Baltimore Gas and Electric Company	Yes	Yes	256,900	-374,500	-117,600	3,580,300	-3.3%
Vectren Corporation	Southern Indiana Gas and Electric	Yes	Yes	123,460	-155,651	-32,191	1,074,569	-3.0%
Xcel Energy, Inc.	Northern States Power Company - MN	Yes	Yes	753,544	-892,387	-138,843	5,011,900	-2.8%
FFL Group, Inc.	Florida Power & Light Company	Yes	No	1,668,000	-1,933,000	-265,000	12,383,000	-2.1%
DTE Energy Company	Detroit Edison Company	Yes	No	915,000	-1,052,000	-137,000	8,283,000	-1.7%
PNM Resources, Inc.	Texas-New Mexico Power Company	Yes	No	33,789	-47,566	-13,777	935,165	-1.5%
American Electric Power Company, Inc.	Indiana Michigan Power Company	Yes	No	425,627	-469,433	-43,806	2,986,885	-1.5%
Southern Company	Gulf Power Company	Yes	No	143,434	-164,411	-20,977	1,504,454	-1.4%
Ameren Corporation	Central Illinois Light Company	Yes	Yes	153,000	-161,000	-8,000	916,000	-0.9%
Pepeco Holdings, Inc.	Potomac Electric Power Company	Yes	No	157,100	-176,400	-19,300	2,474,700	-0.8%
Energy East Corporation	Rochester Gas and Electric Corp	Yes	Yes	80,394	-87,873	-7,479	1,321,505	-0.6%
SCANA Corporation	Public Service Company of North Carolina, Incorporated	No	Yes	80,899	-85,045	-4,146	931,724	-0.4%
Ameren Corporation	Illinois Power Company	Yes	Yes	172,000	-180,000	-8,000	2,336,000	-0.3%
Southern Company	Georgia Power Company	Yes	No	1,200,244	-1,240,928	-40,684	12,250,341	-0.3%
Southern Company	Alabama Power Company	Yes	No	956,011	-976,783	-20,772	9,581,195	-0.2%
NSTAR	Boston Edison Company	Yes	No	276,243	-277,368	-1,125	2,969,026	0.0%
Ameren Corporation	Union Electric Company	Yes	Yes	734,000	-732,000	2,000	6,326,000	0.0%
FirstEnergy Corp.	Jersey Central Power & Light Co.	Yes	No	189,757	-179,515	10,242	4,699,162	0.2%
Wisconsin Energy Corporation	Wisconsin Electric Power Company	Yes	Yes	498,500	-473,800	24,700	5,015,300	0.5%
DPL Inc.	Dayton Power and Light Company	Yes	No	365,700	-354,800	10,900	2,040,200	0.5%
Alliant Energy Corporation	Wisconsin Power and Light Company	Yes	Yes	162,600	-149,000	13,600	1,827,900	0.7%
PG&E Corporation	Pacific Gas and Electric Company	Yes	Yes	2,577,000	-2,426,000	151,000	18,223,000	0.8%
Exelon Corporation	Commonwealth Edison Company	Yes	No	987,000	-894,000	93,000	10,946,000	0.8%
SCANA Corporation	South Carolina Electric & Gas Co.	Yes	Yes	474,000	-431,000	43,000	4,955,000	0.9%
TECO Energy, Inc.	Tampa Electric Company	Yes	Yes	455,800	-419,100	36,700	3,519,000	1.0%
Dominion Resources, Inc.	Virginia Electric and Power Company	Yes	No	1,080,000	-960,000	120,000	11,293,000	1.1%
Xcel Energy, Inc.	Public Service Company of Colorado	Yes	Yes	582,541	-525,401	57,140	5,328,194	1.1%
Black Hills Corporation	Black Hills Power, Inc.	Yes	No	41,999	-37,623	4,376	363,088	1.2%
NA	Otter Tail Corporation	Yes	No	80,246	-65,581	14,665	603,731	1.8%
Energy East Corporation	New York State Electric & Gas Corp	Yes	Yes	102,620	-59,859	42,761	2,196,984	1.9%
OGE Energy Corp.	Oklahoma Gas and Electric Company	Yes	No	455,100	-410,100	45,000	2,267,400	2.0%
Edison International	Southern California Edison Co.	Yes	No	2,606,000	-2,359,000	247,000	11,956,000	2.1%
UniSource Energy Corporation	Tucson Electric Power Company	Yes	No	227,226	-181,966	45,262	2,053,307	2.2%
American Electric Power Company, Inc.	AEP Texas North Company	Yes	No	61,415	-48,074	13,341	587,284	2.3%
Hawaiian Electric Industries, Inc.	Hawaiian Electric Company, Inc.	Yes	No	227,531	-174,968	52,573	1,871,788	2.8%
Progress Energy, Inc.	Florida Power Corporation	Yes	No	893,000	-735,000	158,000	5,325,000	3.0%
NA	Avista Corporation	Yes	Yes	201,466	-139,715	61,751	2,036,958	3.0%
Public Service Enterprise Group Incorporated	Public Service Electric and Gas Company	Yes	Yes	804,000	-525,000	279,000	8,216,000	3.4%
Northeast Utilities	Public Service Company of New Hampshire	Yes	No	173,818	-124,364	49,454	1,346,348	3.7%
American Electric Power Company, Inc.	Kentucky Power Company	Yes	No	106,642	-74,887	31,755	849,902	3.7%
CenterPoint Energy, Inc.	CenterPoint Energy Houston Electric LLC	Yes	No	655,000	-412,000	243,000	6,148,000	4.0%
FirstEnergy Corp.	Pennsylvania Electric Company	Yes	No	195,608	-113,671	81,937	2,054,593	4.0%
Consolidated Edison, Inc.	Orange and Rockland Utilities, Inc.	Yes	Yes	144,000	-110,000	34,000	852,000	4.0%
Energy East Corporation	Central Maine Power Company	Yes	No	106,958	-61,924	45,034	1,122,173	4.0%
Energy Corporation	Entergy Mississippi, Inc.	Yes	No	410,721	-349,100	61,621	1,463,207	4.2%
American Electric Power Company, Inc.	Columbus Southern Power Company	Yes	No	416,197	-305,883	110,314	2,262,507	4.9%
Energy Corporation	Entergy New Orleans, Inc.	Yes	Yes	95,430	-73,050	22,380	455,577	4.9%
Ameren Corporation	Central Illinois Public Service Company	Yes	Yes	118,000	-66,000	52,000	1,049,000	5.0%
Progress Energy, Inc.	Carolina Power & Light Company	Yes	No	1,094,000	-722,000	372,000	7,137,000	5.2%
Pepeco Holdings, Inc.	Atlantic City Electric Company	Yes	No	20,700	71,100	91,800	1,470,500	6.2%
Energy East Corporation	Connecticut Natural Gas Corporation	No	Yes	58,251	-22,811	35,440	566,890	6.3%
Vectren Corporation	Indiana Gas Company, Inc.	No	Yes	110,515	-51,299	59,216	905,245	6.5%
Xcel Energy, Inc.	Northern States Power Company - WI	Yes	Yes	110,624	-56,627	53,997	807,995	6.7%
FirstEnergy Corp.	Metropolitan Edison Company	Yes	No	222,089	-98,332	123,757	1,748,449	7.1%
Entergy Corporation	Entergy Arkansas, Inc.	Yes	No	501,503	-280,420	221,083	2,986,587	7.4%
Entergy Corporation	Entergy Gulf States, Inc.	Yes	Yes	782,103	-406,469	375,634	4,696,127	8.0%
PPL Corporation	PPL Electric Utilities Corporation	Yes	No	578,000	-287,000	291,000	3,579,000	8.1%
Xcel Energy, Inc.	Southwestern Public Service Company	Yes	No	244,366	-96,010	148,356	1,620,317	9.2%
DTE Energy Company	Michigan Consolidated Gas Company	No	Yes	334,000	-153,000	181,000	1,843,000	9.8%
Exelon Corporation	PECO Energy Company	Yes	Yes	1,017,000	-332,000	685,000	6,006,000	11.4%
Sempra Energy	Southern California Gas Company	No	Yes	873,000	-513,000	360,000	2,597,000	13.9%
Alliant Energy Corporation	Interstate Power & Light Company	Yes	Yes	272,200	155,300	427,500	2,283,600	18.7%
FirstEnergy Corp.	Cleveland Electric Illuminating Company	Yes	No	419,246	285,080	704,326	3,613,477	19.5%
Southern Company	Mississippi Power Company	Yes	No	194,966	6,454	201,420	952,612	21.1%
FirstEnergy Corp.	Toledo Edison Company	Yes	No	149,052	99,342	248,394	1,023,263	24.3%
FirstEnergy Corp.	Ohio Edison Company	Yes	No	307,069	627,950	935,019	3,367,897	27.8%
Total				35,478,959	(32,709,726)	2,769,233	299,899,736	0.9%
Mean				438,012	(403,824)	34,188	3,702,466	1.9%
Median				251,367	(240,006)	31,755	2,283,600	1.1%

Appendix C Continued

Parent Company Name	Utility Company Name	Electric Distribution	Gas Distribution	Operating Cash Flow (\$000)	Investing Cash Flow (\$000)	FCF (\$000)	Total Capitalization, at Book (\$000)	FCF % of Total Capitalization
ALLETE, Inc.	Minnesota Power, Inc.	Yes	No	NA	NA	NA	NA	NA
ALLETE, Inc.	Superior Water, Light & Power Co.	Yes	Yes	NA	NA	NA	NA	NA
Alliant Energy Corporation	South Beloit Water, Gas & Electric	Yes	Yes	NA	NA	NA	NA	NA
Ameren Corporation	Electric Energy Inc.	Yes	No	NA	NA	NA	NA	NA
American Electric Power Company, Inc.	Kingsport Power Company	Yes	NA	NA	NA	NA	NA	NA
American Electric Power Company, Inc.	Wheeling Power Co	Yes	NA	NA	NA	NA	NA	NA
Black Hills Corporation	Cheyenne Light, Fuel and Power Company	Yes	Yes	NA	NA	NA	NA	NA
Consolidated Edison, Inc.	Pike County Light & Power Co	Yes	Yes	NA	NA	NA	NA	NA
Consolidated Edison, Inc.	Rockland Electric Company	Yes	NA	NA	NA	NA	NA	NA
Dominion Resources, Inc.	East Ohio Gas Company	No	Yes	NA	NA	NA	NA	NA
Dominion Resources, Inc.	Hope Gas, Inc.	No	Yes	NA	NA	NA	NA	NA
Dominion Resources, Inc.	Peoples Natural Gas Company	No	Yes	NA	NA	NA	NA	NA
DTE Energy Company	Citizens Gas Fuel Company	No	Yes	NA	NA	NA	NA	NA
Energy East Corporation	Berkshire Gas Company	No	Yes	NA	NA	NA	NA	NA
Energy East Corporation	Southern Connecticut Gas Company	No	Yes	NA	NA	NA	NA	NA
Entergy Corporation	Entergy Louisiana Holdings, Inc.	Yes	No	NA	NA	NA	NA	NA
FirstEnergy Corp.	Pennsylvania Power Company	Yes	No	NA	NA	NA	NA	NA
Hawaiian Electric Industries, Inc.	Hawaii Electric Light Co Inc	Yes	No	NA	NA	NA	NA	NA
Hawaiian Electric Industries, Inc.	Maui Electric Company	Yes	No	NA	NA	NA	NA	NA
NISource Inc.	Bay State Gas Company	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Columbia Gas of Kentucky	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Columbia Gas of Maryland	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Columbia Gas of Ohio	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Columbia Gas of Pennsylvania	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Columbia Gas of Virginia	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Kokomo Gas & Fuel Company	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Northern Indiana Fuel & Light Company, Inc.	No	Yes	NA	NA	NA	NA	NA
NISource Inc.	Northern Indiana Public Service Co.	Yes	Yes	NA	NA	NA	NA	NA
NISource Inc.	Northern Utilities, Inc.	No	Yes	NA	NA	NA	NA	NA
Northeast Utilities	Holyoke Power & Electric Company	Yes	NA	NA	NA	NA	NA	NA
Northeast Utilities	Yankee Gas Services Company	No	Yes	NA	NA	NA	NA	NA
NSTAR	Cambridge Electric Light Company	Yes	No	NA	NA	NA	NA	NA
NSTAR	Commonwealth Electric Company	Yes	No	NA	NA	NA	NA	NA
NSTAR	NSTAR Gas Company	No	Yes	NA	NA	NA	NA	NA
Sempra Energy	Frontier Energy	No	Yes	NA	NA	NA	NA	NA
TECO Energy, Inc.	Peoples Gas System	No	Yes	NA	NA	NA	NA	NA
UniSource Energy Corporation	UNS Electric, Inc.	Yes	No	NA	NA	NA	NA	NA
UniSource Energy Corporation	UNS Gas, Inc.	No	Yes	NA	NA	NA	NA	NA
Vectren Corporation	Vectren Energy Delivery of Ohio, Inc.	No	Yes	NA	NA	NA	NA	NA
Westar Energy, Inc.	Kansas Gas and Electric Company	Yes	No	NA	NA	NA	NA	NA
Westar Energy, Inc.	Western Resources - KPL	Yes	No	NA	NA	NA	NA	NA
Wisconsin Energy Corporation	Edison Sault Electric Company	Yes	No	NA	NA	NA	NA	NA
Wisconsin Energy Corporation	Wisconsin Gas LLC	No	Yes	NA	NA	NA	NA	NA

1 **Appendix D - Procedure to Calculate and Mitigate the Adverse Credit Impact of**
2 **Debt Equivalence Associated With a Long-Term Contract**

3 1) Determine the fixed capacity payment for each year of the contract;
4 2) Where the contract does not specify a capacity payment, use S&P's proxy
5 capacity charge based on the cost to develop and finance a combustion turbine, stated in dollars
6 per kW / yr, and multiply that charge by the kW under contract;

7 3) Discount remaining capacity payments with a discount rate equal to the cost of
8 debt to determine the NPV of the remaining fixed payments;

9 4) Multiply the NPV by a risk factor assigned by S&P (currently 25% for SDG&E)
10 to determine the debt equivalence;

11 5) Additional common equity, equal to the authorized equity percentage (proposed
12 to remain 49% for SDG&E) of the debt equivalence amount will be added to the capital structure
13 to offset debt equivalence impacts. The increased amount of equity will be used to pay down
14 debt; therefore, the debt is reduced by the same amount;

15 6) Associated revenue requirement is equal to the incremental equity amount
16 multiplied by ((authorized return on equity * net to gross tax multiplier) – cost of debt to be
17 offset and/or retired); and

18 7) The total contract cost recoverable through rates equals the PPA costs plus the
19 revenue requirement associated with the incremental equity required to mitigate the adverse
20 credit impact of the PPA's debt equivalence.

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Appendix E - Illustrative Debt Equivalence Financial Impact

Contract Costs (\$/kW-yr)		150												
Contracted Capacity in MW		100												
Capacity Payment (\$/kW-yr)		100												
PPA - Including Debt Equivalence														
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
PPA Cost		15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Revenue requirement for mitigating debt equivalence		2.0	2.0	1.9	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.2	
Carrying cost - PPA		17.0	17.0	16.9	16.9	16.8	16.7	16.6	16.6	16.5	16.4	16.3	16.2	
		1	2	3	4	5	6	7	8	9	10	11	12	
Capacity Payment		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
NPV of remaining PPA	5.6%	119.0	115.6	112.0	108.2	104.3	100.0	95.6	90.9	85.9	80.7	75.2	69.4	
Risk factor	25%													
Debt equivalent		29.8	28.9	28.0	27.1	26.1	25.0	23.9	22.7	21.5	20.2	18.8	17.3	
Rebalance Capital Structure														
Equity	49%	14.6	14.2	13.7	13.3	12.8	12.3	11.7	11.1	10.5	9.9	9.2	8.5	
Debt		(14.6)	(14.2)	(13.7)	(13.3)	(12.8)	(12.3)	(11.7)	(11.1)	(10.5)	(9.9)	(9.2)	(8.5)	
		-	-	-	-	-	-	-	-	-	-	-	-	
Ratepayer perspective														
(revenue requirement)														
Equity		2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.1	1.9	1.8	1.7	
Debt		(0.8)	(0.8)	(0.8)	(0.7)	(0.7)	(0.7)	(0.6)	(0.6)	(0.6)	(0.5)	(0.5)	(0.5)	
Revenue req change		2.0	2.0	1.9	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.2	
NPV of Rev Requirement Change		14.1	1.9	1.7	1.5	1.3	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.4
Assumptions:														
Based on 100 MW plant contracted for a 20-year term														
Debt equivalence calculated based on S&P methodology														
Assumes contract costs of \$150/kW-yr with capacity payments of \$100/kW-yr														
Assumes proposed cost of capital and capital structure														
Fed tax rate	35.000%													
State tax rate	8.840%													
Composite (t)	40.746%													
Tax Factor	59.254%													
Proposed Weighted Cost of Capital		Capital Ratio	Cost	Wtd Cost	After tax (AT WACC)	Pre tax (AT WACC)								
Weighted avg RoR Debt		43.25%	5.55%	2.51%	1.49%	2.51%								
Weighted avg RoR Preferred Equity		5.75%	6.77%	0.39%	0.39%	0.66%								
Weighted avg RoR Common Equity		49.00%	11.60%	5.68%	5.68%	9.59%	1.6876							
Selected RoR			Total RoR >	8.58%	7.56%	12.76%								

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1 **Appendix F - Procedure to Calculate and Mitigate FIN 46(R) Impacts Associated With a**
2 **Long-Term Contract**

3 1) Determine the estimated cost to construct the plant, and percentage of debt and
4 equity financing used by the counterparty;

5 2) Multiply the debt and equity financing percentages by the cost to construct the
6 plant to determine the additional amount of debt, which is equal to (project debt – project
7 equity), associated with consolidating the plant under FIN 46(R);

8 3) Additional common equity, equal to the authorized equity percentage (proposed
9 to remain 49% for SDG&E) of the additional debt amount (offset by minority interest) will be
10 added to the capital structure to offset FIN 46(R) consolidation impacts. The increased amount
11 of equity will be used to pay down debt; therefore, the consolidated debt is reduced by the same
12 amount;

13 4) Associated revenue requirement is equal to the incremental equity amount
14 multiplied by ((authorized return on equity * net to gross tax multiplier) – cost of debt to be
15 offset and/or retired); and

16 5) The total contract cost recoverable through rates equals the PPA costs plus the
17 revenue requirement associated with rebalancing the utility’s capital structure as a result of
18 mitigating the adverse impact of FIN 46(R) consolidation.

1 Appendix G - Illustrative Fin 46(R) Financial Impact

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	Without New Contract 2008		With New Contract		New Contract	
Debt	2,263	45.25%	2,338	45.83%	75	75%
Preferred	288	5.75%	288	5.64%	-	-
Common Equity	2,450	49.00%	2,475	48.53%	25	25%
Capitalization	5,000		5,100		100	100.00%

	Additional Debt due to Contract	\$	50	Loan Amortization over 20 years											
				2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
				1	2	3	4	5	6	7	8	9	10	11	12
Consolidated Additional Debt			50.0		47.5	45.0	42.5	40.0	37.5	35.0	32.5	30.0	27.5	25.0	22.5
Rebalance Capital Structure															
Equity	49%		24.5	23.3	22.1	20.8	19.6	18.4	17.2	15.9	14.7	13.5	12.3	11.0	
Debt			(24.5)	(23.3)	(22.1)	(20.8)	(19.6)	(18.4)	(17.2)	(15.9)	(14.7)	(13.5)	(12.3)	(11.0)	
Ratespaver perspective (revenue requirement)															
Equity			4.8	4.6	4.3	4.1	3.8	3.6	3.4	3.1	2.9	2.6	2.4	2.2	
Debt			(1.4)	(1.3)	(1.2)	(1.2)	(1.1)	(1.0)	(1.0)	(0.9)	(0.8)	(0.7)	(0.7)	(0.6)	
Revenue req change			3.4	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	1.9	1.7	1.5	
NPV			21.2	3.2	2.8	2.4	2.1	1.8	1.6	1.4	1.2	1.0	0.8	0.7	0.6

Assumptions:

Cost to construct plant of \$100 million
 Hypothetical total capitalization for 2008
 Construction financed 75% debt and 25% equity
 PPA term of 20 years equals debt amortization period
 Assumes proposed cost of capital and capital structure

Fed tax rate	35.000%
State tax rate	8.840%
Composite (t)	40.746%
Tax Factor	59.254%

Proposed Weighted Cost of Capital	Cost		After tax		Pre tax
	Capital Ratio	Cost	Wtd Cost	(A/T WACC)	
Weighted avg RoR Debt	45.25%	5.55%	2.51%	1.49%	2.51%
Weighted avg RoR Preferred Equity	5.75%	6.77%	0.39%	0.39%	0.66%
Weighted avg RoR Common Equity	49.00%	11.60%	5.68%	5.68%	9.59%
Selected RoR			8.58%	7.56%	12.76%

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