COUNCIL AGENDA: 6/4/19
FILE: 19-411
ITEM: 7.1

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Lori Mitchell

SUBJECT: SEE BELOW

DATE: May 22, 2019

Approved D. DSyL

Date 5/23/19

SUBJECT: RENEWABLE POWER AND RESOURCE ADEQUACY PROCUREMENT

RECOMMENDATION

Adopt a resolution:

A. Increasing the authority granted to the Director of Community Energy or her designee for the procurement of power supply products by $19,000,000 from $226,000,000 to an amount not to exceed $245,000,000 in aggregate through Calendar Year ("CY") 2019; and by $80,000,000 from $222,000,000 to an amount not to exceed $302,000,000 in aggregate through CY 2020, subject to the Energy Risk Management Policy and the appropriation of funds.

B. Authorizing the Director of Community Energy or her designee to negotiate and execute long-term Power Purchase Agreement ("PPAs") for renewable projects, which will include the key terms listed in Attachment 1, with modifications, as appropriate, in consultation with the City Attorney and approval of the full final agreements by the Risk Oversight Committee ("ROC"), in an amount not to exceed $50,000,000 annually and $1,080,000,000 in aggregate from 2020 through 2043, subject to the Energy Risk Management Policy and the appropriation of funds.

C. Authorizing the Director of Community Energy or her designee to negotiate and execute medium- to long-term contracts using the Edison Electric Institute ("EEI") Agreement or the Western Systems Power Pool ("WSPP") Agreement with modifications, as appropriate, in consultation with the City Attorney, for a term of up to twenty years to procure Resource Adequacy ("RA") products from different technologies, including battery storage, in an amount not to exceed $451,800,000 in aggregate over twenty years, subject to the Energy Risk Management Policy, ROC approval, and the appropriation of funds.

OUTCOME

Approving the recommended procurement authority will enable San José Clean Energy ("SJCE") to procure all the resources and compliance attributes needed to meet its anticipated load in 2019 and 2020, and it will allow SJCE to meet approximately 70 percent of its load in 2021 and 45 percent of its load in 2022. Approving the recommendation will also enable SJCE to execute specific long-term contracts for new renewable energy projects and battery storage projects. This will create a more diverse portfolio of resources, reduce SJCE's power supply costs, and reduce SJCE's exposure to short-term market volatility. The execution of long-term contracts will allow SJCE to more cost-effectively increase the renewable and greenhouse-gas ("GHG")-free content of SJCE's portfolio and advance SJCE's commitment to comply with California Senate Bill 350, which requires that 65 percent of renewable portfolio standard ("RPS") contracts correspond to long-term agreements of ten years or longer.

Finally, approving the recommendation to enter into medium to long-term RA supply contracts should enable SJCE to begin procuring capacity to meet future RA requirements when attractively priced mid-term RA opportunities become available. Further, approving the recommendation to enter into long-term RA supply contracts with new technologies such as storage, will enable SJCE to make initial investments in long-term GHG-free RA supplies. It will also set SJCE on a path to meet the storage compliance requirement that applies to Community Choice Aggregation programs ("CCAs") and requires these entities to enter into agreements for energy storage equal to 1 percent of their annual 2020 peak load by 2020, with installation to take place no later than 2024. [1]

BACKGROUND

On May 1, 2018, the City Council approved the Energy Risk Management Policy and associated Energy Risk Management Regulations. The Energy Risk Management Policy created a Risk Oversight Committee ("ROC") responsible for overseeing compliance with the policy and with authority to amend the regulations. The Energy Risk Management Policy and associated Energy Risk Management Regulations set forth a risk control structure and procurement requirements that apply to SJCE procurement activities. The Energy Risk Management Regulations are currently approved by City Council but in working draft form, and the ROC intends to review and update the regulations this summer with the benefit of the last year of direct energy risk management experience.

On September 25, 2018, Council approved a Revolving Credit Facility in the amount of $50 million with Barclays Bank that provides both a line of credit and letters of credit that can be issued as collateral to electricity suppliers.

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[1] CPUC Decision 13-10-040 [http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M079/K533/79533378.PDF]

On November 6, 2018, City Council adopted a resolution authorizing the Director of Community Energy to negotiate and execute energy supply contracts for Phase II for CY 2019 using the Western Systems Power Pool ("WSPP") Agreement or the Edison Electric Institute ("EEI") with a total not to exceed amount for 2019 of $226 million; approved rates and a power mix for SJCE's 2019 GreenSource and TrueGreen products; approved adjustments to Phase II; and adopted 2018-2019 Appropriation Ordinance and Funding Sources Resolution amendments in the San José Clean Energy Fund.

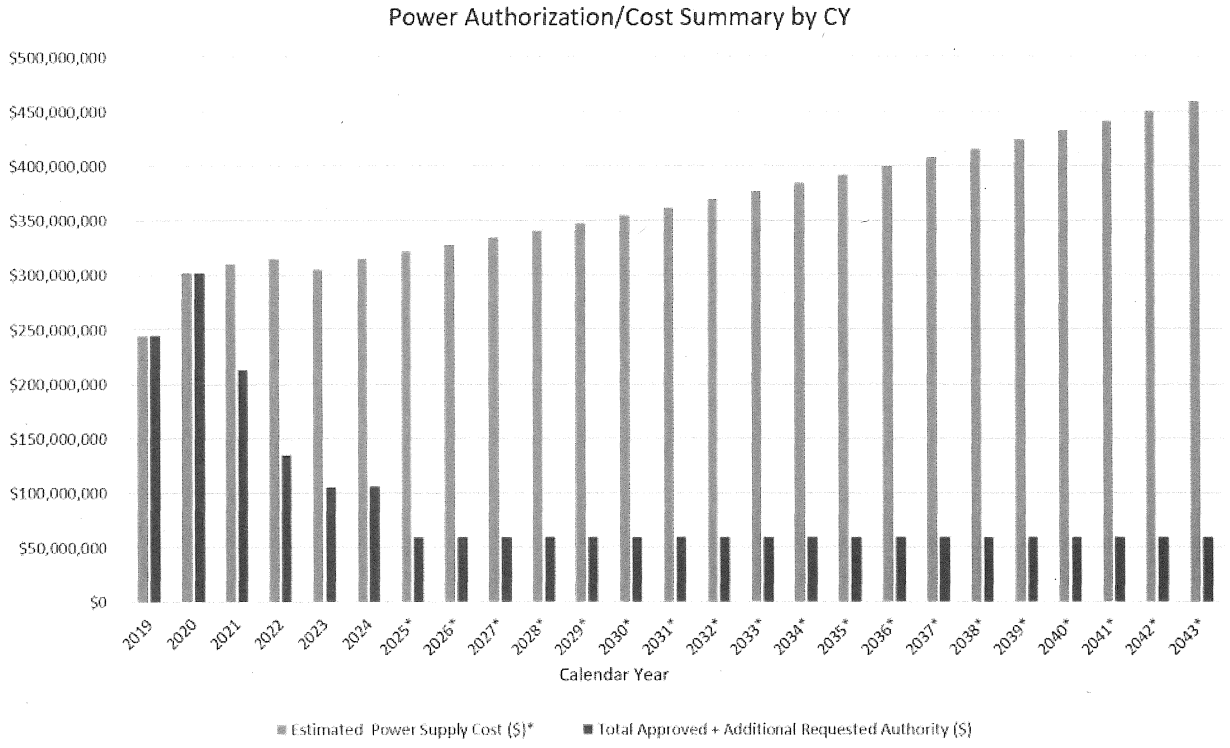
On March 19, 2019, City Council adopted a resolution authorizing the Director of Community Energy or her designee to negotiate and execute power supply contracts, with modifications, as appropriate, in consultation with the City Attorney, for Calendar Years 2020, 2021 and 2022 for Energy, Renewable Energy, Renewable Energy Credits ("RECs"), RA, and Low GHG power and attributes using the EEI Agreement or the WSPP Agreement in an amount not to exceed $380,000,000 in aggregate from January 2020 through December 2022, subject to the Energy Risk Management Policy and the appropriation of funds. Funding for costs in fiscal years ("FYs") 2019-2020, 2020-2021, 2021-2022, and 2022-2023 is subject to the appropriation of funds in 2019-2020, 2020-2021, 2021-2022, and 2022-2023.

On April 30, 2019, City Council adopted a resolution increasing the Revolving Credit Facility with Barclays Bank to $80 million and revising the FY 2018-2019 appropriation for SJCE to increase the Cost of Energy from $82 million to $105 million.

Section 26.50.020 of the Municipal Code states that the City may enter into contracts to procure power products for a term up to twenty-five (25) years through a competitive bidding process, among other alternatives. The Energy Risk Management Policy and associated Energy Risk Management Regulations establish requirements for the competitive procurement of power products.

ANALYSIS

SJCE is recommending several authorizations to start to build a power supply portfolio that includes a mix of short, medium, and long term contracts for a variety of different products that SJCE must procure. These products include: energy, renewable and GHG-free attributes, and resource adequacy. It is good utility practice to build a diversified portfolio that includes contracts with different durations to reduce operational costs and hedge against price fluctuations. Forward energy prices can be volatile and increase and decrease by more than 20 percent a year due to market forces. This volatility makes SJCE vulnerable to unforeseen price increases until it fixes its supply costs through forward contracts such as the medium-term energy agreements, the medium and long-term RA agreements, and the long-term renewable-power agreements proposed in this memo. Figure 1 shows SJCE's expected power supply costs and the total previously approved authority plus the requested authority in this memo. Over time SJCE will periodically come back to City Council to request additional authority while leaving some of the position open for the medium and long-term to prudently manage SJCE's risk.



Increase of Power Supply Authority for Calendar Year 2019 and 2020

SJCE has experienced higher load than it originally forecasted during the first few months of operations. This could be due to a variety of factors including weather, changes in consumption, and new development. On April 30, 2019 the City Council approved amending the Cost of Energy appropriation for Fiscal Year 2018-2019 by $23 million to accommodate the higher-than-expected load.

If the load continues to be higher than expected, the authority granted by the Council will fall short from the current load estimates and would cover only 90 percent of projected power costs. SJCE seeks authority for Calendar Year 2019 and 2020 to procure additional resources necessary to meet the higher projected load. SJCE will continue to analyze the electric load data and will only procure ahead to meet expected higher demand in months where power prices can be volatile such as the summer months. At the March 19, 2019 Council meeting, SJCE received authorization to lock in 90 percent of SJCE's 2020 annual energy need in the amount of $222 million. The $80 million additional request accounts for increasing the authorization to 100 percent of the 2020 annual need as well as increased load as described above.

To accomplish these objectives, staff seeks to increase the power procurement authority by:

- $19 million for calendar year 2019, from $226 million to $245 million.
- $80 million for calendar year 2020, from $222 million to $302 million.

Long-term Renewable Contracts

SJCE also recommends executing long-term Power Purchase Agreement ("PPAs") for new renewable projects, which will include the key terms listed in Attachment 1, with modifications, as appropriate, in consultation with the City Attorney and approval of the full final agreements by the Risk Oversight Committee ("ROC"), in an amount not to exceed $50,000,000 annually and $1,080,000,000 in aggregate from 2020 through 2043. The cost of renewables procured pursuant to long-term contracts with new developments is significantly less than the cost of buying renewables under short-term contracts from existing projects. This is because the cost of developing new renewable projects has come down significantly and new projects can be built and operated to compete very favorably with other existing resources.

For example, existing renewable projects tend to sell the renewable attribute from their energy production at prices between $14 to $18 per MWh of attribute in addition to the cost of the energy which can vary from negative numbers to $80 and higher per MWh depending on the time when the energy is produced. Given the relatively low cost of power during the sunny hours of the day, existing solar projects would thus be selling power at a combined cost for the energy and the attribute of between $15 and $45 per MWh depending on the hour, with the bulk of the procurement costing in the $35-$45 per MWh range. In contrast, buying renewable power from a new solar project pursuant to a long term agreement can cost less than $25 per MWh for both the power and the attribute, which is a savings for SJCE between 30-45 percent for the power and the attribute. Similarly, the cost of wind power can vary between $55 to $100 MWh for the energy and the attribute from an existing project, to less than $45 per MWh for the power and the attribute pursuant to a long term contract with a new wind development. This results in a savings for SJCE of 20-55 percent for the power and the attribute.

Long-term contracts do come with some risks. The primary risk is entering into an agreement with a developer who fails to timely construct a project. The result of such a failure would be that SJCE would have to continue to buy high cost renewable power from existing projects until it can contract with another project that is timely and competently constructed. Thus, SJCE proposes to include in its power purchase agreements with project developers standard requirements for delay and performance security damages. If the project's guaranteed online commercial operation date is delayed beyond a negotiated number of days (30-120 days) SJCE will obtain delay damages. Beyond this number of days, SJCE may terminate the agreement.

Another risk with renewable contracts is that the technologies are often weather driven and the amount of generation can vary each year. In order to manage this risk SJCE will negotiate with the seller an expected annual amount of energy that the project will generate. SJCE will require a performance guarantee that the project will generate a certain percentage of the expected energy each year. If it falls below this amount the seller will be required to pay damages. SJCE will also limit payment for over-generation so that SJCE can manage its power supply costs. See Attachment 1, Key Terms for details.

SJCE will carefully vet developers and projects during its solicitation processes. SJCE will also include in the PPA a requirement that the developer complete the required California Environmental Quality Act ("CEQA") and other permitting approvals before the commercial

operation date when SJCE would begin purchasing energy under the PPA. Another risk is the possibility that SJCE may lose some of its load to direct access or opt-outs and have a smaller requirement for GHG-free and renewable power going forward. SJCE is addressing this risk by limiting the total amount of renewable power that it is proposing to enter into long-term contracts to no more than 50 percent of its expected need for renewables. It is important to note that SJCE expects additional load growth in the region over time due to 1) to new development 2) the electrification of the transportation sector (such as electric vehicle adoption) and 3) the conversion of heating loads currently served by natural gas to electricity.

Moreover, by pursuing the most cost-effective new projects, contracting with diverse technologies, and having agreements of different lengths, SJCE can also reduce the risk of contracting with a portfolio of projects that consistently becomes uneconomic over time. There is always the risk that the cost of developing renewables and of buying power from existing resources will continue to fall, particularly as the proportion of renewables on the system continues to increase. Over the 20-year life of the contracts with new renewable developments, this risk will vary. However, at the current time, the expectation is that the technical breakthroughs that resulted in the significant reduction in the cost of renewables over the last two decades are not expected to continue at the same pace and prices are not expected to go much lower given the cost of required labor and the continued increase in demand for GHG-free and renewable resources. See Utility Scale Solar, Lawrence Berkeley National Laboratory (2018 Edition); https://emp.lbl.gov/utility-scale-solar Presentation slides 24-26.

As stated in the outcome section, state law requires SJCE to procure at least 65% of the state-mandated renewables pursuant to contracts of ten years or more[2]. In addition, doing so will materially reduce the cost of providing a power supply with a high proportion of renewable and GHG-free power in the immediate and medium term. Finally, while the cost of new renewables, and utility scale solar, may continue to decline, the slope of the decline is expected to be much less steep than it previously has been. Thus, in the near to medium term, SJCE cannot effectively compete in the clean electric supply space without entering into long-term contracts for renewables, and the risk of doing so has significantly moderated. Moreover, increasing worldwide interest in reducing greenhouse gas emissions is likely to keep demand for renewables growing. Thus, renewable power is likely to remain valuable for the foreseeable future.

Collaboration with other Community Choice Aggregators (CCA's)

SJCE has the opportunity to collaborate with East Bay Community Energy ("EBCE") on a solicitation for new renewable projects. Many CCAs are working collaboratively to execute power supply contracts. In September 2017, Silicon Valley Clean Energy ("SVCE") and Monterey Bay Community Power ("MBCP") issued a Joint Request for Offers ("RFO") for GHG-free energy plus storage resources. The results of that RFO included three long-term

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[2] Clean Energy and Pollution Reduction Act (de León, Chapter 547, Statutes of 2015) (SB 350)

contracts for wind energy and the two largest solar-plus-storage projects in California. These projects are scheduled to begin deliveries in 2021.

EBCE is in a similar operational situation as SJCE. EBCE launched service to customers approximately six months prior to SJCE, serves a similar customer base, and is also in the market for a large amount of power resources to meet customer needs. SJCE and EBCE have discussed joint procurement to achieve economies of scale and attractive pricing. On June 4, 2018, as a result of these discussions, EBCE issued a competitive solicitation titled "2018 California Renewable Energy Request For Proposals ("RFP")." The RFP provided for the possibility that EBCE would, upon review of proposals, work on a best efforts basis to collaborate with other credit worthy CCAs, including SJCE, to jointly procure renewable energy.

EBCE used an industry standard fully competitive energy solicitation process and received 568 unique offers associated with 75 different projects. EBCE undertook a thorough evaluation of proposals, their proponents, and the proposed projects. This assessment resulted in short listing 20 projects. EBCE remains in active negotiations with seven of these projects. SJCE and EBCE are working together with respect to three utility scale solar projects that have sufficient capacity to accommodate procurement by both entities and can achieve economies of scale and cost benefits for both entities. The evaluation included an estimate of the hourly wholesale value of the electricity generated (relative to the contract price) under a range of market conditions including various natural gas prices, grid fundamentals, solar penetration, and weather conditions to evaluate a number of scenarios and ensure that these projects reflect the best value to the CCAs.

If the joint procurement goes forward, EBCE and SJCE would contract independently with portions of a solar project, each of which will be separately metered. SJCE has carefully reviewed the quality of these projects and their developers and intends to undertake further review and negotiations before finalizing any agreements. Key details of these projects are provided in Table 1, below.

Table 1 – Projects under consideration with EBCE

Project	Term	Technology	MW	Online Date	Location (County)
1	20 years	Solar	100	12/31/2022	Fresno
2	20 years	Solar	100	1/1/2023	Kern
3	15 years	Solar	100	12/31/2022	Kern

SJCE has also issued an industry standard solicitation for long-term PPAs of renewable energy and has received competitive offers. SJCE sent the solicitation to a wide number of market participants including all entities that asked to be included and posted the solicitation on SJCE's website and some social media outlets. SJCE is also using standard industry contracts such as the EEI agreement and has issued clear evaluation and scoring criteria that includes evaluating the value and the viability of the project. Some of the key scoring criteria are outlined below:

- The value (energy, attributes, and capacity)
    - Contract cost
    - Contract term
    - Material changes to the EEI Agreement
- Project viability:
    - Project status regarding interconnection, site control, permits, and equipment
    - Technology viability
    - Financial stability of project owner/developer
    - Progress on EPC contract
- Project team experience
- Clarity and thoroughness
- Local business and/or Small Business

Currently, between collaborating with other CCAs and issuing its own solicitation, SJCE is seeking to procure up to 450 megawatts ("MW") of new renewable long-term resources for the period comprised between 2020 and 2043. The projects selected would likely be from a combination of the projects under consideration with EBCE and SJCE's separate solicitation process. SJCE will select only the most competitive projects that offer the most value to SJCE. These projects would begin operations between 2020 and 2023 and would operate for a term of 10 to 20 years.

The PPAs would provide SJCE with a maximum of 1,000 gigawatt-hour ("GWh") per year of renewable energy, which is roughly half of the annual renewable energy required to meet SJCE's renewable requirements in the early years. Executing these contracts will also contribute towards allowing SJCE to achieve the Climate Smart San José goal of 100 percent GHG-free power by 2021 in a cost-effective manner.

As a rule, to develop and cost-effectively finance new projects, developers require long term contracts for renewable projects with terms of 10 to 20 years. The total cost of 2 to 3 long-term contracts for a total of 450MWs of renewables would total approximately $1.1 billion over the term of the agreements, if the agreements all have 20-year terms. On an annual basis, the cost of these agreements would amount to approximately $50 million, which is between 15 percent and 20 percent of SJCE's total annual power supply expected costs. See Attachment 2 for more details. SJCE would finalize PPAs for these projects based on the industry standard Edison Electric Institute agreement. Key terms and the form agreement are included as Attachment 1.

Resource Adequacy Contracts

Resource Adequacy ("RA") is defined as ability to provide adequate supply during peak load and generation outage conditions. All utilities and CCAs are required to procure RA to meet their customer load obligations. On February 21, 2019, the California Public Utilities Commission ("CPUC") issued an order requiring SJCE and other load serving entities to procure local RA for a three year forward duration. Pursuant to this decision, by October 31, 2019, SJCE will be

required to have procured at least 100 percent of its local RA requirements for 2020 and 2021 and 50 percent of its local RA requirements for 2022[3].

Complying with this requirement will be challenging as the bulk of RA supplies in California are controlled by the Investor Owned Utilities ("IOUs") and a few Independent Power Producers. Moreover, while the CPUC requires load serving entities ("LSEs") to procure sufficient capacity and may apply penalties if LSEs fail to procure the required amount and types of RA, there is no requirement that the IOUs or Independent Power Producers offer to sell their excess RA supply to other LSEs in a timely manner and offer fair and nondiscriminatory prices and terms.

SJCE is aggressively pursuing procurement of RA for 2020, 2021 and 2022 in order to reduce the risk of shortfalls and penalties in these years. Thus, on March 19, 2019, Council approved executing RA contracts for up to three years. RA supplies remain limited and prices are increasing. SJCE must actively work to diversify its RA contracts to manage costs related to this product and increase its portfolio. SJCE has participated in solicitations of sellers of RA and submitted bids to these market participants. SJCE has also issued an industry standard RA solicitation and received bids from sellers seeking medium to long-term contracts and offering new technologies such as battery storage.

Staff recommends executing medium-term contracts for Resource Adequacy over a period of five to nine years. Staff also recommends executing a limited amount of long-term (10-20 years) RA contracts from projects that utilize clean technologies such as battery storage. This authorization to spend a total of $451,800,000 for RA over the next twenty years should allow SJCE to fully procure all required RA for the next five to seven years, avoid compliance issues, and contribute to increasing the reliability of the electricity service that is provided to San José's residents. Staff intends to negotiate agreements for RA using the Edison Electric Institute ("EEI") Agreement or the Western Systems Power Pool ("WSPP") Agreement with modifications, as appropriate, in consultation with the City Attorney, and subject to the Risk Management Regulations and the appropriation of funds.

State law requires all Community Choice Aggregators including SJCE to enter into agreements for energy storage equal to 1 percent of their annual 2020 peak load by 2020, with installation to take place no later than 2024.[4] The cost of current battery storage projects varies significantly as manufacturing and development costs have been decreasing rapidly and some developers are ahead of others in terms of identifying technologies, business models, and applications that minimize costs.

Staff recommends carefully exploring opportunities to enter into battery storage contracts with those developers able to offer favorable prices. Current market conditions are unfavorable for RA procurement and investing in new battery storage could provide coveted RA capacity that is

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[3] CPUC: Decision 05-10-042, Decision 06-06-064 and Decision 19-02-022
[4] CPUC Decision 13-10-040 [http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M079/K533/79533378.PDF]

needed to comply with increasingly difficult and expensive RA regulatory requirements. SJCE would benefit from participating in RA sale solicitations for storage capacity at reasonable prices and piloting battery storage projects in San José could help reduce reliance on natural gas plants located in San José and across the state. Further, if Council approves the authority, when cost-effective opportunities are offered, SJCE would be able to enter into longer-term contracts that could help satisfy its RA compliance obligations while also contributing to the development of innovative GHG-free battery storage projects.

The main risk associated with entering into long-term battery storage contracts is that the price will likely come down over time similar to what has occurred with solar energy pricing. To mitigate this risk SJCE plans to enter into a small amount of long-term contracts for battery storage projects. At this time, SJCE is recommending that the long-term battery storage projects should represent approximately 3-5% of SJCE's total power supply costs or approximately $10M on an annual basis. SJCE will continue to monitor prices and evaluate opportunities as the technology evolves over time. Another risk is that the technology is relatively new and these projects could have construction and operational problems. To mitigate this risk SJCE will also carefully vet developers and projects during its solicitation processes and select the most qualified developers with a good record of developing quality utility-scale projects. SJCE will also include in its power purchase agreements standard requirements for delay and performance security damages.

EVALUATION AND FOLLOW-UP

Staff will add all executed contracts to its quarterly summaries of executed short, mid, and long-term power supply contracts. As previously reported, this report will include: the counterparty name, the product type, the energy delivery period, the agreement date, and the total contracted amount for the quarter.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the June 4, 2019 City Council meeting.

COORDINATION

This memorandum has been coordinated with the City Attorney's Office, the Finance Department, and the City Manager's Budget Office

COMMISSION RECOMMENDATION/INPUT

There is no commission recommendation or input associated with this action.

FISCAL/POLICY ALIGNMENT

The recommended actions support Climate Smart San José's (action 1.1 Transition to a Renewable Energy Future) and the Envision San José 2040 General Plan (Goal MS-2 and Appendix 8: GHG Reduction Strategy).

COST SUMMARY/IMPLICATIONS

Approving the recommendation will allow SJCE to fully procure for the power supply needs for calendar year 2019 which is expected to cost $245,000,000 and for calendar year 2020 which is expected to cost $302 million. It will also allow SJCE to procure approximately 70 percent of its needs for calendar year 2021, which are expected to amount to $310 million and approximately 45 percent of its needs for calendar year 2022, which are expected to cost $315 million.

Additionally, approving the recommendation will allow SJCE to begin executing long-term power purchase agreements for new renewable projects, which are expected to total approximately $1.1 billion over the 20-year term of the agreements or approximately $50 million annually. This represents approximately half of SJCE's required annual renewable supplies and under 20 percent of SJCE's total annual power supply expected costs.

The projected costs for the medium-term and long-term RA contracts are expected to total $252 million and $200 million respectively. The medium-term contracts represent approximately 100 percent SJCE's expected RA costs over the next 5 years and the long-term RA contracts represent approximately 20 percent of SJCE's annual RA expected costs. Attachment 2 details these costs.

The City appropriates funding annually to cover the projected energy costs. The payments under these contracts are made based on the actual energy delivered, subject to the appropriation of funds.

CEQA

Not a Project, File No. PP17-003, Agreements/Contracts (New or Amended) resulting in no physical changes to the environment.

The approval requested is not a "project" subject to CEQA because it involves the administrative activity of purchasing power that will result in no physical changes to the environment. Even if this approval were a "project" subject to CEQA, the approval requested would be exempt because the activity of purchasing power is purely a financial transaction, and any construction that may occur by a private party in the future in reliance on this approval would be subject to CEQA review by a governmental agency at that time when actual details of any physical proposal would be more than speculative.

/s/
LORI MITCHELL
Director, Community Energy

For questions, please contact Lori Mitchell, Director of Community Energy Department, at (408) 535-4880.

Attachment 1 Key Terms and the Edison Electric Power Purchase Agreement
Attachment 2 Approved Requested Authority

Attachment 1

Key Terms and the Edison Electric Power Purchase Agreement

Overview

Under a long-term power purchase agreement ("PPA"), the buyer or "offtaker" agrees to purchase the energy output from an energy facility, as well as its associated environmental attributes and capacity (if any), for a term of 15 to 20 years at a specified price. A PPA may also provide a hedge against price volatility in the energy market. The seller will not transfer ownership of the facility to the buyer.

The seller is an independent energy producer that will develop, own, and operate an energy project. A PPA provides an assured source of revenue that is essential for the project to become viable. Technically, the energy output from a renewable energy resource could be sold without a long-term agreement by placing bids into the spot market. However, these spot transactions are exposed to fluctuating market prices, which are too unpredictable for investors and developers to commit financing to build the project.

From the buyer's perspective, the spot market is also very risky. Prices can spike and rise well above long-term contract prices. PPAs provide certainty regarding the price of energy and associated attribute for a given period of time.

Cover Page

While all of the information contained in the PPA is important, the Cover Page summarizes certain key terms that are essential to the Agreement. The Cover Page will be completely and accurately filled out before signing the PPA.

Parties

- **Seller**: The seller will usually be a limited liability company that owns and operates the renewable energy facility that will generate the energy and attributes sold to the buyer. Generally, the seller would only own one asset, which is the facility named in the PPA. The seller will likely be a subsidiary of a well-established and reputable renewable energy developer.
- **Buyer**: The buyer will be the City of San José doing business as SJCE, which is permitted under California law to buy energy at wholesale because it is certified as a Community Choice Aggregator. SJCE will purchase the renewable energy facility's output to serve San José's load. SJCE will not own the facility.

Product

Under the PPA, SJCE will purchase some or all of the following products: (1) energy, (2) environmental attributes, and (3) capacity.

- **Energy**: SJCE will purchase from seller all of the electricity that is generated by a specific renewable energy facility (e.g., solar, wind, geothermal, battery storage), or a separately metered portion of a facility.
- **Environmental Attributes**: The production of renewable energy avoids adverse environmental effects such as emission of carbon or other air pollutants. SJCE will also buy other attributes associated with the production of renewable energy that have a value because they are necessary to comply with California renewable energy and greenhouse gas reduction programs.
- **Capacity**: Capacity, also known as resource adequacy ("RA") attributes, is the ability to provide adequate supply during peak load and generation outage conditions. All utilities and CCAs are required to procure RA to meet their customer load obligations.

Term

The term of the PPA allows the seller to amortize the debt and obtain a return on the investment. The PPA is effective and binding on the date that it is signed.

Upon the execution of the PPA, the seller will set out to build the facility. The PPA will include milestones to track construction progress and provide SJCE with liquidated damages if some of those are missed. Two of the most important milestones are the Guaranteed Construction Start Date and Guaranteed Commercial Operation Date.

- **Guaranteed Construction Start Date**: This milestone requires the seller to obtain all permits, execute a construction contract, and obtain interconnection to begin construction of the project by certain date. Any delay in this milestone would cause the expected commercial operation date ("COD") to slip, so SJCE would be entitled to liquidated delay damages. These damages may be returned to the Seller if the Seller nonetheless meets the Guaranteed Commercial Operation Date. SJCE and the seller may mutually agree to extend the Guaranteed Construction Start Date.
- **Guaranteed Commercial Operation Date**: This is the date on which the project has completed all the phases required to safely operate the facility and deliver energy to the transmission system. While the PPA begins at the effective date, the term of the contract is determined by COD (*e.g.*, the seller will deliver energy for 20 years from COD). If the seller misses the Guaranteed COD, the PPA will allow for an extension (usually 120 to 180 days) and SJCE would receive liquidated delay damages. If COD is not completed by the end of the extension time, SJCE may terminate the contract and retain the development security. SJCE and the seller may also mutually agree to extend the Guaranteed COD.

Curtailment Risk

One of the risks associated with a long-term PPA agreement is the curtailment of output. PPAs usually include a right for either party to curtail output without paying damages and/or the energy that was supposed to be delivered.

- **Seller curtailment**: The PPA will grant the seller a right to curtail the facility's output for unplanned outages due to an emergency or force majeure.
- **Buyer curtailment**: The PPA will permit SJCE to curtail deliveries for convenience without compensating the seller up to a certain amount ("Curtailment Cap"). SJCE may want to exercise this right if market prices are negative due to an over-supply of generation on the grid. This may occur during certain hours of the year such as the Spring when there is a lot of renewable energy on the grid and load is low due to mild weather conditions. The Curtailment Cap is usually defined as a yearly output quantity equal to a predetermined number of hours. If the buyer curtailment exceeds the Curtailment Cap, the PPA requires the buyer to pay the PPA price for the curtailed generation.

Guarantees

PPAs include provisions that require the seller to both develop the project and guarantee performance standards for the facility once it is constructed. Those guarantees are established to protect the buyer.

- **Development Security**: This security ensures payment of liquidated damages for delays related to the Guaranteed Construction Start Date. The Development Security must be in the form of cash or a letter of credit that the seller must deliver to buyer, usually within thirty days of the effective date.
- **Performance Guarantee**. The seller must guarantee the performance of the facility by establishing a minimum amount of electricity and associated attributes that the facility is expected to produce over a period of time (usually two years). The Performance Guarantee requires the seller to pay the buyer if the project's output fails to meet the guaranteed deliveries over that period. The guarantee allows recovery of the cost of purchasing replacement power and energy related products in the market if the facility does not generate the expected energy and attributes.

Excess Energy

Under a PPA, the seller must specify the output (in megawatt-hours ("MWhs")) that the facility is expected to produce each year for two reasons. First, as indicated above, the seller must guarantee performance of the facility, and this expected output amount is the basis for that performance. Second, SJCE may not be interested in buying the full output of the facility if it exceeds the estimated output specified in the PPA unless the price is competitive.

To encourage the seller to make an accurate estimate of the expected output, the PPA provides for a reduced contract price for each MWh of energy in excess of the estimated annual output (generally between 105% and 125%) and a zero-dollar rate for any additional product above certain threshold (usually 125%). Also, the PPA will exempt SJCE from any obligation to compensate the seller for delivered energy that exceeds a percentage limit (usually 115%).

In other words, SJCE will have the option to buy energy in excess of the expected output at a discounted price (*e.g.*, if output is 105% to 125% of expected generation) or obtain it for free if the excess energy goes over certain output thresholds. However, SJCE has no obligation to pay the seller if the energy generated exceeds certain limits.

Liquidated Damages

- **Delay Damages:** Damages are assessed for each day of delay, in the amount of the Development Security divided by the maximum number of permitted delay days (usually 120). Failure to start construction within a number of days of the Guaranteed Construction Start Date may constitute an event of default, and buyer has the right to terminate the PPA and retain the Development Security.
- **Shortfall Damages:** If the facility does not meet the guaranteed output during a performance guarantee period, the seller must pay shortfall damages to the buyer. These damages compensate the buyer for the cost of replacement energy and are estimated based on: (1) the difference between the guaranteed output and the energy delivered or not delivered due to an excusable event, (2) multiplied by the positive difference, if any, of the cost of buying replacement energy and the PPA price.
- **Termination Payment:** If there is an event of default from either party, the defaulting party may have to pay a Termination Payment to the other party. These payments are usually estimated in the agreement. *Buyer default*: lost revenues for the developer for the remainder of the PPA. *Seller default*: cost that the buyer is expected to incur in buying replacement power and expenses associated with switching providers. The buyer can draw on the Performance Guarantee if the default is related to poor performance of the facility.

Designated Fund and Appropriation of Funds

The PPA will include provisions that will limit SJCE's liability to the Department of Community Energy's Designated Fund. This fund is used solely for SJCE's costs and expenses. Specifically, the PPA will provide that obligations under the agreement are special limited obligations of SJCE payable solely from the Designated Fund, and that those obligations shall not be a charge upon the revenues or general fund of the City of San José or upon any non-SJCE moneys or other property of the Community Energy Department or the City of San José.

The PPA will also provide that the agreement will not financially bind future governing bodies and will not constitute an obligation of future legislative bodies of the City to appropriate funds for purposes of the PPA.

Project Attributes

- Counterparty and experience
- Technology (solar, wind, geothermal, etc.)
- Price $/MWh
- Contract quantity (MWh)
- Commercial operation date (COD)
- Hourly generation profile
- Project capacity (MW) and RA value

- Project location & congestion costs
- Curtailment risk
- CAISO scheduling
- Use of prevailing wages for project construction
- Status of permitting & CEQA

Master Power Purchase & Sale Agreement

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MASTER POWER PURCHASE AND SALES AGREEMENT

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MASTER POWER PURCHASE AND SALE AGREEMENT

COVER SHEET

This *Master Power Purchase and Sale Agreement* ("*Master Agreement*") is made as of the following date: _____ ("Effective Date"). The *Master Agreement*, together with the exhibits, schedules and any written supplements hereto, the Party A Tariff, if any, the Party B Tariff, if any, any designated collateral, credit support or margin agreement or similar arrangement between the Parties and all Transactions (including any confirmations accepted in accordance with Section 2.3 hereto) shall be referred to as the "Agreement." The Parties to this *Master Agreement* are the following:

Name ("_____" or "Party A")

All Notices:

Street: _____

City: _____Zip: _____

Attn: Contract Administration
Phone: _____
Facsimile: _____
Duns: _____
Federal Tax ID Number: _____

Invoices:
Attn: _____
Phone: _____
Facsimile: _____

Scheduling:
Attn: _____
Phone: _____
Facsimile: _____

Payments:
Attn: _____
Phone: _____
Facsimile: _____

Wire Transfer:
BNK: _____
ABA: _____
ACCT: _____

Credit and Collections:
Attn: _____
Phone: _____
Facsimile: _____

With additional Notices of an Event of Default or Potential Event of Default to:
Attn: _____
Phone: _____
Facsimile: _____

Name ("Counterparty" or "Party B")

All Notices:

Street: _____

City: _____Zip: _____

Attn: Contract Administration
Phone: _____
Facsimile: _____
Duns: _____
Federal Tax ID Number: _____

Invoices:
Attn: _____
Phone: _____
Facsimile: _____

Scheduling:
Attn: _____
Phone: _____
Facsimile: _____

Payments:
Attn: _____
Phone: _____
Facsimile: _____

Wire Transfer:
BNK: _____
ABA: _____
ACCT: _____

Credit and Collections:
Attn: _____
Phone: _____
Facsimile: _____

With additional Notices of an Event of Default or Potential Event of Default to:
Attn: _____
Phone: _____
Facsimile: _____

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The Parties hereby agree that the General Terms and Conditions are incorporated herein, and to the following provisions as provided for in the General Terms and Conditions:

Party A Tariff	Tariff _____	Dated _____	Docket Number _____
Party B Tariff	Tariff _____	Dated _____	Docket Number _____

Article Two

Transaction Terms and Conditions

[] Optional provision in Section 2.4. If not checked, inapplicable.

Article Four

Remedies for Failure to Deliver or Receive

[] Accelerated Payment of Damages. If not checked, inapplicable.

Article Five

Events of Default; Remedies

[] Cross Default for Party A:

[] Party A:_____ Cross Default Amount $_____

[] Other Entity:_____ Cross Default Amount $_____

[] Cross Default for Party B:

[] Party B:_____ Cross Default Amount $_____

[] Other Entity:_____ Cross Default Amount $_____

5.6 Closeout Setoff

[] Option A (Applicable if no other selection is made.)

[] Option B - Affiliates shall have the meaning set forth in the Agreement unless otherwise specified as follows:_____
_____

[] Option C (No Setoff)

Article 8

Credit and Collateral Requirements

8.1 Party A Credit Protection:

(a) Financial Information:

[] Option A
[] Option B Specify: _____
[] Option C Specify: _____

(b) Credit Assurances:

[] Not Applicable
[] Applicable

(c) Collateral Threshold:

[] Not Applicable
[] Applicable

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If applicable, complete the following:

Party B Collateral Threshold: $ _____; provided, however, that Party B's Collateral Threshold shall be zero if an Event of Default or Potential Event of Default with respect to Party B has occurred and is continuing.

Party B Independent Amount: $_____

Party B Rounding Amount: $_____

(d) Downgrade Event:

[] Not Applicable
[] Applicable

If applicable, complete the following:

[] It shall be a Downgrade Event for Party B if Party B's Credit Rating falls below _____ from S&P or _____ from Moody's or if Party B is not rated by either S&P or Moody's

[] Other:
Specify:_____

(e) Guarantor for Party B:_____

Guarantee Amount:_____

8.2 Party B Credit Protection:

(a) Financial Information:

[] Option A
[] Option B Specify: _____
[] Option C Specify: _____

(b) Credit Assurances:

[] Not Applicable
[] Applicable

(c) Collateral Threshold:

[] Not Applicable
[] Applicable

If applicable, complete the following:

Party A Collateral Threshold: $ _____; provided, however, that Party A's Collateral Threshold shall be zero if an Event of Default or Potential Event of Default with respect to Party A has occurred and is continuing.

Party A Independent Amount: $_____

Party A Rounding Amount: $_____

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(d) Downgrade Event:

[] Not Applicable
[] Applicable

If applicable, complete the following:

[] It shall be a Downgrade Event for Party A if Party A's Credit Rating falls below _____ from S&P or _____ from Moody's or if Party A is not rated by either S&P or Moody's

[] Other:
Specify:_____

(e) Guarantor for Party A:_____

Guarantee Amount:_____

Article 10

Confidentiality [] Confidentiality Applicable If not checked, inapplicable.

Schedule M

[] Party A is a Governmental Entity or Public Power System
[] Party B is a Governmental Entity or Public Power System
[] Add Section 3.6. If not checked, inapplicable
[] Add Section 8.6. If not checked, inapplicable

Other Changes Specify, if any: _____

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IN WITNESS WHEREOF, the Parties have caused this Master Agreement to be duly executed as of the date first above written.

Party A Name	Party B Name
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

DISCLAIMER: This Master Power Purchase and Sale Agreement was prepared by a committee of representatives of Edison Electric Institute ("EEI") and National Energy Marketers Association ("NEM") member companies to facilitate orderly trading in and development of wholesale power markets. Neither EEI nor NEM nor any member company nor any of their agents, representatives or attorneys shall be responsible for its use, or any damages resulting therefrom. By providing this Agreement EEI and NEM do not offer legal advice and all users are urged to consult their own legal counsel to ensure that their commercial objectives will be achieved and their legal interests are adequately protected.

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GENERAL TERMS AND CONDITIONS

ARTICLE ONE: GENERAL DEFINITIONS

1.1 "Affiliate" means, with respect to any person, any other person (other than an individual) that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such person. For this purpose, "control" means the direct or indirect ownership of fifty percent (50%) or more of the outstanding capital stock or other equity interests having ordinary voting power.

1.2 "Agreement" has the meaning set forth in the Cover Sheet.

1.3 "Bankrupt" means with respect to any entity, such entity (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they fall due.

1.4 "Business Day" means any day except a Saturday, Sunday, or a Federal Reserve Bank holiday. A Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business. The relevant Party, in each instance unless otherwise specified, shall be the Party from whom the notice, payment or delivery is being sent and by whom the notice or payment or delivery is to be received.

1.5 "Buyer" means the Party to a Transaction that is obligated to purchase and receive, or cause to be received, the Product, as specified in the Transaction.

1.6 "Call Option" means an Option entitling, but not obligating, the Option Buyer to purchase and receive the Product from the Option Seller at a price equal to the Strike Price for the Delivery Period for which the Option may be exercised, all as specified in the Transaction. Upon proper exercise of the Option by the Option Buyer, the Option Seller will be obligated to sell and deliver the Product for the Delivery Period for which the Option has been exercised.

1.7 "Claiming Party" has the meaning set forth in Section 3.3.

1.8 "Claims" means all third party claims or actions, threatened or filed and, whether groundless, false, fraudulent or otherwise, that directly or indirectly relate to the subject matter of an indemnity, and the resulting losses, damages, expenses, attorneys' fees and court costs, whether incurred by settlement or otherwise, and whether such claims or actions are threatened or filed prior to or after the termination of this Agreement.

1.9 "Confirmation" has the meaning set forth in Section 2.3.

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1.10 "Contract Price" means the price in $U.S. (unless otherwise provided for) to be paid by Buyer to Seller for the purchase of the Product, as specified in the Transaction.

1.11 "Costs" means, with respect to the Non-Defaulting Party, brokerage fees, commissions and other similar third party transaction costs and expenses reasonably incurred by such Party either in terminating any arrangement pursuant to which it has hedged its obligations or entering into new arrangements which replace a Terminated Transaction; and all reasonable attorneys' fees and expenses incurred by the Non-Defaulting Party in connection with the termination of a Transaction.

1.12 "Credit Rating" means, with respect to any entity, the rating then assigned to such entity's unsecured, senior long-term debt obligations (not supported by third party credit enhancements) or if such entity does not have a rating for its senior unsecured long-term debt, then the rating then assigned to such entity as an issues rating by S&P, Moody's or any other rating agency agreed by the Parties as set forth in the Cover Sheet.

1.13 "Cross Default Amount" means the cross default amount, if any, set forth in the Cover Sheet for a Party.

1.14 "Defaulting Party" has the meaning set forth in Section 5.1.

1.15 "Delivery Period" means the period of delivery for a Transaction, as specified in the Transaction.

1.16 "Delivery Point" means the point at which the Product will be delivered and received, as specified in the Transaction.

1.17 "Downgrade Event" has the meaning set forth on the Cover Sheet.

1.18 "Early Termination Date" has the meaning set forth in Section 5.2.

1.19 "Effective Date" has the meaning set forth on the Cover Sheet.

1.20 "Equitable Defenses" means any bankruptcy, insolvency, reorganization and other laws affecting creditors' rights generally, and with regard to equitable remedies, the discretion of the court before which proceedings to obtain same may be pending.

1.21 "Event of Default" has the meaning set forth in Section 5.1.

1.22 "FERC" means the Federal Energy Regulatory Commission or any successor government agency.

1.23 "Force Majeure" means an event or circumstance which prevents one Party from performing its obligations under one or more Transactions, which event or circumstance was not anticipated as of the date the Transaction was agreed to, which is not within the reasonable control of, or the result of the negligence of, the Claiming Party, and which, by the exercise of due diligence, the Claiming Party is unable to overcome or avoid or cause to be avoided. Force Majeure shall not be based on (i) the loss of Buyer's markets; (ii) Buyer's inability economically

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to use or resell the Product purchased hereunder; (iii) the loss or failure of Seller's supply; or (iv) Seller's ability to sell the Product at a price greater than the Contract Price. Neither Party may raise a claim of Force Majeure based in whole or in part on curtailment by a Transmission Provider unless (i) such Party has contracted for firm transmission with a Transmission Provider for the Product to be delivered to or received at the Delivery Point and (ii) such curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the Transmission Provider's tariff; provided, however, that existence of the foregoing factors shall not be sufficient to conclusively or presumptively prove the existence of a Force Majeure absent a showing of other facts and circumstances which in the aggregate with such factors establish that a Force Majeure as defined in the first sentence hereof has occurred. The applicability of Force Majeure to the Transaction is governed by the terms of the Products and Related Definitions contained in Schedule P.

1.24 "Gains" means, with respect to any Party, an amount equal to the present value of the economic benefit to it, if any (exclusive of Costs), resulting from the termination of a Terminated Transaction, determined in a commercially reasonable manner.

1.25 "Guarantor" means, with respect to a Party, the guarantor, if any, specified for such Party on the Cover Sheet.

1.26 "Interest Rate" means, for any date, the lesser of (a) the per annum rate of interest equal to the prime lending rate as may from time to time be published in *The Wall Street Journal* under "Money Rates" on such day (or if not published on such day on the most recent preceding day on which published), plus two percent (2%) and (b) the maximum rate permitted by applicable law.

1.27 "Letter(s) of Credit" means one or more irrevocable, transferable standby letters of credit issued by a U.S. commercial bank or a foreign bank with a U.S. branch with such bank having a credit rating of at least A- from S&P or A3 from Moody's, in a form acceptable to the Party in whose favor the letter of credit is issued. Costs of a Letter of Credit shall be borne by the applicant for such Letter of Credit.

1.28 "Losses" means, with respect to any Party, an amount equal to the present value of the economic loss to it, if any (exclusive of Costs), resulting from termination of a Terminated Transaction, determined in a commercially reasonable manner.

1.29 "Master Agreement" has the meaning set forth on the Cover Sheet.

1.30 "Moody's" means Moody's Investor Services, Inc. or its successor.

1.31 "NERC Business Day" means any day except a Saturday, Sunday or a holiday as defined by the North American Electric Reliability Council or any successor organization thereto. A NERC Business Day shall open at 8:00 a.m. and close at 5:00 p.m. local time for the relevant Party's principal place of business. The relevant Party, in each instance unless otherwise specified, shall be the Party from whom the notice, payment or delivery is being sent and by whom the notice or payment or delivery is to be received.

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1.32 “Non-Defaulting Party” has the meaning set forth in Section 5.2.

1.33 “Offsetting Transactions” mean any two or more outstanding Transactions, having the same or overlapping Delivery Period(s), Delivery Point and payment date, where under one or more of such Transactions, one Party is the Seller, and under the other such Transaction(s), the same Party is the Buyer.

1.34 “Option” means the right but not the obligation to purchase or sell a Product as specified in a Transaction.

1.35 “Option Buyer” means the Party specified in a Transaction as the purchaser of an option, as defined in Schedule P.

1.36 “Option Seller” means the Party specified in a Transaction as the seller of an option , as defined in Schedule P.

1.37 “Party A Collateral Threshold” means the collateral threshold, if any, set forth in the Cover Sheet for Party A.

1.38 “Party B Collateral Threshold” means the collateral threshold, if any, set forth in the Cover Sheet for Party B.

1.39 “Party A Independent Amount” means the amount , if any, set forth in the Cover Sheet for Party A.

1.40 “Party B Independent Amount” means the amount , if any, set forth in the Cover Sheet for Party B.

1.41 “Party A Rounding Amount” means the amount, if any, set forth in the Cover Sheet for Party A.

1.42 “Party B Rounding Amount” means the amount, if any, set forth in the Cover Sheet for Party B.

1.43 “Party A Tariff” means the tariff, if any, specified in the Cover Sheet for Party A.

1.44 “Party B Tariff” means the tariff, if any, specified in the Cover Sheet for Party B.

1.45 “Performance Assurance” means collateral in the form of either cash, Letter(s) of Credit, or other security acceptable to the Requesting Party.

1.46 “Potential Event of Default” means an event which, with notice or passage of time or both, would constitute an Event of Default.

1.47 “Product” means electric capacity, energy or other product(s) related thereto as specified in a Transaction by reference to a Product listed in Schedule P hereto or as otherwise specified by the Parties in the Transaction.

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1.48 "Put Option" means an Option entitling, but not obligating, the Option Buyer to sell and deliver the Product to the Option Seller at a price equal to the Strike Price for the Delivery Period for which the option may be exercised, all as specified in a Transaction. Upon proper exercise of the Option by the Option Buyer, the Option Seller will be obligated to purchase and receive the Product.

1.49 "Quantity" means that quantity of the Product that Seller agrees to make available or sell and deliver, or cause to be delivered, to Buyer, and that Buyer agrees to purchase and receive, or cause to be received, from Seller as specified in the Transaction.

1.50 "Recording" has the meaning set forth in Section 2.4.

1.51 "Replacement Price" means the price at which Buyer, acting in a commercially reasonable manner, purchases at the Delivery Point a replacement for any Product specified in a Transaction but not delivered by Seller, plus (i) costs reasonably incurred by Buyer in purchasing such substitute Product and (ii) additional transmission charges, if any, reasonably incurred by Buyer to the Delivery Point, or at Buyer's option, the market price at the Delivery Point for such Product not delivered as determined by Buyer in a commercially reasonable manner; provided, however, in no event shall such price include any penalties, ratcheted demand or similar charges, nor shall Buyer be required to utilize or change its utilization of its owned or controlled assets or market positions to minimize Seller's liability. For the purposes of this definition, Buyer shall be considered to have purchased replacement Product to the extent Buyer shall have entered into one or more arrangements in a commercially reasonable manner whereby Buyer repurchases its obligation to sell and deliver the Product to another party at the Delivery Point.

1.52 "S&P" means the Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) or its successor.

1.53 "Sales Price" means the price at which Seller, acting in a commercially reasonable manner, resells at the Delivery Point any Product not received by Buyer, deducting from such proceeds any (i) costs reasonably incurred by Seller in reselling such Product and (ii) additional transmission charges, if any, reasonably incurred by Seller in delivering such Product to the third party purchasers, or at Seller's option, the market price at the Delivery Point for such Product not received as determined by Seller in a commercially reasonable manner; provided, however, in no event shall such price include any penalties, ratcheted demand or similar charges, nor shall Seller be required to utilize or change its utilization of its owned or controlled assets, including contractual assets, or market positions to minimize Buyer's liability. For purposes of this definition, Seller shall be considered to have resold such Product to the extent Seller shall have entered into one or more arrangements in a commercially reasonable manner whereby Seller repurchases its obligation to purchase and receive the Product from another party at the Delivery Point.

1.54 "Schedule" or "Scheduling" means the actions of Seller, Buyer and/or their designated representatives, including each Party's Transmission Providers, if applicable, of notifying, requesting and confirming to each other the quantity and type of Product to be delivered on any given day or days during the Delivery Period at a specified Delivery Point.

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1.55 "Seller" means the Party to a Transaction that is obligated to sell and deliver, or cause to be delivered, the Product, as specified in the Transaction.

1.56 "Settlement Amount" means, with respect to a Transaction and the Non-Defaulting Party, the Losses or Gains, and Costs, expressed in U.S. Dollars, which such party incurs as a result of the liquidation of a Terminated Transaction pursuant to Section 5.2.

1.57 "Strike Price" means the price to be paid for the purchase of the Product pursuant to an Option.

1.58 "Terminated Transaction" has the meaning set forth in Section 5.2.

1.59 "Termination Payment" has the meaning set forth in Section 5.3.

1.60 "Transaction" means a particular transaction agreed to by the Parties relating to the sale and purchase of a Product pursuant to this Master Agreement.

1.61 "Transmission Provider" means any entity or entities transmitting or transporting the Product on behalf of Seller or Buyer to or from the Delivery Point in a particular Transaction.

ARTICLE TWO: TRANSACTION TERMS AND CONDITIONS

2.1 Transactions. A Transaction shall be entered into upon agreement of the Parties orally or, if expressly required by either Party with respect to a particular Transaction, in writing, including an electronic means of communication. Each Party agrees not to contest, or assert any defense to, the validity or enforceability of the Transaction entered into in accordance with this Master Agreement (i) based on any law requiring agreements to be in writing or to be signed by the parties, or (ii) based on any lack of authority of the Party or any lack of authority of any employee of the Party to enter into a Transaction.

2.2 Governing Terms. Unless otherwise specifically agreed, each Transaction between the Parties shall be governed by this Master Agreement. This Master Agreement (including all exhibits, schedules and any written supplements hereto), , the Party A Tariff, if any, and the Party B Tariff, if any, any designated collateral, credit support or margin agreement or similar arrangement between the Parties and all Transactions (including any Confirmations accepted in accordance with Section 2.3) shall form a single integrated agreement between the Parties. Any inconsistency between any terms of this Master Agreement and any terms of the Transaction shall be resolved in favor of the terms of such Transaction.

2.3 Confirmation. Seller may confirm a Transaction by forwarding to Buyer by facsimile within three (3) Business Days after the Transaction is entered into a confirmation ("Confirmation") substantially in the form of Exhibit A. If Buyer objects to any term(s) of such Confirmation, Buyer shall notify Seller in writing of such objections within two (2) Business Days of Buyer's receipt thereof, failing which Buyer shall be deemed to have accepted the terms as sent. If Seller fails to send a Confirmation within three (3) Business Days after the Transaction is entered into, a Confirmation substantially in the form of Exhibit A, may be forwarded by Buyer to Seller. If Seller objects to any term(s) of such Confirmation, Seller shall notify Buyer of such objections within two (2) Business Days of Seller's receipt thereof, failing

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which Seller shall be deemed to have accepted the terms as sent. If Seller and Buyer each send a Confirmation and neither Party objects to the other Party's Confirmation within two (2) Business Days of receipt, Seller's Confirmation shall be deemed to be accepted and shall be the controlling Confirmation, unless (i) Seller's Confirmation was sent more than three (3) Business Days after the Transaction was entered into and (ii) Buyer's Confirmation was sent prior to Seller's Confirmation, in which case Buyer's Confirmation shall be deemed to be accepted and shall be the controlling Confirmation. Failure by either Party to send or either Party to return an executed Confirmation or any objection by either Party shall not invalidate the Transaction agreed to by the Parties.

2.4 Additional Confirmation Terms. If the Parties have elected on the Cover Sheet to make this Section 2.4 applicable to this Master Agreement, when a Confirmation contains provisions, other than those provisions relating to the commercial terms of the Transaction (e.g., price or special transmission conditions), which modify or supplement the general terms and conditions of this Master Agreement (e.g., arbitration provisions or additional representations and warranties), such provisions shall not be deemed to be accepted pursuant to Section 2.3 unless agreed to either orally or in writing by the Parties; provided that the foregoing shall not invalidate any Transaction agreed to by the Parties.

2.5 Recording. Unless a Party expressly objects to a Recording (defined below) at the beginning of a telephone conversation, each Party consents to the creation of a tape or electronic recording ("Recording") of all telephone conversations between the Parties to this Master Agreement, and that any such Recordings will be retained in confidence, secured from improper access, and may be submitted in evidence in any proceeding or action relating to this Agreement. Each Party waives any further notice of such monitoring or recording, and agrees to notify its officers and employees of such monitoring or recording and to obtain any necessary consent of such officers and employees. The Recording, and the terms and conditions described therein, if admissible, shall be the controlling evidence for the Parties' agreement with respect to a particular Transaction in the event a Confirmation is not fully executed (or deemed accepted) by both Parties. Upon full execution (or deemed acceptance) of a Confirmation, such Confirmation shall control in the event of any conflict with the terms of a Recording, or in the event of any conflict with the terms of this Master Agreement.

ARTICLE THREE: OBLIGATIONS AND DELIVERIES

3.1 Seller's and Buyer's Obligations. With respect to each Transaction, Seller shall sell and deliver, or cause to be delivered, and Buyer shall purchase and receive, or cause to be received, the Quantity of the Product at the Delivery Point, and Buyer shall pay Seller the Contract Price; provided, however, with respect to Options, the obligations set forth in the preceding sentence shall only arise if the Option Buyer exercises its Option in accordance with its terms. Seller shall be responsible for any costs or charges imposed on or associated with the Product or its delivery of the Product up to the Delivery Point. Buyer shall be responsible for any costs or charges imposed on or associated with the Product or its receipt at and from the Delivery Point.

3.2 Transmission and Scheduling. Seller shall arrange and be responsible for transmission service to the Delivery Point and shall Schedule or arrange for Scheduling services

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with its Transmission Providers, as specified by the Parties in the Transaction, or in the absence thereof, in accordance with the practice of the Transmission Providers, to deliver the Product to the Delivery Point. Buyer shall arrange and be responsible for transmission service at and from the Delivery Point and shall Schedule or arrange for Scheduling services with its Transmission Providers to receive the Product at the Delivery Point.

3.3 Force Majeure. To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under the Transaction and such Party (the "Claiming Party") gives notice and details of the Force Majeure to the other Party as soon as practicable, then, unless the terms of the Product specify otherwise, the Claiming Party shall be excused from the performance of its obligations with respect to such Transaction (other than the obligation to make payments then due or becoming due with respect to performance prior to the Force Majeure). The Claiming Party shall remedy the Force Majeure with all reasonable dispatch. The non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

ARTICLE FOUR: REMEDIES FOR FAILURE TO DELIVER/RECEIVE

4.1 Seller Failure. If Seller fails to schedule and/or deliver all or part of the Product pursuant to a Transaction, and such failure is not excused under the terms of the Product or by Buyer's failure to perform, then Seller shall pay Buyer, on the date payment would otherwise be due in respect of the month in which the failure occurred or, if "Accelerated Payment of Damages" is specified on the Cover Sheet, within five (5) Business Days of invoice receipt, an amount for such deficiency equal to the positive difference, if any, obtained by subtracting the Contract Price from the Replacement Price. The invoice for such amount shall include a written statement explaining in reasonable detail the calculation of such amount.

4.2 Buyer Failure. If Buyer fails to schedule and/or receive all or part of the Product pursuant to a Transaction and such failure is not excused under the terms of the Product or by Seller's failure to perform, then Buyer shall pay Seller, on the date payment would otherwise be due in respect of the month in which the failure occurred or, if "Accelerated Payment of Damages" is specified on the Cover Sheet, within five (5) Business Days of invoice receipt, an amount for such deficiency equal to the positive difference, if any, obtained by subtracting the Sales Price from the Contract Price. The invoice for such amount shall include a written statement explaining in reasonable detail the calculation of such amount.

ARTICLE FIVE: EVENTS OF DEFAULT; REMEDIES

5.1 Events of Default. An "Event of Default" shall mean, with respect to a Party (a "Defaulting Party"), the occurrence of any of the following:

(a) the failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within three (3) Business Days after written notice;

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(b) any representation or warranty made by such Party herein is false or misleading in any material respect when made or when deemed made or repeated;

(c) the failure to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default, and except for such Party's obligations to deliver or receive the Product, the exclusive remedy for which is provided in Article Four) if such failure is not remedied within three (3) Business Days after written notice;

(d) such Party becomes Bankrupt;

(e) the failure of such Party to satisfy the creditworthiness/collateral requirements agreed to pursuant to Article Eight hereof;

(f) such Party consolidates or amalgamates with, or merges with or into, or transfers all or substantially all of its assets to, another entity and, at the time of such consolidation, amalgamation, merger or transfer, the resulting, surviving or transferee entity fails to assume all the obligations of such Party under this Agreement to which it or its predecessor was a party by operation of law or pursuant to an agreement reasonably satisfactory to the other Party;

(g) if the applicable cross default section in the Cover Sheet is indicated for such Party, the occurrence and continuation of (i) a default, event of default or other similar condition or event in respect of such Party or any other party specified in the Cover Sheet for such Party under one or more agreements or instruments, individually or collectively, relating to indebtedness for borrowed money in an aggregate amount of not less than the applicable Cross Default Amount (as specified in the Cover Sheet), which results in such indebtedness becoming, or becoming capable at such time of being declared, immediately due and payable or (ii) a default by such Party or any other party specified in the Cover Sheet for such Party in making on the due date therefor one or more payments, individually or collectively, in an aggregate amount of not less than the applicable Cross Default Amount (as specified in the Cover Sheet);

(h) with respect to such Party's Guarantor, if any:

(i) if any representation or warranty made by a Guarantor in connection with this Agreement is false or misleading in any material respect when made or when deemed made or repeated;

(ii) the failure of a Guarantor to make any payment required or to perform any other material covenant or obligation in any guaranty made in connection with this Agreement and such failure shall not be remedied within three (3) Business Days after written notice;

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(iii) a Guarantor becomes Bankrupt;

(iv) the failure of a Guarantor's guaranty to be in full force and effect for purposes of this Agreement (other than in accordance with its terms) prior to the satisfaction of all obligations of such Party under each Transaction to which such guaranty shall relate without the written consent of the other Party; or

(v) a Guarantor shall repudiate, disaffirm, disclaim, or reject, in whole or in part, or challenge the validity of any guaranty.

5.2 Declaration of an Early Termination Date and Calculation of Settlement Amounts. If an Event of Default with respect to a Defaulting Party shall have occurred and be continuing, the other Party (the "Non-Defaulting Party") shall have the right (i) to designate a day, no earlier than the day such notice is effective and no later than 20 days after such notice is effective, as an early termination date ("Early Termination Date") to accelerate all amounts owing between the Parties and to liquidate and terminate all, but not less than all, Transactions (each referred to as a "Terminated Transaction") between the Parties, (ii) withhold any payments due to the Defaulting Party under this Agreement and (iii) suspend performance. The Non-Defaulting Party shall calculate, in a commercially reasonable manner, a Settlement Amount for each such Terminated Transaction as of the Early Termination Date (or, to the extent that in the reasonable opinion of the Non-Defaulting Party certain of such Terminated Transactions are commercially impracticable to liquidate and terminate or may not be liquidated and terminated under applicable law on the Early Termination Date, as soon thereafter as is reasonably practicable).

5.3 Net Out of Settlement Amounts. The Non-Defaulting Party shall aggregate all Settlement Amounts into a single amount by: netting out (a) all Settlement Amounts that are due to the Defaulting Party, plus, at the option of the Non-Defaulting Party, any cash or other form of security then available to the Non-Defaulting Party pursuant to Article Eight, plus any or all other amounts due to the Defaulting Party under this Agreement against (b) all Settlement Amounts that are due to the Non-Defaulting Party, plus any or all other amounts due to the Non-Defaulting Party under this Agreement, so that all such amounts shall be netted out to a single liquidated amount (the "Termination Payment") payable by one Party to the other. The Termination Payment shall be due to or due from the Non-Defaulting Party as appropriate.

5.4 Notice of Payment of Termination Payment. As soon as practicable after a liquidation, notice shall be given by the Non-Defaulting Party to the Defaulting Party of the amount of the Termination Payment and whether the Termination Payment is due to or due from the Non-Defaulting Party. The notice shall include a written statement explaining in reasonable detail the calculation of such amount. The Termination Payment shall be made by the Party that owes it within two (2) Business Days after such notice is effective.

5.5 Disputes With Respect to Termination Payment. If the Defaulting Party disputes the Non-Defaulting Party's calculation of the Termination Payment, in whole or in part, the Defaulting Party shall, within two (2) Business Days of receipt of Non-Defaulting Party's calculation of the Termination Payment, provide to the Non-Defaulting Party a detailed written

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explanation of the basis for such dispute; provided, however, that if the Termination Payment is due from the Defaulting Party, the Defaulting Party shall first transfer Performance Assurance to the Non-Defaulting Party in an amount equal to the Termination Payment.

5.6 Closeout Setoffs.

Option A: After calculation of a Termination Payment in accordance with Section 5.3, if the Defaulting Party would be owed the Termination Payment, the Non-Defaulting Party shall be entitled, at its option and in its discretion, to (i) set off against such Termination Payment any amounts due and owing by the Defaulting Party to the Non-Defaulting Party under any other agreements, instruments or undertakings between the Defaulting Party and the Non-Defaulting Party and/or (ii) to the extent the Transactions are not yet liquidated in accordance with Section 5.2, withhold payment of the Termination Payment to the Defaulting Party. The remedy provided for in this Section shall be without prejudice and in addition to any right of setoff, combination of accounts, lien or other right to which any Party is at any time otherwise entitled (whether by operation of law, contract or otherwise).

Option B: After calculation of a Termination Payment in accordance with Section 5.3, if the Defaulting Party would be owed the Termination Payment, the Non-Defaulting Party shall be entitled, at its option and in its discretion, to (i) set off against such Termination Payment any amounts due and owing by the Defaulting Party or any of its Affiliates to the Non-Defaulting Party or any of its Affiliates under any other agreements, instruments or undertakings between the Defaulting Party or any of its Affiliates and the Non-Defaulting Party or any of its Affiliates and/or (ii) to the extent the Transactions are not yet liquidated in accordance with Section 5.2, withhold payment of the Termination Payment to the Defaulting Party. The remedy provided for in this Section shall be without prejudice and in addition to any right of setoff, combination of accounts, lien or other right to which any Party is at any time otherwise entitled (whether by operation of law, contract or otherwise).

Option C: Neither Option A nor B shall apply.

5.7 Suspension of Performance. Notwithstanding any other provision of this Master Agreement, if (a) an Event of Default or (b) a Potential Event of Default shall have occurred and be continuing, the Non-Defaulting Party, upon written notice to the Defaulting Party, shall have the right (i) to suspend performance under any or all Transactions; provided, however, in no event shall any such suspension continue for longer than ten (10) NERC Business Days with respect to any single Transaction unless an early Termination Date shall have been declared and notice thereof pursuant to Section 5.2 given, and (ii) to the extent an Event of Default shall have occurred and be continuing to exercise any remedy available at law or in equity.

ARTICLE SIX: PAYMENT AND NETTING

6.1 Billing Period. Unless otherwise specifically agreed upon by the Parties in a Transaction, the calendar month shall be the standard period for all payments under this Agreement (other than Termination Payments and, if "Accelerated Payment of Damages" is specified by the Parties in the Cover Sheet, payments pursuant to Section 4.1 or 4.2 and Option premium payments pursuant to Section 6.7). As soon as practicable after the end of each month,

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each Party will render to the other Party an invoice for the payment obligations, if any, incurred hereunder during the preceding month.

6.2 Timeliness of Payment. Unless otherwise agreed by the Parties in a Transaction, all invoices under this Master Agreement shall be due and payable in accordance with each Party's invoice instructions on or before the later of the twentieth (20th) day of each month, or tenth (10th) day after receipt of the invoice or, if such day is not a Business Day, then on the next Business Day. Each Party will make payments by electronic funds transfer, or by other mutually agreeable method(s), to the account designated by the other Party. Any amounts not paid by the due date will be deemed delinquent and will accrue interest at the Interest Rate, such interest to be calculated from and including the due date to but excluding the date the delinquent amount is paid in full.

6.3 Disputes and Adjustments of Invoices. A Party may, in good faith, dispute the correctness of any invoice or any adjustment to an invoice, rendered under this Agreement or adjust any invoice for any arithmetic or computational error within twelve (12) months of the date the invoice, or adjustment to an invoice, was rendered. In the event an invoice or portion thereof, or any other claim or adjustment arising hereunder, is disputed, payment of the undisputed portion of the invoice shall be required to be made when due, with notice of the objection given to the other Party. Any invoice dispute or invoice adjustment shall be in writing and shall state the basis for the dispute or adjustment. Payment of the disputed amount shall not be required until the dispute is resolved. Upon resolution of the dispute, any required payment shall be made within two (2) Business Days of such resolution along with interest accrued at the Interest Rate from and including the due date to but excluding the date paid. Inadvertent overpayments shall be returned upon request or deducted by the Party receiving such overpayment from subsequent payments, with interest accrued at the Interest Rate from and including the date of such overpayment to but excluding the date repaid or deducted by the Party receiving such overpayment. Any dispute with respect to an invoice is waived unless the other Party is notified in accordance with this Section 6.3 within twelve (12) months after the invoice is rendered or any specific adjustment to the invoice is made. If an invoice is not rendered within twelve (12) months after the close of the month during which performance of a Transaction occurred, the right to payment for such performance is waived.

6.4 Netting of Payments. The Parties hereby agree that they shall discharge mutual debts and payment obligations due and owing to each other on the same date pursuant to all Transactions through netting, in which case all amounts owed by each Party to the other Party for the purchase and sale of Products during the monthly billing period under this Master Agreement, including any related damages calculated pursuant to Article Four (unless one of the Parties elects to accelerate payment of such amounts as permitted by Article Four), interest, and payments or credits, shall be netted so that only the excess amount remaining due shall be paid by the Party who owes it.

6.5 Payment Obligation Absent Netting. If no mutual debts or payment obligations exist and only one Party owes a debt or obligation to the other during the monthly billing period, including, but not limited to, any related damage amounts calculated pursuant to Article Four, interest, and payments or credits, that Party shall pay such sum in full when due.

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6.6 Security. Unless the Party benefiting from Performance Assurance or a guaranty notifies the other Party in writing, and except in connection with a liquidation and termination in accordance with Article Five, all amounts netted pursuant to this Article Six shall not take into account or include any Performance Assurance or guaranty which may be in effect to secure a Party's performance under this Agreement.

6.7 Payment for Options. The premium amount for the purchase of an Option shall be paid within two (2) Business Days of receipt of an invoice from the Option Seller. Upon exercise of an Option, payment for the Product underlying such Option shall be due in accordance with Section 6.1.

6.8 Transaction Netting. If the Parties enter into one or more Transactions, which in conjunction with one or more other outstanding Transactions, constitute Offsetting Transactions, then all such Offsetting Transactions may by agreement of the Parties, be netted into a single Transaction under which:

(a) the Party obligated to deliver the greater amount of Energy will deliver the difference between the total amount it is obligated to deliver and the total amount to be delivered to it under the Offsetting Transactions, and

(b) the Party owing the greater aggregate payment will pay the net difference owed between the Parties.

Each single Transaction resulting under this Section shall be deemed part of the single, indivisible contractual arrangement between the parties, and once such resulting Transaction occurs, outstanding obligations under the Offsetting Transactions which are satisfied by such offset shall terminate.

ARTICLE SEVEN: LIMITATIONS

7.1 Limitation of Remedies, Liability and Damages. EXCEPT AS SET FORTH HEREIN, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY, THE OBLIGOR'S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. IF NO REMEDY OR MEASURE OF DAMAGES IS EXPRESSLY PROVIDED HEREIN OR IN A TRANSACTION, THE OBLIGOR'S LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. UNLESS EXPRESSLY HEREIN PROVIDED, NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR

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OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID HEREUNDER ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OR OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT AND THE DAMAGES CALCULATED HEREUNDER CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS.

ARTICLE EIGHT: CREDIT AND COLLATERAL REQUIREMENTS

8.1 Party A Credit Protection. The applicable credit and collateral requirements shall be as specified on the Cover Sheet. If no option in Section 8.1(a) is specified on the Cover Sheet, Section 8.l(a) Option C shall apply exclusively. If none of Sections 8.1(b), 8.1(c) or 8.1(d) are specified on the Cover Sheet, Section 8.1(b) shall apply exclusively.

(a) Financial Information. Option A: If requested by Party A, Party B shall deliver (i) within 120 days following the end of each fiscal year, a copy of Party B's annual report containing audited consolidated financial statements for such fiscal year and (ii) within 60 days after the end of each of its first three fiscal quarters of each fiscal year, a copy of Party B's quarterly report containing unaudited consolidated financial statements for such fiscal quarter. In all cases the statements shall be for the most recent accounting period and prepared in accordance with generally accepted accounting principles; provided, however, that should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as Party B diligently pursues the preparation, certification and delivery of the statements.

Option B: If requested by Party A, Party B shall deliver (i) within 120 days following the end of each fiscal year, a copy of the annual report containing audited consolidated financial statements for such fiscal year for the party(s) specified on the Cover Sheet and (ii) within 60 days after the end of each of its first three fiscal quarters of each fiscal year, a copy of quarterly report containing unaudited consolidated financial statements for such fiscal quarter for the party(s) specified on the Cover Sheet. In all cases the statements shall be for the most recent accounting period and shall be prepared in accordance with generally accepted accounting principles; provided, however, that should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as the relevant entity diligently pursues the preparation, certification and delivery of the statements.

Option C: Party A may request from Party B the information specified in the Cover Sheet.

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(b) Credit Assurances. If Party A has reasonable grounds to believe that Party B's creditworthiness or performance under this Agreement has become unsatisfactory, Party A will provide Party B with written notice requesting Performance Assurance in an amount determined by Party A in a commercially reasonable manner. Upon receipt of such notice Party B shall have three (3) Business Days to remedy the situation by providing such Performance Assurance to Party A. In the event that Party B fails to provide such Performance Assurance, or a guaranty or other credit assurance acceptable to Party A within three (3) Business Days of receipt of notice, then an Event of Default under Article Five will be deemed to have occurred and Party A will be entitled to the remedies set forth in Article Five of this Master Agreement.

(c) Collateral Threshold. If at any time and from time to time during the term of this Agreement (and notwithstanding whether an Event of Default has occurred), the Termination Payment that would be owed to Party A plus Party B's Independent Amount, if any, exceeds the Party B Collateral Threshold, then Party A, on any Business Day, may request that Party B provide Performance Assurance in an amount equal to the amount by which the Termination Payment plus Party B's Independent Amount, if any, exceeds the Party B Collateral Threshold (rounding upwards for any fractional amount to the next Party B Rounding Amount) ("Party B Performance Assurance"), less any Party B Performance Assurance already posted with Party A. Such Party B Performance Assurance shall be delivered to Party A within three (3) Business Days of the date of such request. On any Business Day (but no more frequently than weekly with respect to Letters of Credit and daily with respect to cash), Party B, at its sole cost, may request that such Party B Performance Assurance be reduced correspondingly to the amount of such excess Termination Payment plus Party B's Independent Amount, if any, (rounding upwards for any fractional amount to the next Party B Rounding Amount). In the event that Party B fails to provide Party B Performance Assurance pursuant to the terms of this Article Eight within three (3) Business Days, then an Event of Default under Article Five shall be deemed to have occurred and Party A will be entitled to the remedies set forth in Article Five of this Master Agreement.

For purposes of this Section 8.1(c), the calculation of the Termination Payment shall be calculated pursuant to Section 5.3 by Party A as if all outstanding Transactions had been liquidated, and in addition thereto, shall include all amounts owed but not yet paid by Party B to Party A, whether or not such amounts are due, for performance already provided pursuant to any and all Transactions.

(d) Downgrade Event. If at any time there shall occur a Downgrade Event in respect of Party B, then Party A may require Party B to provide Performance Assurance in an amount determined by Party A in a commercially reasonable manner. In the event Party B shall fail to provide such Performance Assurance or a guaranty or other credit assurance acceptable to Party A within three (3) Business Days of receipt of notice, then an Event of Default shall be deemed to have occurred and Party A will be entitled to the remedies set forth in Article Five of this Master Agreement.

(e) If specified on the Cover Sheet, Party B shall deliver to Party A, prior to or concurrently with the execution and delivery of this Master Agreement a guarantee in an amount not less than the Guarantee Amount specified on the Cover Sheet and in a form reasonably acceptable to Party A.

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8.2 Party B Credit Protection. The applicable credit and collateral requirements shall be as specified on the Cover Sheet. If no option in Section 8.2(a) is specified on the Cover Sheet, Section 8.2(a) Option C shall apply exclusively. If none of Sections 8.2(b), 8.2(c) or 8.2(d) are specified on the Cover Sheet, Section 8.2(b) shall apply exclusively.

(a) Financial Information. Option A: If requested by Party B, Party A shall deliver (i) within 120 days following the end of each fiscal year, a copy of Party A's annual report containing audited consolidated financial statements for such fiscal year and (ii) within 60 days after the end of each of its first three fiscal quarters of each fiscal year, a copy of such Party's quarterly report containing unaudited consolidated financial statements for such fiscal quarter. In all cases the statements shall be for the most recent accounting period and prepared in accordance with generally accepted accounting principles; provided, however, that should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as such Party diligently pursues the preparation, certification and delivery of the statements.

Option B: If requested by Party B, Party A shall deliver (i) within 120 days following the end of each fiscal year, a copy of the annual report containing audited consolidated financial statements for such fiscal year for the party(s) specified on the Cover Sheet and (ii) within 60 days after the end of each of its first three fiscal quarters of each fiscal year, a copy of quarterly report containing unaudited consolidated financial statements for such fiscal quarter for the party(s) specified on the Cover Sheet. In all cases the statements shall be for the most recent accounting period and shall be prepared in accordance with generally accepted accounting principles; provided, however, that should any such statements not be available on a timely basis due to a delay in preparation or certification, such delay shall not be an Event of Default so long as the relevant entity diligently pursues the preparation, certification and delivery of the statements.

Option C: Party B may request from Party A the information specified in the Cover Sheet.

(b) Credit Assurances. If Party B has reasonable grounds to believe that Party A's creditworthiness or performance under this Agreement has become unsatisfactory, Party B will provide Party A with written notice requesting Performance Assurance in an amount determined by Party B in a commercially reasonable manner. Upon receipt of such notice Party A shall have three (3) Business Days to remedy the situation by providing such Performance Assurance to Party B. In the event that Party A fails to provide such Performance Assurance, or a guaranty or other credit assurance acceptable to Party B within three (3) Business Days of receipt of notice, then an Event of Default under Article Five will be deemed to have occurred and Party B will be entitled to the remedies set forth in Article Five of this Master Agreement.

(c) Collateral Threshold. If at any time and from time to time during the term of this Agreement (and notwithstanding whether an Event of Default has occurred), the Termination Payment that would be owed to Party B plus Party A's Independent Amount, if any, exceeds the Party A Collateral Threshold, then Party B, on any Business Day, may request that Party A provide Performance Assurance in an amount equal to the amount by which the Termination Payment plus Party A's Independent Amount, if any, exceeds the Party A Collateral

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Threshold (rounding upwards for any fractional amount to the next Party A Rounding Amount) ("Party A Performance Assurance"), less any Party A Performance Assurance already posted with Party B. Such Party A Performance Assurance shall be delivered to Party B within three (3) Business Days of the date of such request. On any Business Day (but no more frequently than weekly with respect to Letters of Credit and daily with respect to cash), Party A, at its sole cost, may request that such Party A Performance Assurance be reduced correspondingly to the amount of such excess Termination Payment plus Party A's Independent Amount, if any, (rounding upwards for any fractional amount to the next Party A Rounding Amount). In the event that Party A fails to provide Party A Performance Assurance pursuant to the terms of this Article Eight within three (3) Business Days, then an Event of Default under Article Five shall be deemed to have occurred and Party B will be entitled to the remedies set forth in Article Five of this Master Agreement.

For purposes of this Section 8.2(c), the calculation of the Termination Payment shall be calculated pursuant to Section 5.3 by Party B as if all outstanding Transactions had been liquidated, and in addition thereto, shall include all amounts owed but not yet paid by Party A to Party B, whether or not such amounts are due, for performance already provided pursuant to any and all Transactions.

(d) Downgrade Event. If at any time there shall occur a Downgrade Event in respect of Party A, then Party B may require Party A to provide Performance Assurance in an amount determined by Party B in a commercially reasonable manner. In the event Party A shall fail to provide such Performance Assurance or a guaranty or other credit assurance acceptable to Party B within three (3) Business Days of receipt of notice, then an Event of Default shall be deemed to have occurred and Party B will be entitled to the remedies set forth in Article Five of this Master Agreement.

(e) If specified on the Cover Sheet, Party A shall deliver to Party B, prior to or concurrently with the execution and delivery of this Master Agreement a guarantee in an amount not less than the Guarantee Amount specified on the Cover Sheet and in a form reasonably acceptable to Party B.

8.3 Grant of Security Interest/Remedies. To secure its obligations under this Agreement and to the extent either or both Parties deliver Performance Assurance hereunder, each Party (a "Pledgor") hereby grants to the other Party (the "Secured Party") a present and continuing security interest in, and lien on (and right of setoff against), and assignment of, all cash collateral and cash equivalent collateral and any and all proceeds resulting therefrom or the liquidation thereof, whether now or hereafter held by, on behalf of, or for the benefit of, such Secured Party, and each Party agrees to take such action as the other Party reasonably requires in order to perfect the Secured Party's first-priority security interest in, and lien on (and right of setoff against), such collateral and any and all proceeds resulting therefrom or from the liquidation thereof. Upon or any time after the occurrence or deemed occurrence and during the continuation of an Event of Default or an Early Termination Date, the Non-Defaulting Party may do any one or more of the following: (i) exercise any of the rights and remedies of a Secured Party with respect to all Performance Assurance, including any such rights and remedies under law then in effect; (ii) exercise its rights of setoff against any and all property of the Defaulting Party in the possession of the Non-Defaulting Party or its agent; (iii) draw on any outstanding

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Letter of Credit issued for its benefit; and (iv) liquidate all Performance Assurance then held by or for the benefit of the Secured Party free from any claim or right of any nature whatsoever of the Defaulting Party, including any equity or right of purchase or redemption by the Defaulting Party. The Secured Party shall apply the proceeds of the collateral realized upon the exercise of any such rights or remedies to reduce the Pledgor's obligations under the Agreement (the Pledgor remaining liable for any amounts owing to the Secured Party after such application), subject to the Secured Party's obligation to return any surplus proceeds remaining after such obligations are satisfied in full.

ARTICLE NINE: GOVERNMENTAL CHARGES

9.1 Cooperation. Each Party shall use reasonable efforts to implement the provisions of and to administer this Master Agreement in accordance with the intent of the parties to minimize all taxes , so long as neither Party is materially adversely affected by such efforts.

9.2 Governmental Charges. Seller shall pay or cause to be paid all taxes imposed by any government authority("Governmental Charges") on or with respect to the Product or a Transaction arising prior to the Delivery Point. Buyer shall pay or cause to be paid all Governmental Charges on or with respect to the Product or a Transaction at and from the Delivery Point (other than ad valorem, franchise or income taxes which are related to the sale of the Product and are, therefore, the responsibility of the Seller). In the event Seller is required by law or regulation to remit or pay Governmental Charges which are Buyer's responsibility hereunder, Buyer shall promptly reimburse Seller for such Governmental Charges. If Buyer is required by law or regulation to remit or pay Governmental Charges which are Seller's responsibility hereunder, Buyer may deduct the amount of any such Governmental Charges from the sums due to Seller under Article 6 of this Agreement. Nothing shall obligate or cause a Party to pay or be liable to pay any Governmental Charges for which it is exempt under the law.

ARTICLE TEN: MISCELLANEOUS

10.1 Term of Master Agreement. The term of this Master Agreement shall commence on the Effective Date and shall remain in effect until terminated by either Party upon (thirty) 30 days' prior written notice; provided, however, that such termination shall not affect or excuse the performance of either Party under any provision of this Master Agreement that by its terms survives any such termination and, provided further, that this Master Agreement and any other documents executed and delivered hereunder shall remain in effect with respect to the Transaction(s) entered into prior to the effective date of such termination until both Parties have fulfilled all of their obligations with respect to such Transaction(s), or such Transaction(s) that have been terminated under Section 5.2 of this Agreement.

10.2 Representations and Warranties. On the Effective Date and the date of entering into each Transaction, each Party represents and warrants to the other Party that:

(i) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

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(ii) it has all regulatory authorizations necessary for it to legally perform its obligations under this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3);

(iii) the execution, delivery and performance of this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3) are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;

(iv) this Master Agreement, each Transaction (including any Confirmation accepted in accordance with Section 2.3), and each other document executed and delivered in accordance with this Master Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms; subject to any Equitable Defenses.

(v) it is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming Bankrupt;

(vi) there is not pending or, to its knowledge, threatened against it or any of its Affiliates any legal proceedings that could materially adversely affect its ability to perform its obligations under this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3);

(vii) no Event of Default or Potential Event of Default with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3);

(viii) it is acting for its own account, has made its own independent decision to enter into this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3) and as to whether this Master Agreement and each such Transaction (including any Confirmation accepted in accordance with Section 2.3) is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions and risks of this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3);

(ix) it is a "forward contract merchant" within the meaning of the United States Bankruptcy Code;

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(x) it has entered into this Master Agreement and each Transaction (including any Confirmation accepted in accordance with Section 2.3) in connection with the conduct of its business and it has the capacity or ability to make or take delivery of all Products referred to in the Transaction to which it is a Party;

(xi) with respect to each Transaction (including any Confirmation accepted in accordance with Section 2.3) involving the purchase or sale of a Product or an Option, it is a producer, processor, commercial user or merchant handling the Product, and it is entering into such Transaction for purposes related to its business as such; and

(xii) the material economic terms of each Transaction are subject to individual negotiation by the Parties.

10.3 Title and Risk of Loss. Title to and risk of loss related to the Product shall transfer from Seller to Buyer at the Delivery Point. Seller warrants that it will deliver to Buyer the Quantity of the Product free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.

10.4 Indemnity. Each Party shall indemnify, defend and hold harmless the other Party from and against any Claims arising from or out of any event, circumstance, act or incident first occurring or existing during the period when control and title to Product is vested in such Party as provided in Section 10.3. Each Party shall indemnify, defend and hold harmless the other Party against any Governmental Charges for which such Party is responsible under Article Nine.

10.5 Assignment. Neither Party shall assign this Agreement or its rights hereunder without the prior written consent of the other Party, which consent may be withheld in the exercise of its sole discretion; provided, however, either Party may, without the consent of the other Party (and without relieving itself from liability hereunder), (i) transfer, sell, pledge, encumber or assign this Agreement or the accounts, revenues or proceeds hereof in connection with any financing or other financial arrangements, (ii) transfer or assign this Agreement to an affiliate of such Party which affiliate's creditworthiness is equal to or higher than that of such Party, or (iii) transfer or assign this Agreement to any person or entity succeeding to all or substantially all of the assets whose creditworthiness is equal to or higher than that of such Party; provided, however, that in each such case, any such assignee shall agree in writing to be bound by the terms and conditions hereof and so long as the transferring Party delivers such tax and enforceability assurance as the non-transferring Party may reasonably request.

10.6 Governing Law. THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. EACH PARTY WAIVES ITS RESPECTIVE RIGHT TO ANY JURY TRIAL WITH RESPECT TO ANY LITIGATION ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT.

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10.7 Notices. All notices, requests, statements or payments shall be made as specified in the Cover Sheet. Notices (other than scheduling requests) shall, unless otherwise specified herein, be in writing and may be delivered by hand delivery, United States mail, overnight courier service or facsimile. Notice by facsimile or hand delivery shall be effective at the close of business on the day actually received, if received during business hours on a Business Day, and otherwise shall be effective at the close of business on the next Business Day. Notice by overnight United States mail or courier shall be effective on the next Business Day after it was sent. A Party may change its addresses by providing notice of same in accordance herewith.

10.8 General. This Master Agreement (including the exhibits, schedules and any written supplements hereto), the Party A Tariff, if any, the Party B Tariff, if any, any designated collateral, credit support or margin agreement or similar arrangement between the Parties and all Transactions (including any Confirmation accepted in accordance with Section 2.3) constitute the entire agreement between the Parties relating to the subject matter. Notwithstanding the foregoing, any collateral, credit support or margin agreement or similar arrangement between the Parties shall, upon designation by the Parties, be deemed part of this Agreement and shall be incorporated herein by reference. This Agreement shall be considered for all purposes as prepared through the joint efforts of the parties and shall not be construed against one party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof. Except to the extent herein provided for, no amendment or modification to this Master Agreement shall be enforceable unless reduced to writing and executed by both Parties. Each Party agrees if it seeks to amend any applicable wholesale power sales tariff during the term of this Agreement, such amendment will not in any way affect outstanding Transactions under this Agreement without the prior written consent of the other Party. Each Party further agrees that it will not assert, or defend itself, on the basis that any applicable tariff is inconsistent with this Agreement. This Agreement shall not impart any rights enforceable by any third party (other than a permitted successor or assignee bound to this Agreement). Waiver by a Party of any default by the other Party shall not be construed as a waiver of any other default. Any provision declared or rendered unlawful by any applicable court of law or regulatory agency or deemed unlawful because of a statutory change (individually or collectively, such events referred to as "Regulatory Event") will not otherwise affect the remaining lawful obligations that arise under this Agreement; and provided, further, that if a Regulatory Event occurs, the Parties shall use their best efforts to reform this Agreement in order to give effect to the original intention of the Parties. The term "including" when used in this Agreement shall be by way of example only and shall not be considered in any way to be in limitation. The headings used herein are for convenience and reference purposes only. All indemnity and audit rights shall survive the termination of this Agreement for twelve (12) months. This Agreement shall be binding on each Party's successors and permitted assigns.

10.9 Audit. Each Party has the right, at its sole expense and during normal working hours, to examine the records of the other Party to the extent reasonably necessary to verify the accuracy of any statement, charge or computation made pursuant to this Master Agreement. If requested, a Party shall provide to the other Party statements evidencing the Quantity delivered at the Delivery Point. If any such examination reveals any inaccuracy in any statement, the necessary adjustments in such statement and the payments thereof will be made promptly and shall bear interest calculated at the Interest Rate from the date the overpayment or underpayment was made until paid; provided, however, that no adjustment for any statement or payment will be

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made unless objection to the accuracy thereof was made prior to the lapse of twelve (12) months from the rendition thereof, and thereafter any objection shall be deemed waived.

10.10 Forward Contract. The Parties acknowledge and agree that all Transactions constitute "forward contracts" within the meaning of the United States Bankruptcy Code.

10.11 Confidentiality. If the Parties have elected on the Cover Sheet to make this Section 10.11 applicable to this Master Agreement, neither Party shall disclose the terms or conditions of a Transaction under this Master Agreement to a third party (other than the Party's employees, lenders, counsel, accountants or advisors who have a need to know such information and have agreed to keep such terms confidential) except in order to comply with any applicable law, regulation, or any exchange, control area or independent system operator rule or in connection with any court or regulatory proceeding; provided, however, each Party shall, to the extent practicable, use reasonable efforts to prevent or limit the disclosure. The Parties shall be entitled to all remedies available at law or in equity to enforce, or seek relief in connection with, this confidentiality obligation.

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SCHEDULE M

(THIS SCHEDULE IS INCLUDED IF THE APPROPRIATE BOX ON THE COVER SHEET IS MARKED INDICATING A PARTY IS A GOVERNMENTAL ENTITY OR PUBLIC POWER SYSTEM)

A. The Parties agree to add the following definitions in Article One.

"Act" means _____.[1]

"Governmental Entity or Public Power System" means a municipality, county, governmental board, public power authority, public utility district, joint action agency, or other similar political subdivision or public entity of the United States, one or more States or territories or any combination thereof.

"Special Fund" means a fund or account of the Governmental Entity or Public Power System set aside and or pledged to satisfy the Public Power System's obligations hereunder out of which amounts shall be paid to satisfy all of the Public Power System's obligations under this Master Agreement for the entire Delivery Period.

B. The following sentence shall be added to the end of the definition of "Force Majeure" in Article One.

If the Claiming Party is a Governmental Entity or Public Power System, Force Majeure does not include any action taken by the Governmental Entity or Public Power System in its governmental capacity.

C. The Parties agree to add the following representations and warranties to Section 10.2:

Further and with respect to a Party that is a Governmental Entity or Public Power System, such Governmental Entity or Public Power System represents and warrants to the other Party continuing throughout the term of this Master Agreement, with respect to this Master Agreement and each Transaction, as follows: (i) all acts necessary to the valid execution, delivery and performance of this Master Agreement, including without limitation, competitive bidding, public notice, election, referendum, prior appropriation or other required procedures has or will be taken and performed as required under the Act and the Public Power System's ordinances, bylaws or other regulations, (ii) all persons making up the governing body of Governmental Entity or Public Power System are the duly elected or appointed incumbents in their positions and hold such

[1] Cite the state enabling and other relevant statutes applicable to Governmental Entity or Public Power System.

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positions in good standing in accordance with the Act and other applicable law, (iii) entry into and performance of this Master Agreement by Governmental Entity or Public Power System are for a proper public purpose within the meaning of the Act and all other relevant constitutional, organic or other governing documents and applicable law, (iv) the term of this Master Agreement does not extend beyond any applicable limitation imposed by the Act or other relevant constitutional, organic or other governing documents and applicable law, (v) the Public Power System's obligations to make payments hereunder are unsubordinated obligations and such payments are (a) operating and maintenance costs (or similar designation) which enjoy first priority of payment at all times under any and all bond ordinances or indentures to which it is a party, the Act and all other relevant constitutional, organic or other governing documents and applicable law or (b) otherwise not subject to any prior claim under any and all bond ordinances or indentures to which it is a party, the Act and all other relevant constitutional, organic or other governing documents and applicable law and are available without limitation or deduction to satisfy all Governmental Entity or Public Power System' obligations hereunder and under each Transaction or (c) are to be made solely from a Special Fund, (vi) entry into and performance of this Master Agreement and each Transaction by the Governmental Entity or Public Power System will not adversely affect the exclusion from gross income for federal income tax purposes of interest on any obligation of Governmental Entity or Public Power System otherwise entitled to such exclusion, and (vii) obligations to make payments hereunder do not constitute any kind of indebtedness of Governmental Entity or Public Power System or create any kind of lien on, or security interest in, any property or revenues of Governmental Entity or Public Power System which, in either case, is proscribed by any provision of the Act or any other relevant constitutional, organic or other governing documents and applicable law, any order or judgment of any court or other agency of government applicable to it or its assets, or any contractual restriction binding on or affecting it or any of its assets.

D. The Parties agree to add the following sections to Article Three:

Section 3.4 Public Power System's Deliveries. On the Effective Date and as a condition to the obligations of the other Party under this Agreement, Governmental Entity or Public Power System shall provide the other Party hereto (i) certified copies of all ordinances, resolutions, public notices and other documents evidencing the necessary authorizations with respect to the execution, delivery and performance by Governmental Entity or Public Power System of this Master Agreement and (ii) an opinion of counsel for Governmental Entity or Public Power System, in form and substance reasonably satisfactory to the Other Party, regarding the validity, binding effect and enforceability of this Master Agreement against Governmental Entity or Public Power System in

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respect of the Act and all other relevant constitutional organic or other governing documents and applicable law.

Section 3.5 No Immunity Claim. Governmental Entity or Public Power System warrants and covenants that with respect to its contractual obligations hereunder and performance thereof, it will not claim immunity on the grounds of sovereignty or similar grounds with respect to itself or its revenues or assets from (a) suit, (b) jurisdiction of court (including a court located outside the jurisdiction of its organization), (c) relief by way of injunction, order for specific performance or recovery of property, (d) attachment of assets, or (e) execution or enforcement of any judgment.

E. If the appropriate box is checked on the Cover Sheet, as an alternative to selecting one of the options under Section 8.3, the Parties agree to add the following section to Article Three:

Section 3.6 Governmental Entity or Public Power System Security. With respect to each Transaction, Governmental Entity or Public Power System shall either (i) have created and set aside a Special Fund or (ii) upon execution of this Master Agreement and prior to the commencement of each subsequent fiscal year of Governmental Entity or Public Power System during any Delivery Period, have obtained all necessary budgetary approvals and certifications for payment of all of its obligations under this Master Agreement for such fiscal year; any breach of this provision shall be deemed to have arisen during a fiscal period of Governmental Entity or Public Power System for which budgetary approval or certification of its obligations under this Master Agreement is in effect and, notwithstanding anything to the contrary in Article Four, an Early Termination Date shall automatically and without further notice occur hereunder as of such date wherein Governmental Entity or Public Power System shall be treated as the Defaulting Party. Governmental Entity or Public Power System shall have allocated to the Special Fund or its general funds a revenue base that is adequate to cover Public Power System's payment obligations hereunder throughout the entire Delivery Period.

F. If the appropriate box is checked on the Cover Sheet, the Parties agree to add the following section to Article Eight:

Section 8.4 Governmental Security. As security for payment and performance of Public Power System's obligations hereunder, Public Power System hereby pledges, sets over, assigns and grants to the other Party a security interest in all of Public Power System's right, title and interest in and to [specify collateral].

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G. The Parties agree to add the following sentence at the end of Section 10.6 - Governing Law:

> NOTWITHSTANDING THE FOREGOING, IN RESPECT OF THE APPLICABILITY OF THE ACT AS HEREIN PROVIDED, THE LAWS OF THE STATE OF _____[2] SHALL APPLY.

[2] Insert relevant state for Governmental Entity or Public Power System.

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SCHEDULE P: PRODUCTS AND RELATED DEFINITIONS

"Ancillary Services" means any of the services identified by a Transmission Provider in its transmission tariff as "ancillary services" including, but not limited to, regulation and frequency response, energy imbalance, operating reserve-spinning and operating reserve-supplemental, as may be specified in the Transaction.

"Capacity" has the meaning specified in the Transaction.

"Energy" means three-phase, 60-cycle alternating current electric energy, expressed in megawatt hours.

"Firm (LD)" means, with respect to a Transaction, that either Party shall be relieved of its obligations to sell and deliver or purchase and receive without liability only to the extent that, and for the period during which, such performance is prevented by Force Majeure. In the absence of Force Majeure, the Party to which performance is owed shall be entitled to receive from the Party which failed to deliver/receive an amount determined pursuant to Article Four.

"Firm Transmission Contingent - Contract Path" means, with respect to a Transaction, that the performance of either Seller or Buyer (as specified in the Transaction) shall be excused, and no damages shall be payable including any amounts determined pursuant to Article Four, if the transmission for such Transaction is interrupted or curtailed and (i) such Party has provided for firm transmission with the transmission provider(s) for the Product in the case of the Seller from the generation source to the Delivery Point or in the case of the Buyer from the Delivery Point to the ultimate sink, and (ii) such interruption or curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the applicable transmission provider's tariff. This contingency shall excuse performance for the duration of the interruption or curtailment notwithstanding the provisions of the definition of "Force Majeure" in Section 1.23 to the contrary.

"Firm Transmission Contingent - Delivery Point" means, with respect to a Transaction, that the performance of either Seller or Buyer (as specified in the Transaction) shall be excused, and no damages shall be payable including any amounts determined pursuant to Article Four, if the transmission to the Delivery Point (in the case of Seller) or from the Delivery Point (in the case of Buyer) for such Transaction is interrupted or curtailed and (i) such Party has provided for firm transmission with the transmission provider(s) for the Product, in the case of the Seller, to be delivered to the Delivery Point or, in the case of Buyer, to be received at the Delivery Point and (ii) such interruption or curtailment is due to "force majeure" or "uncontrollable force" or a similar term as defined under the applicable transmission provider's tariff. This transmission contingency excuses performance for the duration of the interruption or curtailment, notwithstanding the provisions of the definition of "Force Majeure" in Section 1.23 to the contrary. Interruptions or curtailments of transmission other than the transmission either immediately to or from the Delivery Point shall not excuse performance

"Firm (No Force Majeure)" means, with respect to a Transaction, that if either Party fails to perform its obligation to sell and deliver or purchase and receive the Product, the Party to which performance is owed shall be entitled to receive from the Party which failed to perform an

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amount determined pursuant to Article Four. Force Majeure shall not excuse performance of a Firm (No Force Majeure) Transaction.

"Into _____ (the "Receiving Transmission Provider"), Seller's Daily Choice" means that, in accordance with the provisions set forth below, (1) the Product shall be scheduled and delivered to an interconnection or interface ("Interface") either (a) on the Receiving Transmission Provider's transmission system border or (b) within the control area of the Receiving Transmission Provider if the Product is from a source of generation in that control area, which Interface, in either case, the Receiving Transmission Provider identifies as available for delivery of the Product in or into its control area; and (2) Seller has the right on a daily prescheduled basis to designate the Interface where the Product shall be delivered. An "Into" Product shall be subject to the following provisions:

1. Prescheduling and Notification. Subject to the provisions of Section 6, not later than the prescheduling deadline of 11:00 a.m. CPT on the Business Day before the next delivery day or as otherwise agreed to by Buyer and Seller, Seller shall notify Buyer ("Seller's Notification") of Seller's immediate upstream counterparty and the Interface (the "Designated Interface") where Seller shall deliver the Product for the next delivery day, and Buyer shall notify Seller of Buyer's immediate downstream counterparty.

2. Availability of "Firm Transmission" to Buyer at Designated Interface; "Timely Request for Transmission," "ADI" and "Available Transmission." In determining availability to Buyer of next-day firm transmission ("Firm Transmission") from the Designated Interface, a "Timely Request for Transmission" shall mean a properly completed request for Firm Transmission made by Buyer in accordance with the controlling tariff procedures, which request shall be submitted to the Receiving Transmission Provider no later than 30 minutes after delivery of Seller's Notification, provided, however, if the Receiving Transmission Provider is not accepting requests for Firm Transmission at the time of Seller's Notification, then such request by Buyer shall be made within 30 minutes of the time when the Receiving Transmission Provider first opens thereafter for purposes of accepting requests for Firm Transmission.

Pursuant to the terms hereof, delivery of the Product may under certain circumstances be redesignated to occur at an Interface other than the Designated Interface (any such alternate designated interface, an "ADI") either (a) on the Receiving Transmission Provider's transmission system border or (b) within the control area of the Receiving Transmission Provider if the Product is from a source of generation in that control area, which ADI, in either case, the Receiving Transmission Provider identifies as available for delivery of the Product in or into its control area using either firm or non-firm transmission, as available on a day-ahead or hourly basis (individually or collectively referred to as "Available Transmission") within the Receiving Transmission Provider's transmission system.

3. Rights of Buyer and Seller Depending Upon Availability of/Timely Request for Firm Transmission.

A. Timely Request for Firm Transmission made by Buyer, Accepted by the Receiving Transmission Provider and Purchased by Buyer. If a Timely Request for Firm Transmission is made by Buyer and is accepted by the Receiving Transmission Provider

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and Buyer purchases such Firm Transmission, then Seller shall deliver and Buyer shall receive the Product at the Designated Interface.

i. If the Firm Transmission purchased by Buyer within the Receiving Transmission Provider's transmission system from the Designated Interface ceases to be available to Buyer for any reason, or if Seller is unable to deliver the Product at the Designated Interface for any reason except Buyer's non-performance, then at Seller's choice from among the following, Seller shall: (a) to the extent Firm Transmission is available to Buyer from an ADI on a day-ahead basis, require Buyer to purchase such Firm Transmission from such ADI, and schedule and deliver the affected portion of the Product to such ADI on the basis of Buyer's purchase of Firm Transmission, or (b) require Buyer to purchase non-firm transmission, and schedule and deliver the affected portion of the Product on the basis of Buyer's purchase of non-firm transmission from the Designated Interface or an ADI designated by Seller, or (c) to the extent firm transmission is available on an hourly basis, require Buyer to purchase firm transmission, and schedule and deliver the affected portion of the Product on the basis of Buyer's purchase of such hourly firm transmission from the Designated Interface or an ADI designated by Seller.

ii. If the Available Transmission utilized by Buyer as required by Seller pursuant to Section 3A(i) ceases to be available to Buyer for any reason, then Seller shall again have those alternatives stated in Section 3A(i) in order to satisfy its obligations.

iii. Seller's obligation to schedule and deliver the Product at an ADI is subject to Buyer's obligation referenced in Section 4B to cooperate reasonably therewith. If Buyer and Seller cannot complete the scheduling and/or delivery at an ADI, then Buyer shall be deemed to have satisfied its receipt obligations to Seller and Seller shall be deemed to have failed its delivery obligations to Buyer, and Seller shall be liable to Buyer for amounts determined pursuant to Article Four.

iv. In each instance in which Buyer and Seller must make alternative scheduling arrangements for delivery at the Designated Interface or an ADI pursuant to Sections 3A(i) or (ii), and Firm Transmission had been purchased by both Seller and Buyer into and within the Receiving Transmission Provider's transmission system as to the scheduled delivery which could not be completed as a result of the interruption or curtailment of such Firm Transmission, Buyer and Seller shall bear their respective transmission expenses and/or associated congestion charges incurred in connection with efforts to complete delivery by such alternative scheduling and delivery arrangements. In any instance except as set forth in the immediately preceding sentence, Buyer and Seller must make alternative scheduling arrangements for delivery at the Designated Interface or an ADI under Sections 3A(i) or (ii), Seller shall be responsible for any additional transmission purchases and/or associated congestion charges incurred by Buyer in connection with such alternative scheduling arrangements.

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B. Timely Request for Firm Transmission Made by Buyer but Rejected by the Receiving Transmission Provider. If Buyer's Timely Request for Firm Transmission is rejected by the Receiving Transmission Provider because of unavailability of Firm Transmission from the Designated Interface, then Buyer shall notify Seller within 15 minutes after receipt of the Receiving Transmission Provider's notice of rejection ("Buyer's Rejection Notice"). If Buyer timely notifies Seller of such unavailability of Firm Transmission from the Designated Interface, then Seller shall be obligated either (1) to the extent Firm Transmission is available to Buyer from an ADI on a day-ahead basis, to require Buyer to purchase (at Buyer's own expense) such Firm Transmission from such ADI and schedule and deliver the Product to such ADI on the basis of Buyer's purchase of Firm Transmission, and thereafter the provisions in Section 3A shall apply, or (2) to require Buyer to purchase (at Buyer's own expense) non-firm transmission, and schedule and deliver the Product on the basis of Buyer's purchase of non-firm transmission from the Designated Interface or an ADI designated by the Seller, in which case Seller shall bear the risk of interruption or curtailment of the non-firm transmission; provided, however, that if the non-firm transmission is interrupted or curtailed or if Seller is unable to deliver the Product for any reason, Seller shall have the right to schedule and deliver the Product to another ADI in order to satisfy its delivery obligations, in which case Seller shall be responsible for any additional transmission purchases and/or associated congestion charges incurred by Buyer in connection with Seller's inability to deliver the Product as originally prescheduled. If Buyer fails to timely notify Seller of the unavailability of Firm Transmission, then Buyer shall bear the risk of interruption or curtailment of transmission from the Designated Interface, and the provisions of Section 3D shall apply.

C. Timely Request for Firm Transmission Made by Buyer, Accepted by the Receiving Transmission Provider and not Purchased by Buyer. If Buyer's Timely Request for Firm Transmission is accepted by the Receiving Transmission Provider but Buyer elects to purchase non-firm transmission rather than Firm Transmission to take delivery of the Product, then Buyer shall bear the risk of interruption or curtailment of transmission from the Designated Interface. In such circumstances, if Seller's delivery is interrupted as a result of transmission relied upon by Buyer from the Designated Interface, then Seller shall be deemed to have satisfied its delivery obligations to Buyer, Buyer shall be deemed to have failed to receive the Product and Buyer shall be liable to Seller for amounts determined pursuant to Article Four.

D. No Timely Request for Firm Transmission Made by Buyer, or Buyer Fails to Timely Send Buyer's Rejection Notice. If Buyer fails to make a Timely Request for Firm Transmission or Buyer fails to timely deliver Buyer's Rejection Notice, then Buyer shall bear the risk of interruption or curtailment of transmission from the Designated Interface. In such circumstances, if Seller's delivery is interrupted as a result of transmission relied upon by Buyer from the Designated Interface, then Seller shall be deemed to have satisfied its delivery obligations to Buyer, Buyer shall be deemed to have failed to receive the Product and Buyer shall be liable to Seller for amounts determined pursuant to Article Four.

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4. Transmission.

A. Seller's Responsibilities. Seller shall be responsible for transmission required to deliver the Product to the Designated Interface or ADI, as the case may be. It is expressly agreed that Seller is not required to utilize Firm Transmission for its delivery obligations hereunder, and Seller shall bear the risk of utilizing non-firm transmission. If Seller's scheduled delivery to Buyer is interrupted as a result of Buyer's attempted transmission of the Product beyond the Receiving Transmission Provider's system border, then Seller will be deemed to have satisfied its delivery obligations to Buyer, Buyer shall be deemed to have failed to receive the Product and Buyer shall be liable to Seller for damages pursuant to Article Four.

B. Buyer's Responsibilities. Buyer shall be responsible for transmission required to receive and transmit the Product at and from the Designated Interface or ADI, as the case may be, and except as specifically provided in Section 3A and 3B, shall be responsible for any costs associated with transmission therefrom. If Seller is attempting to complete the designation of an ADI as a result of Seller's rights and obligations hereunder, Buyer shall co-operate reasonably with Seller in order to effect such alternate designation.

5. Force Majeure. An "Into" Product shall be subject to the "Force Majeure" provisions in Section 1.23.

6. Multiple Parties in Delivery Chain Involving a Designated Interface. Seller and Buyer recognize that there may be multiple parties involved in the delivery and receipt of the Product at the Designated Interface or ADI to the extent that (1) Seller may be purchasing the Product from a succession of other sellers ("Other Sellers"), the first of which Other Sellers shall be causing the Product to be generated from a source ("Source Seller") and/or (2) Buyer may be selling the Product to a succession of other buyers ("Other Buyers"), the last of which Other Buyers shall be using the Product to serve its energy needs ("Sink Buyer"). Seller and Buyer further recognize that in certain Transactions neither Seller nor Buyer may originate the decision as to either (a) the original identification of the Designated Interface or ADI (which designation may be made by the Source Seller) or (b) the Timely Request for Firm Transmission or the purchase of other Available Transmission (which request may be made by the Sink Buyer). Accordingly, Seller and Buyer agree as follows:

A. If Seller is not the Source Seller, then Seller shall notify Buyer of the Designated Interface promptly after Seller is notified thereof by the Other Seller with whom Seller has a contractual relationship, but in no event may such designation of the Designated Interface be later than the prescheduling deadline pertaining to the Transaction between Buyer and Seller pursuant to Section 1.

B. If Buyer is not the Sink Buyer, then Buyer shall notify the Other Buyer with whom Buyer has a contractual relationship of the Designated Interface promptly after Seller notifies Buyer thereof, with the intent being that the party bearing actual responsibility to secure transmission shall have up to 30 minutes after receipt of the Designated Interface to submit its Timely Request for Firm Transmission.

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C. Seller and Buyer each agree that any other communications or actions required to be given or made in connection with this "Into Product" (including without limitation, information relating to an ADI) shall be made or taken promptly after receipt of the relevant information from the Other Sellers and Other Buyers, as the case may be.

D. Seller and Buyer each agree that in certain Transactions time is of the essence and it may be desirable to provide necessary information to Other Sellers and Other Buyers in order to complete the scheduling and delivery of the Product. Accordingly, Seller and Buyer agree that each has the right, but not the obligation, to provide information at its own risk to Other Sellers and Other Buyers, as the case may be, in order to effect the prescheduling, scheduling and delivery of the Product

"Native Load" means the demand imposed on an electric utility or an entity by the requirements of retail customers located within a franchised service territory that the electric utility or entity has statutory obligation to serve.

"Non-Firm" means, with respect to a Transaction, that delivery or receipt of the Product may be interrupted for any reason or for no reason, without liability on the part of either Party.

"System Firm" means that the Product will be supplied from the owned or controlled generation or pre-existing purchased power assets of the system specified in the Transaction (the "System") with non-firm transmission to and from the Delivery Point, unless a different Transmission Contingency is specified in a Transaction. Seller's failure to deliver shall be excused: (i) by an event or circumstance which prevents Seller from performing its obligations, which event or circumstance was not anticipated as of the date the Transaction was agreed to, which is not within the reasonable control of, or the result of the negligence of, the Seller; (ii) by Buyer's failure to perform; (iii) to the extent necessary to preserve the integrity of, or prevent or limit any instability on, the System; (iv) to the extent the System or the control area or reliability council within which the System operates declares an emergency condition, as determined in the system's, or the control area's, or reliability council's reasonable judgment; or (v) by the interruption or curtailment of transmission to the Delivery Point or by the occurrence of any Transmission Contingency specified in a Transaction as excusing Seller's performance. Buyer's failure to receive shall be excused (i) by Force Majeure; (ii) by Seller's failure to perform, or (iii) by the interruption or curtailment of transmission from the Delivery Point or by the occurrence of any Transmission Contingency specified in a Transaction as excusing Buyer's performance. In any of such events, neither party shall be liable to the other for any damages, including any amounts determined pursuant to Article Four.

"Transmission Contingent" means, with respect to a Transaction, that the performance of either Seller or Buyer (as specified in the Transaction) shall be excused, and no damages shall be payable including any amounts determined pursuant to Article Four, if the transmission for such Transaction is unavailable or interrupted or curtailed for any reason, at any time, anywhere from the Seller's proposed generating source to the Buyer's proposed ultimate sink, regardless of whether transmission, if any, that such Party is attempting to secure and/or has purchased for the Product is firm or non-firm. If the transmission (whether firm or non-firm) that Seller or Buyer is attempting to secure is from source to sink is unavailable, this contingency excuses performance for the entire Transaction. If the transmission (whether firm or non-firm) that Seller

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or Buyer has secured from source to sink is interrupted or curtailed for any reason, this contingency excuses performance for the duration of the interruption or curtailment notwithstanding the provisions of the definition of "Force Majeure" in Article 1.23 to the contrary.

"Unit Firm" means, with respect to a Transaction, that the Product subject to the Transaction is intended to be supplied from a generation asset or assets specified in the Transaction. Seller's failure to deliver under a "Unit Firm" Transaction shall be excused: (i) if the specified generation asset(s) are unavailable as a result of a Forced Outage (as defined in the NERC Generating Unit Availability Data System (GADS) Forced Outage reporting guidelines) or (ii) by an event or circumstance that affects the specified generation asset(s) so as to prevent Seller from performing its obligations, which event or circumstance was not anticipated as of the date the Transaction was agreed to, and which is not within the reasonable control of, or the result of the negligence of, the Seller or (iii) by Buyer's failure to perform. In any of such events, Seller shall not be liable to Buyer for any damages, including any amounts determined pursuant to Article Four.

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EXHIBIT A

MASTER POWER PURCHASE AND SALE AGREEMENT
CONFIRMATION LETTER

This confirmation letter shall confirm the Transaction agreed to on _____, ___ between _____ ("Party A") and _____ ("Party B") regarding the sale/purchase of the Product under the terms and conditions as follows:

Seller: _____

Buyer: _____

Product:

[] Into _____, Seller's Daily Choice

[] Firm (LD)

[] Firm (No Force Majeure)

[] System Firm

(Specify System: _____)

[] Unit Firm

(Specify Unit(s): _____)

[] Other _____

[] Transmission Contingency (If not marked, no transmission contingency)

[]	FT-Contract Path Contingency	[]	Seller	[]	Buyer
[]	FT-Delivery Point Contingency	[]	Seller	[]	Buyer
[]	Transmission Contingent	[]	Seller	[]	Buyer

[] Other transmission contingency

(Specify: _____)

Contract Quantity: _____

Delivery Point: _____

Contract Price:

Energy Price: _____

Other Charges: _____

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Delivery Period: _____

Special Conditions: _____

Scheduling: _____

Option Buyer: _____

Option Seller: _____

Type of Option: _____

Strike Price: _____

Premium: _____

Exercise Period: _____

This confirmation letter is being provided pursuant to and in accordance with the Master Power Purchase and Sale Agreement dated _____ (the "Master Agreement") between Party A and Party B, and constitutes part of and is subject to the terms and provisions of such Master Agreement. Terms used but not defined herein shall have the meanings ascribed to them in the Master Agreement.

[Party A]	[Party B]
Name: _____	Name: _____
Title: _____	Title: _____
Phone No: _____	Phone No: _____
Fax: _____	Fax: _____

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Attachment 2 - Approved and Requested Authority (Calendar Year)

	Estimated Power Supply Cost ($)**	Approved Power Supply Contract Authority ($)	Requested Additional Power Procurement Authority	Estimated Cost of Renewable Attribute plus Energy (2019 & 2020 renewable attribute only) ($)	Requested Additional Renewable/ Energy Authority ($)	Estimated Cost of RA ($)	Requested Additional Annual RA ($)	Total Additional Requested	Total Approved + Additional Requested Authority ($)	If Approved Percent of Total Power Supply Cost
2019	$245,000,000	$226,000,000	$19,000,000	*$21,988,798*		$44,000,000		$19,000,000	**$245,000,000**	**100%**
2020	$302,000,000	$222,000,000	$30,000,000	*$35,907,848*		$50,000,000	$50,000,000	$80,000,000	**$302,000,000**	**100%**
2021	$310,000,000	$128,000,000		$112,230,000	$30,000,000	$55,000,000	$55,000,000	$85,000,000	**$213,000,000**	**69%**
2022	$315,000,000	$30,000,000		$113,664,375	$50,000,000	$55,000,000	$55,000,000	$105,000,000	**$135,000,000**	**43%**
2023	$305,000,000			$102,943,750	$50,000,000	$55,600,000	$55,600,000	$105,600,000	**$105,600,000**	**35%**
2024	$315,000,000			$104,743,750	$50,000,000	$56,200,000	$56,200,000	$106,200,000	**$106,200,000**	**34%**
2025*	$321,300,000			$106,750,000	$50,000,000	$56,800,000	$10,000,000	$60,000,000	**$60,000,000**	**19%**
2026*	$327,700,000			$112,720,400	$50,000,000	$57,400,000	$10,000,000	$60,000,000	**$60,000,000**	**18%**
2027*	$334,300,000			$118,856,916	$50,000,000	$58,000,000	$10,000,000	$60,000,000	**$60,000,000**	**18%**
2028*	$341,000,000			$125,164,204	$50,000,000	$58,600,000	$10,000,000	$60,000,000	**$60,000,000**	**18%**
2029*	$347,800,000			$131,647,042	$50,000,000	$59,200,000	$10,000,000	$60,000,000	**$60,000,000**	**17%**
2030*	$354,800,000			$138,310,327	$50,000,000	$59,800,000	$10,000,000	$60,000,000	**$60,000,000**	**17%**
2031*	$361,900,000			$147,500,360	$50,000,000	$60,400,000	$10,000,000	$60,000,000	**$60,000,000**	**17%**
2032*	$369,100,000			$156,954,670	$50,000,000	$61,100,000	$10,000,000	$60,000,000	**$60,000,000**	**16%**
2033*	$376,500,000			$166,680,753	$50,000,000	$61,800,000	$10,000,000	$60,000,000	**$60,000,000**	**16%**
2034*	$384,000,000			$176,686,297	$50,000,000	$62,500,000	$10,000,000	$60,000,000	**$60,000,000**	**16%**
2035*	$391,700,000			$186,979,191	$50,000,000	$63,200,000	$10,000,000	$60,000,000	**$60,000,000**	**15%**
2036*	$399,500,000			$197,567,526	$50,000,000	$63,900,000	$10,000,000	$60,000,000	**$60,000,000**	**15%**
2037*	$407,500,000			$208,459,602	$50,000,000	$64,600,000	$10,000,000	$60,000,000	**$60,000,000**	**15%**
2038*	$415,700,000			$219,663,935	$50,000,000	$65,300,000	$10,000,000	$60,000,000	**$60,000,000**	**14%**
2039*	$424,000,000			$231,189,257	$50,000,000	$66,000,000	$10,000,000	$60,000,000	**$60,000,000**	**14%**
2040*	$432,500,000			$243,044,526	$50,000,000	$66,700,000	$10,000,000	$60,000,000	**$60,000,000**	**14%**
2041*	$441,200,000			$255,238,930	$50,000,000	$67,400,000	$10,000,000	$60,000,000	**$60,000,000**	**14%**
2042*	$450,000,000			$267,781,893	$50,000,000	$68,100,000	$10,000,000	$60,000,000	**$60,000,000**	**13%**
	$8,672,500,000	$606,000,000	$49,000,000	$3,682,674,350	$1,080,000,000	$1,436,600,000	$451,800,000	$1,580,800,000	**$2,186,800,000**	

** This period extends beyond SJCE's detailed pro-forma. Accordingly, these numbers are very preliminary estimates of the annual costs each of these years.*

*** Includes all power supply costs: RPS, RA, GHG-free, Energy price hedges, and CAISO fees.*

Estimated costs

Approved authority

Requested authority