



651 Commerce Drive  
Roseville, CA 95678

phone (916) 781-3636  
fax (916) 783-7693  
web www.ncpa.com

January 25, 2018

TO: Facilities Committee

FROM: Carrie Pollo

SUBJECT: Notice of the Facilities Committee Meeting

Facilities Committee: In compliance with the Brown Act, if participating on the conference call **and/or online presentation**, please attend at one of the locations listed below and post this notice at a publicly accessible location at the participation location **72-hours** before the call begins.

Date:	<b>Wednesday, January 31, 2018</b>
Time:	<b>9:00 am</b>
Where:	<b>NCPA Headquarters 651 Commerce Drive Roseville, CA 95678</b>
Contact at NCPA:	Carrie Pollo (916) 781-4282

ALAMEDA MUNICIPAL PWR 2000 Grand St., Alameda 510.748.3901	BAY AREA RAPID TRANSIT 300 Lakeside Drive, Oakland 510.464.6435	CITY OF BIGGS 465 "C" Street, Biggs 530.868.5493
CITY OF GRIDLEY 685 Kentucky Street, Gridley 530.846.5695	CITY OF HEALDSBURG 435 Allen Ct., Healdsburg 707.431.3317	CITY OF LODI 1331 S. Ham Lane, Lodi 209.333.6762
CITY OF LOMPOC 100 Civic Ctr. Plaza, Lompoc 805.875.8299	CITY OF PALO ALTO 250 Hamilton Ave, Palo Alto 650.329.2273	PORT OF OAKLAND 530 Water Street, Oakland 510.627.1100
PLUMAS-SIERRA REC 73233 Hwy 70, Portola 530.832.4261	CITY OF ROSEVILLE 2090 Hilltop Cir, Roseville 916.774.5602	CITY OF SANTA CLARA 881 Martin Avenue, Santa Clara 408.615.2300
TURLOCK IRR. DISTRICT 333 E. Canal Drive, Turlock 209.883.8300	CITY OF UKIAH 300 Seminary Ave, Ukiah 707.463.6200	



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# Agenda

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**Date:** Wednesday, January 31, 2018  
**Subject:** Facilities Committee Meeting  
**Location:** NCPA Headquarters, 651 Commerce Drive, Roseville CA.  
**Time:** 9:00 am

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*The Committee may take action on any of the items listed on this Agenda regardless of whether the matter appears on the Consent Calendar or is described as an Action Item, a Report or an Informational Item. This agenda is often supplemented by various documents which are available to the public upon request. Pursuant to Government Code Section 54957.5, the following is the location at which the public can view agendas and other public writings: NCPA Offices, 651 Commerce Drive, Roseville California, or [www.ncpa.com](http://www.ncpa.com).*

*Persons requiring accommodation in accordance with the Americans with Disabilities Act in order to attend or participate in this meeting are requested to contact the NCPA Secretary at 916.781.3636 in advance of the meeting to arrange for such accommodations.*

## 1. Call Meeting to Order and Roll Call

### **PUBLIC FORUM**

Any member of the public who wishes to address the Committee on matters not on the Agenda, but within the subject matter jurisdiction of the Committee, or any member of the public who desires to address the Committee on any item considered by the Committee at this meeting before or during the Committee's consideration of that item, shall so advise the Chair and shall thereupon be given an opportunity to do so.

### **OPEN SESSION**

2. **Approve minutes from the January 3, 2018 Facilities Committee Meeting, and the January 11, 2018 Facilities Committee Special Meeting.**
3. **CT1 Alameda Outage Update** – CT Staff will provide an informational update regarding the CT1 Alameda Unit 1 Outage. (*Commission Category: Discussion/Action; Sponsor: Generation Services*)
4. **Approval of NCPA Solar Project Phase 2 Agreement** – Staff will present and seek a recommendation for approval of the NCPA Solar Project 1 Phase 2 Agreement. The Agreement encompasses site selection, technical/financial evaluation, and site development for a fleet of solar photovoltaic (PV) plants to be located within participating member territories. (*Commission Category: Discussion/Action; Sponsor: Generation Services*)
5. **Nexant Cost Allocation Model Billing Determinants** – Staff is seeking a recommendation for Commission approval of the billing determinants that will be used in the FY2019 Nexant Cost Allocation Model. (*Commission Category: Discussion/Action; Sponsor: Admin Services*)

6. **New Services Staffing Update** – Review of new services staffing study. (*Commission Category: Informational; Sponsor: Power Management*).
7. **Planning and Operations Update** – Staff will provide an update on issues related to planning and operations.
8. **Schedule next meeting date** – The next Facilities Committee meeting is currently scheduled for February 28, 2018.

**ADJOURNMENT**

/cp



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# Minutes

---

**Date:** January 4, 2018  
**To:** NCPA Facilities Committee  
**From:** Carrie Pollo  
**Subject:** January 3, 2018 Facilities Committee Meeting Minutes

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1. **Call meeting to order & Roll Call** - The meeting was called to order by Committee Chair Mike Brozo at 9:03 am. A sign-in sheet was passed around. Attending via teleconference and/or on-line presentation were Alan Hanger, Debbie Whiteman, and Sarah Libua (Alameda), Mark Sorensen (Biggs), Melissa Price (Lodi), Tikan Singh (Lompoc), Monica Padilla (Palo Alto), and Kathleen Hughes, and Steve Hance (Santa Clara). Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from BART, Gridley, Healdsburg, Port of Oakland, TID, and Ukiah were absent. A quorum of the Committee was established.

## **PUBLIC FORUM**

No public comment.

2. **Approve minutes from the December 6, 2017 Facilities Committee meeting, and the December 7, 2017 Facilities Committee Special meeting.** A motion was made by Shannon McCann and seconded by Jiayo Chang recommending approval of the December 6, 2017 Facilities Committee meeting minutes, and the December 7, 2017 Facilities Committee Special meeting. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville and Santa Clara. The motion passed.
3. **Hydroelectric Generation Services Facility – Ford Construction, Inc. for Adit 4 Spoils Facility Repairs Construction** – Staff gave background information and was seeking a recommendation for Commission approval increasing the General Manager's signature authority from the current level of \$2,897,507 to \$3,250,000 for construction of the Adit 4 spoils facility repairs.

Motion: A motion was made by Shannon McCann and seconded by Alan Hanger recommending Commission approval authorizing the General Manager to issue additional purchase orders to Ford Construction, Inc., raising the General Manager's signature authority from the current level of \$2,897,507 to the not to exceed amount of \$3,250,000 for construction of the Adit 4 Spoils Facility Repairs at the NCPA Hydroelectric Project. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville and Santa Clara. The motion passed.

4. **Hydroelectric Generation Services Facility - Collierville Generator Rewind Project** – Staff provided background information, and was seeking a recommendation for Commission approval authorizing the General Manager to enter into one or more contracts for a total not-to-exceed amount of \$6,900,000 for rewinding and repairs of the two (2) Collierville generators.

Motion: A motion was made by Shannon McCann and seconded by Jiayo Chang recommending Commission approval authorizing the General Manager to enter into one or more agreements and to issue purchase orders, with a total not-to-exceed amount of \$6,900,000 for the replacement of stator windings for the Collierville Powerhouse Unit 1 and Unit 2 generators. A vote was taken by roll call: YES = YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville and Santa Clara. The motion passed.

5. **Approval of NCPA Solar Project Phase 2 Agreement** – Staff presented background information and major terms of the NCPA Solar Project 1 Phase 2 Agreement. Phase 2 encompasses site selection, technical/financial evaluation, and site development for a fleet of solar photovoltaic (PV) plants to be located within participating member territories. The Agreement describes four sub-phases, beginning with site selection and feasibility analysis that will lead to a critical Go/No-Go decision point early in the process. This will enable a participant to withdraw from the project early on should their desired site(s) be deemed unfeasible for whatever reason, while minimizing their investment in the project. Also described is the cost allocation method; participants will be charged costs directly related to their site(s) development plus a percentage of the project's general costs based on a capacity-based GES.

Because the draft was posted in December, staff decided to allow more time for members to review the document and to solidify their interest in the project. The draft Phase 2 Agreement is available on NCPA Connect. A web meeting for all potential participants will be scheduled for January 12 to review the agreement. Staff would like confirmed interest and all comments completed by January 16. Staff will be seeking a recommendation for approval at the next Facilities Committee meeting January 31, with Commission approval February 22, and launch date as early as February 23.

6. **Nexant Cost Allocation Model Billing Determinants** – Staff reviewed the billing determinants that will be used in the FY2019 Nexant Cost Allocation Model. The calendar year 2017 data model results still need to be finalized. Staff identified and reviewed the source of changes to members' costs from the change in determinants. The Nexant statistics are scheduled to be finalized by January 18, 2018.

Staff is recommending three modifications to the current Nexant Model. The first proposed modification is to exclude day ahead bilateral transactions from the Nexant scheduling deal cost allocations under authorization granted in SR: 113:17. The second modification is to exclude internal final schedules ("IFS") that have not changed from the day ahead final schedule. In an effort to increase efficiency by reducing manual schedule entries, IFS have been pre-seeded in the scheduling software whether they are needed or not which greatly increased IFS counts, particularly for Hydro Operating Entities. The third proposed change is to account for daily Seattle City Light transactions as two monthly buy and sell transactions consistent with existing "As Need" deals. The contract for Seattle City Light will expire in May 2018. Modifications two and three require Commission approval and staff will ask the Facilities Committee to recommend approval in the January 31, 2018 meeting.

The draft Nexant model along with the supporting files, will be available for review on NCPA Connect. Please review prior to the next Facilities Committee meeting scheduled January 31, so the Committee can take action on this item. Please send any questions to staff prior to the meeting.

7. **Approval of Services Agreement with EBCE** – Staff will present and seek a recommendation for approval of a Services Agreement between NCPA and East Bay Community Energy (EBCE), under which NCPA will supply certain wholesale power supply to EBCE.

The Commission approved the EBCE Services Agreement December 14, 2017. Since then NCPA has been working with EBCE to complete negotiations and execute the Services

Agreement. EBCE has raised concerns with certain provisions of the agreement that may be substantive in nature. If substantive changes are made to the agreement, NCPA may need to seek approval of the updated Services Agreement prior to execution.

Staff is recommending Facilities Committee guidance for key provisions in the Services Agreement, and would like to plan a Facilities Committee Special meeting once the negotiations with EBCE have been completed for review of the agreement prior to seeking Commission approval of an updated Services Agreement. After discussion, the Committee agreed on a special meeting Thursday, January 11, in the afternoon.

**8. Expiration of Acquired Resources Designation** – Staff gave background information and reviewed the status of NCPA’s designated list of Acquired Resources, as such is defined in the CAISO Tariff.

Pursuant to Section 40.9.2.1 of the CAISO Tariff, certain units that meet defined criteria can qualify as Acquired Resources. Acquired Resource eligibility criteria was modified at the time the CAISO implemented RAAIM in 2017. The Acquired Resource availability penalty exemption is separate and distinct from the MSSA availability penalty exemption. A Scheduling Coordinator (SC) must submit an affidavit confirming continued eligibility. NCPA staff did not submit the required affidavit, for CY 2018, and as such was recently notified by the CAISO of this failure. Per recent discussions with the CAISO, it appears that many SCs failed to submit the required affidavit due to the lack of notice provided by the CAISO. The CAISO is now considering next steps, but has suggested that NCPA seek a waiver from FERC to allow NCPA to submit the required information to maintain the existing Acquired Resources status. Upon further review of the new criteria implemented with RAAIM, NCPA is considering whether it continues to meet the stated criteria.

Based on this information staff is recommending that due to concerns with continued eligibility, and considering that NCPA members are already protected by certain MSSA exemption provisions, NCPA staff recommends not extending the Acquired Resource designation for the resources listed herein beyond CY 2017

**9. New Service Opportunities** – Staff provided a status update regarding the opportunity for NCPA to supply certain wholesale energy services to the following new prospective fee-for-service customers: South Feather Water and Power Agency, San Jose Community Energy and Nevada Irrigation District.

NCPA submitted a Request for Qualifications to South Feather Water and Power Agency (SFWPA) December 15, 2017. SFWPA has hydro assets, and is looking for PPA services starting in 2020 after their contract with PG&E expires. San Jose Community Energy reached out to NCPA for services, per a recommendation from Pioneer Energy and EBCE. NCPA has provided information for services, and San Jose is showing a very strong interest in these services. Nevada Irrigation District is interested in scheduling services for a 3MW plant, which could lead to other larger projects in the future. Lastly, SCPPA has requested information regarding several NCPA services. NCPA will provide costs for these services once they narrow down what they are looking for. Staff will provide updates as needed.

**10. New Services Staffing Update** – Status update.

Staff is developing a study regarding the impact the new services is having on the dispatch desk, the SC desk, and pre-scheduling. As well as the IS and Power Settlements departments. The dispatch desk is being impacted more than the SC desk, and two of the pre-schedulers are being impacted the first 2 ½ hours each day. Another person on the dispatch desk may eventually be needed. Power Settlements still has an additional vacancy in the budget.

Another consideration is the WECC NERC rating criteria for low impact, medium impact, and high impact. With all these new services NCPA is close to medium impact now. Also being evaluated is the amount of revenue these new services will be bringing in. Staff will continue with the study, and update the Committee prior to executing any additional new services agreements.

#### **11. Planning and Operations Update –**

- PCWA scheduling services started January 1, 2018. Several NCPA staff were on site for the transition, as well as staff from PCWA. It was a great team effort between Power Management and Information Services, making it a seamless change over.
- Pioneer Community Energy will be integrating services February 1, 2018. NCPA has secured RA for this. Pioneer's website is also up and running now.
- TO18 TAC trial starts Tuesday, January 9, 2018 in Washington, DC.
- Order 890 proceedings – NCPA continued its discussions with PG&E via a conference call on December 15, 2017. Southern California Edison has also made a filing at FERC to modify its planning process, in an attempt to ensure its planning process is compliant with the standards required under Order 890. NCPA will continue working with PG&E to address the concerns expressed by NCPA.
- Due to the retirement of a power plant in Oakland, PG&E is working to develop a plan to address the resulting reliability concerns. The plan proposed by PG&E may have adverse impacts on the City of Alameda and the Port of Oakland. NCPA and Alameda Municipal Power (AMP) sent a joint letter to PG&E regarding the need to modify or terminate the Operating Agreement that is currently in place between PG&E and AMP to address these concerns.

**12. Schedule next meeting date** – the next regular Facilities Committee meeting is scheduled for January 31, 2018.

#### **ADJOURNMENT**

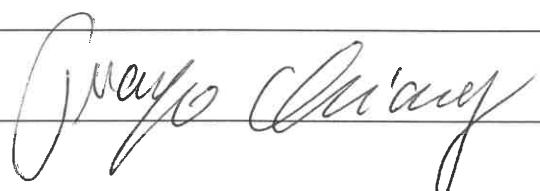
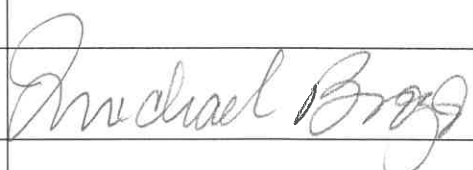

The meeting was adjourned at 12:22 pm.

NCPA Facilities Committee Members, Alternates & Staff are requested to sign, but signature by members of the public is voluntary.

[illegible]

**Northern California Power Agency  
January 3, 2018 Facilities Committee Meeting  
Attendance List**

NCPA Facilities Committee Members are requested to sign, but signature by members of the public is voluntary.

<b>MEMBER</b>	<b>NAME</b>
<b>ALAMEDA</b>	
<b>BART</b>	
<b>BIGGS</b>	
<b>GRIDLEY</b>	
<b>HEALDSBURG</b>	
<b>LODI</b>	
<b>LOMPOC</b>	
<b>PALO ALTO</b>	
<b>PLUMAS-SIERRA REC</b>	
<b>PORT OF OAKLAND</b>	
<b>ROSEVILLE</b>	
<b>SANTA CLARA</b>	
<b>TID</b>	
<b>UKIAH</b>	



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# Minutes

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**Date:** January 11, 2018  
**To:** NCPA Facilities Committee  
**From:** Carrie Pollo  
**Subject:** January 11, 2018 Facilities Committee Special Meeting Minutes

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1. **Call meeting to order & Roll Call** - The meeting was called to order by Committee Chair Mike Brozo at 2:03 pm. A sign-in sheet was passed around. Attending via teleconference and/or on-line presentation were Alan Hanger (Alameda), Jiayo Chiang (Lodi), Tikan Singh (Lompoc), Monica Padilla (Palo Alto), Shannon McCann (Roseville) and Kathleen Hughes, and Steve Hance (Santa Clara). Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from BART, Biggs, Gridley, Healdsburg, TID, and Ukiah were absent. A quorum of the Committee was established.

## **PUBLIC FORUM**

No public comment.

2. **Approval of Services Agreement with EBCE** – Staff gave background information and was seeking a recommendation for approval of a Services Agreement between NCPA and East Bay Community Energy (EBCE), under which NCPA will supply certain wholesale power supply services to EBCE. The Commission approved the East Bay Community Energy (EBCE) Services Agreement on December 14, 2017. Since then, NCPA has been working with EBCE to complete negotiations, and execute the Services Agreement. EBCE has raised concerns with certain provisions of the agreement that may be substantive in nature. Key changes to the agreement include: a slightly modified EBCE SC transition concept, modified billing disputes, added requirements that security account funds to be held in a separate account, the scope of services was updated, and a new Appendix F was added which contains key implementation of milestones. Language in the EBCE Services Agreement will be updated per discussion in the Facilities Committee. The revised agreement will be published for review prior to the Commission Meeting scheduled on January 18, 2018.

Motion: A motion was made by Basil Wong and seconded by Shannon McCann recommending Commission approval of the revised East Bay Community Energy Services Agreement, as such form was presented and discussed (including suggested modifications) with the Facilities Committee on January 11, 2018, subject to further non-substantive modifications to the Services Agreement as may be approved by NCPA's General Counsel. A vote was taken by roll call: YES = Alameda, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Port of Oakland, Roseville and Santa Clara. The motion passed.

## **ADJOURNMENT**

The meeting was adjourned at 3:09 pm.

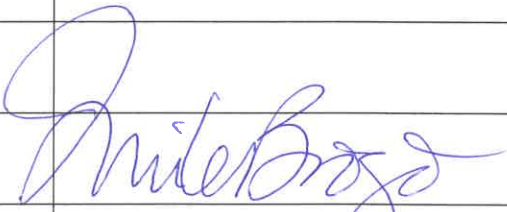
**Northern California Power Agency  
January 11, 2018 Facilities Committee Special Meeting  
Attendance List**

NCPA Facilities Committee Members, Alternates & Staff are requested to sign, but signature by members of the public is voluntary.

[illegible]

**Northern California Power Agency  
January 11, 2018 Facilities Committee Special Meeting  
Attendance List**

NCPA Facilities Committee Members are requested to sign, but signature by members of the public is voluntary.

MEMBER	NAME
ALAMEDA	
BART	
BIGGS	
GRIDLEY	
HEALDSBURG	
LODI	
LOMPOC	
PALO ALTO	
PLUMAS-SIERRA REC	
PORT OF OAKLAND	Basil Wong
ROSEVILLE	
SANTA CLARA	
TID	
UKIAH	



# Commission Staff Report

Date January 25, 2018

**COMMISSION MEETING DATE:** February 22, 2018

**SUBJECT:** Approval of Second Phase Agreement between NCPA and Member Participants for NCPA Solar Project 1

**AGENDA CATEGORY:** Discussion/Action

<b>FROM:</b>	Ken Speer	<b>METHOD OF SELECTION:</b>
	Assistant General Manager	N/A
<b>Division:</b>	Generation Services	<i>If other, please describe:</i>
<b>Department:</b>	Generation Services	

<b>IMPACTED MEMBERS:</b>		
All Members	<input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/> City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power	<input type="checkbox"/>	City of Lompoc <input type="checkbox"/> City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Palo Alto <input type="checkbox"/> Plumas-Sierra REC <input type="checkbox"/>
City of Biggs	<input type="checkbox"/>	City of Redding <input type="checkbox"/> Port of Oakland <input type="checkbox"/>
City of Gridley	<input type="checkbox"/>	City of Roseville <input type="checkbox"/> Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg	<input type="checkbox"/>	City of Santa Clara <input type="checkbox"/> Other <input type="checkbox"/>
<i>If other, please specify</i>		
<hr/>		
<hr/>		

## **RECOMMENDATION:**

NCPA staff recommends the Commission:

1. Approve the Second Phase Agreement for the NCPA Solar Project 1; and
2. Authorize the NCPA General Manager to execute the Second Phase Agreement for the Solar Project 1 on behalf of NCPA, including any non-substantive modifications approved by NCPA's General Counsel.

## **BACKGROUND:**

NCPA, in collaboration with interested Member Participants, has identified potential sites within Member Participants' service territories for new solar photovoltaic generation facilities. Individual project sizes may range from less than 1 megawatt and greater than 10 MW, with an aggregate project capacity as high as 40 MW.

NCPA and Member Participants desire to enter into a Second Phase Agreement for NCPA Solar Project 1 to allow NCPA to serve as project manager and to manage all activities required to assess the feasibility of each potential site, and to perform all necessary due diligence and preparation required to solicit a Power Purchase Agreement (PPA) from a third party.

This Agreement is intended to authorize Member Participants to initiate, fund, and complete activities related to this Project.

## **FISCAL IMPACT:**

Total cost of Phase 2 of the project will be dependent upon the number of Member Participants, planned capacity, and location. Some sites may not be deemed feasible and may not progress through the entirety of Phase 2. Hence for each potential site, the not-to-exceed cost per Member Participant is \$60,000 to perform the site selection and screening (See, Phases 2A/2B in the Second Phase Agreement). In addition, for sites deemed feasible, an additional not-to-exceed cost of \$320,000 per Member Participant would be incurred to complete due diligence, preparation (including compliance with CEQA and to gain site control), and PPA solicitation (See, Phases 2C/2D in the Second Phase Agreement).

Cost allocation will be based on site-specific costs and a division of general costs based on a site's capacity rating relative to the aggregate capacity of the project.

## **ENVIRONMENTAL ANALYSIS:**

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary.

## **COMMITTEE REVIEW:**

Committee reviews pending.

Respectfully submitted,

RANDY S. HOWARD  
General Manager

Attachments: (2)  
Resolution  
Draft Second Phase Agreement for NCPA Solar Project 1

## RESOLUTION 18-XX

### RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING THE SECOND PHASE AGREEMENT FOR NCPA SOLAR PROJECT 1

(reference Staff Report #xxx:18)

WHEREAS, the Northern California Power Agency (NCPA) is working with interested Members to develop additional Renewable Energy Supply sources to meet the future demands of Member Participants; and

WHEREAS, NCPA and Member Participants desire to build multiple Photovoltaic (PV) Solar Power Plants throughout participating Member service territories to meet these demands; and

WHEREAS, NCPA and Member Participants desire to enter into a Second Phase Agreement for the NCPA Solar Project 1 to allow NCPA to serve as project manager and to manage all activities required to assess the feasibility of each potential site, and to perform all necessary due diligence and preparation required to solicit a Power Purchase Agreement (PPA) from a third party; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED that the Commission of the Northern California Power Agency approves the Second Phase Agreement for the NCPA Solar Project 1 and authorizes the NCPA General Manager to execute the Second Phase Agreement for the Solar Project 1 on behalf of NCPA, including any non-substantive modifications approved by NCPA's General Counsel.

PASSED, ADOPTED and APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2018, by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

\_\_\_\_\_  
BOB LINGL  
CHAIR

ATTEST:

\_\_\_\_\_  
CARY A. PADGETT  
ASSISTANT SECRETARY

**SECOND PHASE AGREEMENT FOR  
NCPA SOLAR PROJECT 1**

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Section 1. Definitions.....	4
1.1 Definitions. Whenever used in this Agreement (including the Recitals hereto), the following terms shall have the following respective meanings, provided, capitalized terms used in this Agreement (including the Recitals hereto) that are not defined in Section 1 of this Agreement shall have the meaning indicated in Section 1 of the Power Management and Administrative Services Agreement: .....	4
1.1.1 “Agreement” means this Second Phase Agreement for NCPA Solar Project 1 including all Exhibits attached hereto.....	4
1.1.2 “Authorizing Participants” means a subset of Participants that grant written authority to NCPA to commence Phase 2C and Phase 2D activities of this Agreement, using a Project Development Authorization Form found in Exhibit D of this Agreement. ....	4
1.1.3 “Authorized Project Site” means the generation facility that NCPA will conduct Phase 2C and Phase 2D activities for, as directed by Authorizing Participants using a Project Development Authorization Form. There may be multiple Authorized Project Sites addressed under this Agreement. ....	5
1.1.4 “Capacity Attributes” means any and all current or future defined characteristics consistent with the operational limitations of the Project, certificates, tags, credits, ancillary service attributes, or accounting constructs, howsoever entitled, including resource adequacy benefits, Flexible Capacity Benefits, and any tracking or accounting associated with the foregoing, intended to value any aspect of the capacity of the Project to produce Energy or ancillary services, attributed to or associated with the Project. ....	5
1.1.5 “Constitutive Documents” means, with respect to NCPA, the Joint Powers Agreement and any resolutions or bylaws adopted thereunder with respect to the governance of NCPA, and with respect to each Participant, the California Government Code and other statutory provisions applicable to such Participant, any applicable agreements, charters, contracts or other documents concerning the formation, operation or decision making of such Participant, including, if applicable, its City Charter, and any codes, ordinances, bylaws, and resolutions adopted by such Participant’s governing body.....	5
1.1.6 “Effective Date” shall have the meaning set forth in Section 9 of this Agreement.....	5
1.1.7 “Energy” means electric energy expressed in units of kWh or MWh. ....	6
1.1.8 “Environmental Attributes” means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, as the case may be, and its displacement of conventional energy generation. Environmental Attributes include: (i) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (ii) any avoided emissions of carbon dioxide (CO2), methane (CH4) and other greenhouse gases that have been determined by the United Nations Intergovernmental Panel on Climate Change to contribute to the actual or potential threat of altering the Earth’s climate by trapping heat in the atmosphere; and (iii) the reporting rights to these avoided emissions such as, but not limited to, a Renewable Energy Certificate (“REC”). ....	6
Environmental Attributes do not include: (i) any Energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project, and other financial incentives in the form of credits, reductions, or	

allowances associated with the Project that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or “tipping fees” that may be paid to Seller to accept certain fuels, or local subsidies received by Seller or the owners of the site for the destruction of particular pre-existing pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits. ....	6
1.1.9 “Flexible Capacity” has the meaning set forth in the CAISO Tariff. ....	7
1.1.10 “Flexible Capacity Benefits” means the rights and privileges attached to any generating resource that satisfy any entity’s Flexible Capacity requirement. ....	7
1.1.11 “Initiating Members” shall have the meaning as set forth in Section 5.2. ....	7
1.1.12 “NCPA” has the meaning set forth in the recitals hereto. ....	7
1.1.13 “Participant” has the meaning set forth in the recitals of this Agreement. ....	7
1.1.14 “Power Management and Administrative Services Agreement” means the NCPA Power Management and Administrative Services Agreement, dated as of October 1, 2014 between NCPA and the Members who are signatories to that agreement by which NCPA provides Power Management and Administrative Services. ....	7
1.1.15 “Product” means Energy, Capacity Attributes and Environmental Attributes delivered to the Participants pursuant to the Renewable PPA. ....	7
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1.1.22 “Seller” has the meaning set forth in the recitals of this Agreement. ....	8
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3.2 Obligations of NCPA. Upon the Effective Date of this Agreement, NCPA shall commence work pertaining to its duties under Phase 2A and/or Phase 2B, as described further below. Upon the effective date of a Project Development Authorization Form, NCPA shall commence work pertaining to its duties under Phase 2C and Phase 2D, as described further below. NCPA, on behalf of itself and Participants, shall act as lead or responsible agency for the purposes of environmental review of the Project, shall act as project manager for all Phase 2 activities, and is responsible for engaging necessary expert professional services including those of NCPA staff. NCPA shall divide Phase 2 activities into 4 sub-phases, defined below. 10	
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(iii) if any representation or warranty of a Participant material to the services provided hereunder shall prove to have been incorrect in any material respect when made and the Participant does not cure the facts underlying such incorrect representation or warranty so that the representation or warranty becomes true and correct within thirty (30) Calendar Days of the date of receipt of notice from NCPA demanding cure; or ..... 20

(iv) if a Participant is in default or in breach of any of its covenants or obligations under any other agreement with NCPA and such default or breach is not cured within the time periods specified in such agreement. .... 20

8.3 Uncontrollable Forces. A Party shall not be considered to be in default in respect of any obligation hereunder if prevented from fulfilling such obligation by reason of Uncontrollable Forces. Provided, that in order to be relieved of an Event of Default due to Uncontrollable Forces, a Party affected by an Uncontrollable Force shall: ..... 20

(i) first provide oral notice to the General Manager using telephone communication within two (2) Business Days of the onset of the Uncontrollable Force, and provide subsequent written notice to the General Manager and all other Parties within ten (10) Business Days of the onset of the Uncontrollable Force, describing its nature and extent, the obligations which the Party is unable to fulfill, the anticipated duration of the Uncontrollable Force, and the actions which the Party will undertake so as to remove such disability and be able to fulfill its obligations hereunder; and..... 20

(ii) use due diligence to place itself in a position to fulfill its obligations hereunder and if unable to fulfill any obligation by reason of an Uncontrollable Force such Party shall exercise due diligence to remove such disability with reasonable dispatch. Provided, that nothing in this subsection shall require a Party to settle or compromise a labor dispute. .... 21

8.4 Cure of an Event of Default. An Event of Default shall be deemed cured only if such default shall be remedied or cured within the time periods specified in Section 8.2 above, as may be applicable, provided, however, upon request of the Defaulting Participant the Commission may waive the default at its sole discretion, where such waiver shall not be unreasonably withheld. 21

8.5 Remedies in the Event of Uncured Default. Upon the occurrence of an Event of Default which is not cured within the time limits specified in Section 8.2, without limiting other rights or remedies available under this Agreement, at law or in equity, and without constituting or resulting in a waiver, release or estoppel of any right, action or cause of action NCPA may have against the Defaulting Participant, NCPA may take any or all of the following actions:21

- (i) suspend the provision of services under this Agreement to such Defaulting Participant; or 22
- (ii) demand that the Defaulting Participant provide further assurances to guarantee the correction of the default, including the collection of a surcharge or increase in electric rates, or such other actions as may be necessary to produce necessary Revenues to correct the default.22

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12.2 Several Liabilities. No Participant shall, in the first instance, be liable under this Agreement for the obligations of any other Participant or for the obligations of NCPA incurred on behalf of other Participants. Each Participant shall be solely responsible and liable for performance of its obligations under this Agreement, except as otherwise provided for herein. The obligation of each Participant under this Agreement is, in the first instance, a several obligation and not a joint obligation with those of the other Participants. ....	24
Notwithstanding the foregoing, the Participants acknowledge that any debts or obligations incurred by NCPA under this Agreement on behalf of any of them shall be borne solely by such Participants, and not by non-Participant Members of NCPA, pursuant to Article IV, Section 3(b) of the Joint Powers Agreement. ....	25
12.3 No Consequential Damages. FOR ANY BREACH OF ANY PROVISION OF THIS AGREEMENT FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED IN THIS AGREEMENT, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION, AND ALL OTHER DAMAGES OR REMEDIES ARE HEREBY WAIVED. IF NO REMEDY OR MEASURE OF DAMAGE IS EXPRESSLY PROVIDED, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED TO ACTUAL DAMAGES ONLY AND ALL OTHER DAMAGES AND REMEDIES ARE HEREBY WAIVED. IN NO EVENT SHALL NCPA OR ANY PARTICIPANT OR THEIR RESPECTIVE SUCCESSORS, ASSIGNS, REPRESENTATIVES, DIRECTORS, OFFICERS, AGENTS, OR EMPLOYEES BE LIABLE FOR ANY LOST PROFITS, CONSEQUENTIAL, SPECIAL, EXEMPLARY, INDIRECT, PUNITIVE OR INCIDENTAL LOSSES OR DAMAGES, INCLUDING LOSS OF USE, LOSS OF GOODWILL, LOST REVENUES, LOSS OF PROFIT OR LOSS OF CONTRACTS EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NCPA AND EACH PARTICIPANT EACH HEREBY WAIVES SUCH CLAIMS AND RELEASES EACH OTHER AND EACH OF SUCH PERSONS FROM ANY SUCH LIABILITY.....	25

The Parties acknowledge that California Civil Code section 1542 provides that: “A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.” The Parties waive the provisions of section 1542, or other similar provisions of law, and intend that the waiver and release provided by this Section of this Agreement shall be fully enforceable despite its reference to future or unknown claims. 26

12.4 Waiver. No waiver of the performance by a Party of any obligation under this Agreement with respect to any default or any other matter arising in connection with this Agreement shall be effective unless given by the Commission. Any such waiver by the Commission in any particular instance shall not be deemed a waiver with respect to any subsequent performance, default or matter. .... 26

12.5 Amendments. Except where this Agreement specifically provides otherwise, this Agreement may be amended only by written instrument executed by the Parties with the same formality as this Agreement. .... 26

12.6 Assignment of Agreement. .... 26

12.6.1 Binding Upon Successors. This Agreement shall inure to the benefit of and shall be binding upon the respective successors and assignees of the Parties to this Agreement. 27

12.6.2 No Assignment. Neither this Agreement, nor any interest herein, shall be transferred or assigned by a Party hereto except with the consent in writing of the other Parties hereto, which such consent shall not be unreasonably withheld, provided that such transfer or assignment shall be only to another NCPA Member. .... 27

12.7 Severability. In the event that any of the terms, covenants or conditions of this Agreement or the application of any such term, covenant or condition, shall be held invalid as to any person or circumstance by any court having jurisdiction, all other terms, covenants or conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect unless the court holds that such provisions are not severable from all other provisions of this Agreement. .... 27

12.8 Governing Law. This Agreement shall be interpreted, governed by, and construed under the laws of the State of California. .... 27

12.9 Headings. All indices, titles, subject headings, section titles and similar items are provided for the purpose of convenience and are not intended to be inclusive, definitive, or affect the meaning of the contents of this Agreement or the scope thereof. .... 27

12.10 Notices. Any notice, demand or request required or authorized by this Agreement to be given to any Party shall be in writing, and shall either be personally delivered to a Participant’s Commissioner or Alternate, and to the General Manager, or shall be transmitted to the Participant and the General Manager at the addresses shown on the signature pages hereof. The designation of such addresses may be changed at any time by written notice given to the General Manager who shall thereupon give written notice of such change to each Participant. All such notices shall be deemed delivered when personally delivered, two (2) Business Days after deposit in the United States mail first class postage prepaid, or on the first Business Day following delivery through electronic communication. .... 27

12.11 Warranty of Authority. Each Party represents and warrants that it has been duly authorized by all requisite approval and action to execute and deliver this Agreement and that this Agreement is a binding, legal, and valid agreement enforceable in accordance with its terms. Upon execution of this Agreement, each Participant shall deliver to NCPA a resolution of the governing body of such Participant evidencing approval of and authority to enter into this Agreement. 28

12.12 Counterparts. This Agreement may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument and as if all the signatories to all of the counterparts had signed the same instrument. Any signature page of this Agreement may be detached from any counterpart of this Agreement without impairing the legal effect of any signatures thereon, and may be attached to another counterpart of this Agreement identical in form hereto but having attached to it one or more signature pages. 28

12.13 Venue. In the event that a Party brings any action under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California. 29

12.14 Attorneys' Fees. If a Party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provisions of this Agreement, each Party shall bear its own fees and costs, including attorneys' fees, associated with the action. .... 29

12.15 Counsel Representation. Pursuant to the provisions of California Civil Code Section 1717 (a), each of the Parties were represented by counsel in the negotiation and execution of this Agreement and no one Party is the author of this Agreement or any of its subparts. Those terms of this Agreement which dictate the responsibility for bearing any attorney's fees incurred in arbitration, litigation or settlement in a manner inconsistent with the provisions of Section 12.1 were intentionally so drafted by the Parties, and any ambiguities in this Agreement shall not be interpreted for or against a Party by reason of that Party being the author of the provision. 29

12.16 No Third Party Beneficiaries. Nothing contained in this Agreement is intended by the Parties, nor shall any provision of this Agreement be deemed or construed by the Parties, by any third person or any Third Parties, to be for the benefit of any Third Party, nor shall any Third Party have any right to enforce any provision of this Agreement or be entitled to damages for any breach by the Parties of any of the provisions of this Agreement. .... 29

IN WITNESS WHEREOF, NCPA and each Participant have, by the signature of its duly authorized representative shown below, executed and delivered a counterpart of this Agreement.

30

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EXHIBIT C: LIST OF POTENTIAL SITES AND ESTIMATED CONTRACTOR COSTS PER PHASE .....	1
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5.1 Authorization and Funding. The Authorizing Participants hereby authorize NCPA to conduct Phase 2C and Phase 2D activities, as defined in the Second Phase Agreement, for the Authorize Project Site identified above. The Authorizing Participants hereby agree to provide all necessary funds to NCPA to conduct these activities, with costs not to exceed the figures listed in Exhibit C of the Second Phase Agreement for the Authorized Project. ....	iii
5.2 Obligations of NCPA. Upon full execution of this Project Development Authorization Form, NCPA shall commence work on all Phase 2C and Phase 2D activities, as	

defined in the Second Phase Agreement, for the Authorized Project Site on behalf of the Authorizing Participants. .... iii

5.3 Obligations of Authorizing Participants. Authorizing Participants hereby agree to continue to pay or advance to NCPA its allocated share of the costs in accordance with the Second Phase Agreement and this Project Development Authorization Form in connection with its participation in the Authorized Project. .... iii

IN WITNESS WHEREOF, NCPA and each Participant have, by the signature of its duly authorized representative shown below, executed and delivered a counterpart of this Agreement.

iii

This SECOND PHASE AGREEMENT FOR NCPA SOLAR PROJECT 1 ("this Agreement") is dated as of \_\_\_\_\_, 20\_\_ by and among the Northern California Power Agency, a joint powers agency of the State of California ("NCPA"), and the signatories to this Agreement other than NCPA ("Participants"). NCPA and the Participants are referred to herein individually as a "Party" and collectively as the "Parties".

## **RECITALS**

A. NCPA has heretofore been duly established as a public agency pursuant to the Joint Exercise of Powers Act of the Government Code of the State of California and, among other things, is authorized to acquire, construct, finance, and operate buildings, works, facilities and improvements for the generation and transmission of electric capacity and energy for resale.

B. Each of the Participants is a signatory to the Joint Powers Agreement which created NCPA and therefore is a Member.

C. Each of the Participants to this Agreement have executed the Amended and Restated Facilities Agreement which establishes the framework under which Project Agreements are created for the development, design, financing, construction, and operation of specific NCPA Projects.

D. NCPA and each of the Participants are interested in developing additional Renewable Energy Supply to meet the future demands of the Participants.

E. NCPA, working in collaboration with Participants, proposes new solar photovoltaic generation facilities, located in or near Participants' service territories, with anticipated individual project sizes ranging from less than 1 megawatt ("MW") and up to 16 MW, with a total project capacity of up to approximately 35 MW ("NCPA Solar Project 1").

F. The Parties desire to utilize NCPA as a project manager to oversee study, planning, and operations of the facility, and plan to solicit services of a third party ("Seller") to develop, own, and operate the Project during its initial term of commercial operations.

G. This Agreement is intended to cover all pre-construction activities associated with the development of the Project. The Parties desire to divide Phase 2 activities authorized under this Agreement into four (4) sub-phases, designated as Phase 2A (Site Recommendation), 2B (Site Screening), 2C (Preliminary Development and Planning), and 2D (Project Development and Financing). This agreement is intended to authorize NCPA and Participants to initiate, fund, and complete activities of Phases 2A and 2B; and to describe subsequent processes and approvals needed in order to authorize NCPA to initiate Phase 2C and 2D activities.

H. Each Participant is authorized by its Constitutive Documents to obtain electric capacity and energy for its present or future requirements, through contracts with NCPA or otherwise.

I. To enable NCPA to develop additional Renewable Energy Supply and negotiate and enter into the Renewable PPA on behalf of the Participants, pursuant to the terms and conditions of the Amended and Restated Facilities Agreement, NCPA and the Participants wish to enter into this Agreement to provide all means necessary for NCPA to perform its duties under this Agreement, and to enable and obligate the Participants to pay NCPA for all costs its incurs for undertaking the foregoing activities.

J. The Parties desire NCPA to commence work on Phase 2A, if necessary, and Phase 2B activities on or shortly after the Effective Date of this Agreement.

K. The Parties desire all plants developed under this Agreement to enter commercial operations within a three-month window of each other and that all plants reach completion not later than December 31, 2019.

L. Contingent upon negotiating mutually acceptable terms and conditions with one or more prospective suppliers, NCPA will present the proposed Renewable PPA to the NCPA Commission for review and approval. Contemporaneously, NCPA will seek final approval from Participants through a Third Phase Agreement for the Project that would govern the rights and obligations of NCPA and Participants related to the sale and purchase of Products.

M. Each of the Parties intends to observe the provisions of this Agreement in good faith and shall cooperate with all other Parties in order to achieve the full benefits of joint action.

N. The Parties desire to equitably allocate costs of NCPA's provision of services under this Agreement among the Participants, with costs of each site and each sub-process established in Section 3.5 of this Agreement.

O. The Participants further desire, insofar as possible, to insulate other Members who are not Participants, from risks inherent in the services and transactions undertaken on behalf of the Participants pursuant to this Agreement.

NOW, THEREFORE, the Parties agree as follows:

**Section 1. Definitions.**

1.1 Definitions. Whenever used in this Agreement (including the Recitals hereto), the following terms shall have the following respective meanings, provided, capitalized terms used in this Agreement (including the Recitals hereto) that are not defined in Section 1 of this Agreement shall have the meaning indicated in Section 1 of the Power Management and Administrative Services Agreement:

1.1.1 "Agreement" means this Second Phase Agreement for NCPA Solar Project 1 including all Exhibits attached hereto.

1.1.2 "Authorizing Participants" means a subset of Participants that grant written authority to NCPA to commence Phase 2C and Phase 2D activities of this Agreement, using a Project Development Authorization Form found in Exhibit D of this Agreement.

1.1.3 “Authorized Project Site” means the generation facility that NCPA will conduct Phase 2C and Phase 2D activities for, as directed by Authorizing Participants using a Project Development Authorization Form. There may be multiple Authorized Project Sites addressed under this Agreement.

1.1.4 “Capacity Attributes” means any and all current or future defined characteristics consistent with the operational limitations of the Project, certificates, tags, credits, ancillary service attributes, or accounting constructs, howsoever entitled, including resource adequacy benefits, Flexible Capacity Benefits, and any tracking or accounting associated with the foregoing, intended to value any aspect of the capacity of the Project to produce Energy or ancillary services, attributed to or associated with the Project.

1.1.5 “Constitutive Documents” means, with respect to NCPA, the Joint Powers Agreement and any resolutions or bylaws adopted thereunder with respect to the governance of NCPA, and with respect to each Participant, the California Government Code and other statutory provisions applicable to such Participant, any applicable agreements, charters, contracts or other documents concerning the formation, operation or decision making of such Participant, including, if applicable, its City Charter, and any codes, ordinances, bylaws, and resolutions adopted by such Participant’s governing body.

1.1.6 “Effective Date” shall have the meaning set forth in Section 9 of this Agreement.

1.1.7 “Energy” means electric energy expressed in units of kWh or MWh.

1.1.8 “Environmental Attributes” means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, as the case may be, and its displacement of conventional energy generation. Environmental Attributes include: (i) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (ii) any avoided emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and other greenhouse gases that have been determined by the United Nations Intergovernmental Panel on Climate Change to contribute to the actual or potential threat of altering the Earth’s climate by trapping heat in the atmosphere; and (iii) the reporting rights to these avoided emissions such as, but not limited to, a Renewable Energy Certificate (“REC”).

Environmental Attributes do not include: (i) any Energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project, and other financial incentives in the form of credits, reductions, or allowances associated with the Project that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or “tipping fees” that may be paid to Seller to accept certain fuels, or local subsidies received by Seller or the owners of the site for the destruction of particular pre-existing pollutants or the promotion

of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits.

1.1.9 “Flexible Capacity” has the meaning set forth in the CAISO Tariff.

1.1.10 “Flexible Capacity Benefits” means the rights and privileges attached to any generating resource that satisfy any entity’s Flexible Capacity requirement.

1.1.11 “Initiating Members” shall have the meaning as set forth in Section 5.2.

1.1.12 “NCPA” has the meaning set forth in the recitals hereto.

1.1.13 “Participant” has the meaning set forth in the recitals of this Agreement.

1.1.14 “Power Management and Administrative Services Agreement” means the NCPA Power Management and Administrative Services Agreement, dated as of October 1, 2014 between NCPA and the Members who are signatories to that agreement by which NCPA provides Power Management and Administrative Services.

1.1.15 “Product” means Energy, Capacity Attributes and Environmental Attributes delivered to the Participants pursuant to the Renewable PPA.

1.1.16 “Project” means the NCPA Solar Project 1 as defined in the Recitals of this Agreement.

1.1.17 “Project Development Authorization Form” is Exhibit D of this Agreement, and one form is required for each site for which NCPA will conduct Phase 2C and Phase 2D activities.

1.1.18 “Party” or “Parties” has the meaning set forth in the preamble hereto; provided that “Third Parties” are entities that are not Party to this Agreement.

1.1.19 “Renewable Energy Supply” refers to power supply resources eligible for use under the Renewable Portfolio Standard Program.

1.1.20 “Renewable PPA” means the Power Purchase Agreement to be negotiated by NCPA and Seller, under which NCPA, on behalf of the Participants, purchases Product from newly constructed solar photovoltaic resources.

1.1.21 “RPS” or “Renewable Portfolio Standard Program” means the State of California Renewable Portfolio Standard Program, as codified at California Public Utilities Code Section 399.11, *et seq.*

1.1.22 “Seller” has the meaning set forth in the recitals of this Agreement.

1.1.23 “Term” has the meaning set forth in Section 9.

1.2 Rules of Interpretation. As used in this Agreement (including the Recitals hereto), unless in any such case the context requires otherwise: The terms “herein,” “hereto,” “herewith” and “hereof” are references to this Agreement taken as a whole and not to any particular provision; the term “include,” “includes” or “including” shall mean

“including, for example and without limitation;” and references to a “Section,” “subsection,” “clause,” “Appendix”, “Schedule”, or “Exhibit” shall mean a Section, subsection, clause, Appendix, Schedule or Exhibit of this Agreement, as the case may be. All references to a given agreement, instrument, tariff or other document, or law, regulation or ordinance shall be a reference to that agreement, instrument, tariff or other document, or law, regulation or ordinance as such now exists and as may be amended from time to time, or its successor. A reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having a separate legal personality and includes its successors and permitted assigns. A reference to a “day” shall mean a Calendar Day unless otherwise specified. The singular shall include the plural and the masculine shall include the feminine, and *vice versa*.

## **Section 2. Purpose.**

The purpose of this Agreement is to establish the rights and obligations of the Parties, define Phase 2 activities and sub-phases, and establish a cost allocation methodology for Phase 2 activities.

## **Section 3. Authorities, Obligations, and Allocation of Project Cost.**

### **3.1 Authorities.**

3.1.1 Upon the Effective Date of this Agreement, NCPA is hereby authorized to conduct all work necessary to complete its obligations of Phase 2A and Phase 2B.

3.1.2 NCPA shall conduct all work necessary to complete its obligations under Phase 2C and Phase 2D upon full execution of a Project Development Authorization Form, with a template attached hereto as Exhibit D. Such form shall apply to a single Authorized Project Site and shall become effective when signed by NCPA and all Authorizing Participants of the Authorized Project Site.

3.2 Obligations of NCPA. Upon the Effective Date of this Agreement, NCPA shall commence work pertaining to its duties under Phase 2A and/or Phase 2B, as described further below. Upon the effective date of a Project Development Authorization Form, NCPA shall commence work pertaining to its duties under Phase 2C and Phase 2D, as described further below. NCPA, on behalf of itself and Participants, shall act as lead or responsible agency for the purposes of environmental review of the Project, shall act as project manager for all Phase 2 activities, and is responsible for engaging necessary expert professional services including those of NCPA staff. NCPA shall divide Phase 2 activities into 4 sub-phases, defined below.

3.2.1 Phase 2A (Site Recommendation): NCPA shall assist Participants that have provided multiple potential sites in a single service territory to identify the best site(s) for further evaluation in subsequent Phase 2 sub-processes.

3.2.2 Phase 2B (Site Screening): NCPA shall complete a feasibility study for each proposed site listed in Exhibit C. For Participants that have identified multiple potential sites in a single service territory, NCPA shall conduct a Phase 2B feasibility study

only for those sites identified in Phase 2A for subsequent Phase 2 sub-phases, or as mutually agreed to in writing by NCPA and the Participant(s) of the selected sites. NCPA shall deliver a “Go / No Go” determination for each project site. NCPA shall advance the due diligence investigation required for each proposed site, initiate environmental studies, initiate financial planning, and complete a feasibility assessment for each proposed site. Participants may also opt, at an additional cost, for a Storage Feasibility Study to determine the technical and economic feasibility of incorporating energy storage (e.g. batteries) at their site.

3.2.3 Phase 2C (Preliminary Development & Planning): NCPA shall finalize project design and specifications, prepare conceptual physical and electrical layout diagrams, provide capital, identify site preparation requirements, identify permit requirements, and identify other risks and recommendations.

3.2.4 Phase 2D (Project Development and Project Financing): NCPA shall complete CEQA review; gain site control; complete financing arrangements; and negotiate a Renewable Energy Power Purchase Agreement (“Renewable PPA”) to purchase electric capacity, energy, and environmental attributes produced by eligible renewable resources for the benefit of the Participants’ customers, and to include an option to purchase the project facilities from the third party at a future date.

### 3.3 Obligations of Participants.

3.3.1 Participants hereby agree to continue to pay or advance to NCPA its allocated share of the costs authorized by Participants in accordance with this Agreement in connection with its participation in the Project.

3.3.2 Upon execution of this Agreement, Participant shall identify the individual who is authorized to initiate Phase 2C and Phase 2D activities using a Project Development Authorization Form. Participants' designees shall be listed in Exhibit A.

3.4 Obligations of the Parties. NCPA and Participants hereby agree to conduct all necessary work, secure all necessary authorities, transmit all necessary forms, and to work collaboratively to complete all Phase 2 activities in a timely manner, with the goal that all facilities developed under this Agreement enter commercial operations within a three-month window of each other and that all plants reach completion not later than December 31, 2019.

3.5 Project Costs and Cost Allocation.

3.5.1 Project Costs. Estimated costs for each sub-process at each site are listed in Exhibit C, including a 15% contingency. Upon execution of this Agreement, NCPA is authorized to expend funds listed in Exhibit C to conduct Phase 2A and Phase 2B activities for each site for Parties to this Agreement. NCPA is authorized to expend funds for Phase 2C and Phase 2D activities, contingent upon receiving a duly authorized written consent from Authorizing Participants under a completed Project Development Authorization Form for each Authorized Project Site, which shall specify the not-to-exceed

costs for Phase 2C and Phase 2D. To the extent that Phase 2C and Phase 2D costs differ between Exhibit C of this Agreement and that of Section 4 of the completed Project Development Authorization Form, the latter will control.

3.5.2 NCPA shall assign costs to Participants using a three-step process.

- i. NCPA shall designate a cost as either “General” or “Site-Specific.”
- ii. All General costs shall be assigned to each site, in proportion to each site’s capacity rating relative to the total capacity of the NCPA Solar Project 1.
- iii. General costs assigned to each site, and all site-specific costs, shall be allocated to each Participant in proportion to Participants’ site-specific GES.

3.6 Adjustments to Generation Entitlement Shares. The GES of each Participant shall be revised proportionately if less than the full megawatt capacity of the Project is subscribed. The GES of each Participant shall be revised if and when any Participant withdraws in whole or in part. The full megawatt capacity of the Project shall be revised if and when project specification of individual sites are added, modified, or eliminated for consideration. Notwithstanding the foregoing, Participants are responsible for all obligations and actual costs incurred up to the effective date of changes to participation levels and site specifications.

3.7 Third Phase Agreement Funding and Participation. The Third Phase Agreement that supersedes and replaces this Agreement, if any, shall provide for reimbursement, retirement or refunding of (1) any preliminary expenditures including financing costs, architectural, engineering, surveying, soil testing, debt issuance costs, and

(2) expenditures relating to the acquisition, construction, and land acquisition of the project, of any expenditure of the Participants in the Second Phase of the Project, out of final long-term financing of the Project, or other funding method, including but not limited to cash payments. It is expected that the amount of long term bonds or other reimbursement is not expected to exceed \$4,000,000. This provision is also meant to establish with the requirements of Section 1.150-2 of the Treasury Regulations.

#### **Section 4. Billing and Payments.**

4.1 Participant Payment Obligations. Each Participant agrees to pay to NCPA each month its respective portion of the actual costs associated with activities authorized under this Agreement and the Amended and Restated Facilities Agreement.

4.2 Invoices. NCPA will issue an invoice to each Participant for its share of actual costs associated with negotiation and implementation of the Renewable PPA, and all other costs for services provided in accordance with this Agreement and the Amended and Restated Facilities Agreement. Such invoice may be either the All Resources Bill or separate special invoice, as determined by NCPA. At NCPA's discretion, invoices may be issued to Participants using electronic media or physical distribution.

4.3 Payment of Invoices. All invoices delivered by NCPA (including the All Resources Bill) are due and payable thirty (30) Calendar Days after the date thereof; provided, however, that any amount due on a day other than a Business Day may be paid on the following Business Day.

4.4 Late Payments. Any amount due and not paid by a Participant in accordance with Section 4.3 shall be considered late and bear interest computed on a daily basis until paid at the lesser of (i) the per annum prime rate (or reference rate) of the Bank of America NT&SA then in effect, plus two percent (2%) or (ii) the maximum rate permitted by law.

4.5 Billing Disputes. A Participant may dispute the accuracy of any invoice issued by NCPA under this Agreement by submitting a written dispute to NCPA, within thirty (30) Calendar Days of the date of such invoice; nonetheless the Participant shall pay the full amount billed when due. If a Participant does not timely question or dispute the accuracy of any invoice in writing, the invoice shall be deemed to be correct. Upon review of a submitted dispute, if an invoice is determined by NCPA to be incorrect, NCPA shall issue a corrected invoice and refund any amounts that may be due to the Participant. If NCPA and the Participant fail to agree on the accuracy of an invoice within thirty (30) Calendar Days after the Participant has disputed it, the General Manager shall promptly submit the dispute to the Commission for resolution. If the Commission and the Participant fail to agree on the accuracy of a disputed invoice within sixty (60) Calendar Days of its submission to the Commission, the dispute may then be resolved under the mediation and arbitration procedures set forth in Section 11 of this Agreement. Provided, however, that prior to resorting to either mediation or arbitration proceedings, the full amount of the disputed invoice must be paid.

#### 4.6 Billing/Settlement Data and Examination of Books and Records.

4.6.1 Settlement Data. NCPA shall make billing and settlement data available to the Participants in the All Resources Bill, or other invoice, or upon request. NCPA may also, at its sole discretion, make billing and settlement support information available to Participants using electronic media (e.g. electronic data portal). Procedures and formats for the provision of such electronic data submission may be established by the Commission from time to time. Without limiting the generality of the foregoing, NCPA may, in its reasonable discretion, require the Participants to execute a non-disclosure agreement prior to providing access to the NCPA electronic data portal.

4.6.2 Examination of Books and Records. Any Participant to this Agreement shall have the right to examine the books and records created and maintained by NCPA pursuant to this Agreement at any reasonable, mutually agreed upon time.

### **Section 5. Participation.**

5.1 Eligibility. All Members who are signatory to the Amended and Restated Facilities Agreement are eligible to participate in this Agreement by delivering a duly executed copy of this Agreement to NCPA, and subject to availability of the Renewable Energy Supply as described in Section 5.2.

5.2 Priority. This Agreement has been developed in response to certain Members' request for NCPA to acquire Renewable Energy Supply on their behalf (hereinafter referred to as the "Initiating Members"). The Initiating Members are listed in

Exhibit A. To the extent the amount of Renewable Energy Supply that is made available by Seller is not sufficient to satisfy all Members' requests for a desired amount of Renewable Energy Supply; first priority will be given to the Initiating Members, and secondary priority will be given to all other Members who become a Participant. If after meeting the requests of the Initiating Members, any remaining available Renewable Energy Supply will be allocated to all other Participants based on a first-come first-serve basis, until the total amount of available Renewable Energy Supply is exhausted, or until all Participants' requests have been satisfied, whichever comes first.

5.3 Final Participation Percentages. Upon the Effective Date of this Agreement, NCPA shall include each Participant's Final Project Participation Percentage in Exhibit B. NCPA shall update Exhibit B to reflect changes in Participants and/or GES, in writing, and shall provide written notice to Participants of such changes.

**Section 6. Cooperation and Further Assurances.**

Each of the Parties agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by any other Party which are consistent with the provisions of this Agreement and which do not involve the assumption of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement. The Parties agree to cooperate and act in good faith in connection with obtaining any credit support required in order to satisfy the requirements of this Agreement.

## **Section 7.    Administration of Agreement**

7.1    Commission. The Commission is responsible for the administration of this Agreement. Each Participant shall be represented by its Commissioner or their designated alternate Commissioner (“Alternate”) pursuant to the Joint Powers Agreement. Each Commissioner shall have authority to act for the Participant represented with respect to matters pertaining to this Agreement.

7.2    Forum. Whenever any action anticipated by this Agreement is required to be jointly taken by the Participants, such action shall be taken at regular or special meetings of the NCPA Commission.

### **7.3    Quorum.**

7.3.1 General Administration. For purposes of acting upon matters that relate to general administration of this Agreement, a quorum of the Commission shall consist of those Commissioners, or their designated Alternates, representing a numerical majority of the Participants.

7.3.2 Relating to a Project Site. For purposes of acting upon matters that relate to a specific Project site, a quorum of the Participants shall consist of those Commissioners, or their designated Alternate, representing a GES majority of the Participants with an entitlement interest in such Project site.

### **7.4    Voting.**

7.4.1 General Administration. For acting upon matters that relate to the general administration of this Agreement, each Participant shall have the right to cast one (1)

vote. Actions of the Commission shall be effective only upon a majority vote of the Participants.

**Section 8. Relating to a Project Site. For acting upon matters that relate to a specific Project site, Participant shall have the right to cast one (1) vote. Actions of the Commission shall be effective only upon a majority vote of the Participants with an entitlement interest in such Project site.**Participant Covenants and Defaults

8.1 Each Participant covenants and agrees: (i) to make payments to NCPA, from its Electric System Revenues, of its obligations under this Agreement as an operating expense of its Electric System; (ii) to fix the rates and charges for services provided by its Electric System, so that it will at all times have sufficient Revenues to meet the obligations of this Agreement, including the payment obligations; (iii) to make all such payments due NCPA under this Agreement whether or not there is an interruption in, interference with, or reduction or suspension of services provided under this Agreement, such payments not being subject to any reduction, whether by offset or otherwise, and regardless of whether any dispute exists; and (iv) to operate its Electric System, and the business in connection therewith, in accordance with Good Utility Practices.

8.2 Events of Default. An Event of Default under this Agreement shall exist upon the occurrence of any one or more of the following by a Participant (the "Defaulting Participant"):

(i) the failure of any Participant to make any payment in full to NCPA when due;

(ii) the failure of a Participant to perform any covenant or obligation of this Agreement where such failure is not cured within thirty (30) Calendar Days following receipt of a notice from NCPA demanding cure. Provided, that this subsection shall not apply to any failure to make payments specified by subsection 8.2 (i));

(iii) if any representation or warranty of a Participant material to the services provided hereunder shall prove to have been incorrect in any material respect when made and the Participant does not cure the facts underlying such incorrect representation or warranty so that the representation or warranty becomes true and correct within thirty (30) Calendar Days of the date of receipt of notice from NCPA demanding cure; or

(iv) if a Participant is in default or in breach of any of its covenants or obligations under any other agreement with NCPA and such default or breach is not cured within the time periods specified in such agreement.

8.3 Uncontrollable Forces. A Party shall not be considered to be in default in respect of any obligation hereunder if prevented from fulfilling such obligation by reason of Uncontrollable Forces. Provided, that in order to be relieved of an Event of Default due to Uncontrollable Forces, a Party affected by an Uncontrollable Force shall:

(i) first provide oral notice to the General Manager using telephone communication within two (2) Business Days of the onset of the Uncontrollable Force, and provide subsequent written notice to the General Manager and all other Parties within ten (10) Business Days of the onset of the Uncontrollable Force, describing its nature and

extent, the obligations which the Party is unable to fulfill, the anticipated duration of the Uncontrollable Force, and the actions which the Party will undertake so as to remove such disability and be able to fulfill its obligations hereunder; and

(ii) use due diligence to place itself in a position to fulfill its obligations hereunder and if unable to fulfill any obligation by reason of an Uncontrollable Force such Party shall exercise due diligence to remove such disability with reasonable dispatch. Provided, that nothing in this subsection shall require a Party to settle or compromise a labor dispute.

8.4 Cure of an Event of Default. An Event of Default shall be deemed cured only if such default shall be remedied or cured within the time periods specified in Section 8.2 above, as may be applicable, provided, however, upon request of the Defaulting Participant the Commission may waive the default at its sole discretion, where such waiver shall not be unreasonably withheld.

8.5 Remedies in the Event of Uncured Default. Upon the occurrence of an Event of Default which is not cured within the time limits specified in Section 8.2, without limiting other rights or remedies available under this Agreement, at law or in equity, and without constituting or resulting in a waiver, release or estoppel of any right, action or cause of action NCPA may have against the Defaulting Participant, NCPA may take any or all of the following actions:

(i) suspend the provision of services under this Agreement to such Defaulting Participant; or

(ii) demand that the Defaulting Participant provide further assurances to guarantee the correction of the default, including the collection of a surcharge or increase in electric rates, or such other actions as may be necessary to produce necessary Revenues to correct the default.

#### 8.6 Effect of Suspension.

8.6.1 Generally. The suspension of this Agreement will not terminate, waive, or otherwise discharge any ongoing or undischarged liabilities, credits or obligations arising from this Agreement until such liabilities, credits or obligations are satisfied in full.

8.6.2 Suspension. If performance of all or any portion of this Agreement is suspended by NCPA with respect to a Participant in accordance with subsection 8.5(i), such Participant shall pay any and all costs incurred by NCPA as a result of such suspension including reasonable attorney fees, the fees and expenses of other experts, including auditors and accountants, or other reasonable and necessary costs associated with such suspension and any portion of the Project Costs, scheduling and dispatch costs, and Administrative Services Costs that were not recovered from such Participant as a result of such suspension.

### **Section 9. Term and Termination.**

This Agreement shall become effective when it has been duly executed by NCPA and at least one Participant (the “Effective Date”). The date on which NCPA makes this Agreement effective shall be determined by NCPA, at its sole discretion. NCPA shall deliver a written notice to all signatories to this Agreement and to all Members that are signatory to the Amended and Restated Facilities Agreement, stating the Effective Date of this Agreement. This Agreement shall commence on the Effective Date and shall continue until the Agreement terminates, which shall occur when either:

9.1 All activities pursuant to this Agreement are terminated by NCPA in its discretion; or

9.2 Upon the effective date of a Third Phase Agreement with one or more Participants relating to a Renewable Energy PPA.

#### **Section 10. Withdrawal of Participants.**

If at any time following the execution of this Agreement, NCPA issues a written notice of a change to Exhibit B or an increase in the financial commitment beyond that contemplated in Exhibit C, Participants may partially withdraw (i.e., from participating in the increase), or may withdraw wholly from the Project. Any withdrawal shall be subject to honoring any commitments made to them or on their behalf pursuant to authorization of this Agreement. To withdraw, such Participant shall give NCPA written notice of such withdrawal, in part or in whole, within thirty (30) days of the receipt of the notice by them of the increase. Notwithstanding the above, a Participant may withdraw following the completion of any sub-process. In this event the Participants may vote to consider modifications to this Agreement and/or the applicable executed Project Development Authorization Form for affected site(s).

#### **Section 11. Settlement of Disputes and Arbitration.**

The Parties agree to make best efforts to settle all disputes among themselves connected with this Agreement as a matter of normal business under this Agreement. The procedures set forth in Section 10 of the Power Management and Administrative Services Agreement shall apply to all disputes that cannot be settled by the Participants themselves; provided, that the provisions of Section 5.5 of this Agreement shall first apply to all disputes involving invoices prepared by NCPA.

**Section 12. Miscellaneous.**

12.1 Indemnification and Hold Harmless. Subject to the provisions of Section 12.3, each Participant agrees to indemnify, defend and hold harmless NCPA and its Members, including their respective governing boards, officials, officers, agents, and employees, from and against any and all claims, suits, losses, costs, damages, expenses and liability of any kind or nature, including reasonable attorneys' fees and the costs of litigation, including experts, to the extent caused by any acts, omissions, breach of contract, negligence (active or passive), gross negligence, recklessness, or willful misconduct of that Participant, its governing officials, officers, employees, subcontractors or agents, to the maximum extent permitted by law.

12.2 Several Liabilities. No Participant shall, in the first instance, be liable under this Agreement for the obligations of any other Participant or for the obligations of NCPA incurred on behalf of other Participants. Each Participant shall be solely responsible and liable for performance of its obligations under this Agreement, except as otherwise provided for herein. The obligation of each Participant under this Agreement is, in the

first instance, a several obligation and not a joint obligation with those of the other Participants.

Notwithstanding the foregoing, the Participants acknowledge that any debts or obligations incurred by NCPA under this Agreement on behalf of any of them shall be borne solely by such Participants, and not by non-Participant Members of NCPA, pursuant to Article IV, Section 3(b) of the Joint Powers Agreement.

12.3 No Consequential Damages. FOR ANY BREACH OF ANY PROVISION OF THIS AGREEMENT FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED IN THIS AGREEMENT, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION, AND ALL OTHER DAMAGES OR REMEDIES ARE HEREBY WAIVED. IF NO REMEDY OR MEASURE OF DAMAGE IS EXPRESSLY PROVIDED, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED TO ACTUAL DAMAGES ONLY AND ALL OTHER DAMAGES AND REMEDIES ARE HEREBY WAIVED. IN NO EVENT SHALL NCPA OR ANY PARTICIPANT OR THEIR RESPECTIVE SUCCESSORS, ASSIGNS, REPRESENTATIVES, DIRECTORS, OFFICERS, AGENTS, OR EMPLOYEES BE LIABLE FOR ANY LOST PROFITS, CONSEQUENTIAL, SPECIAL, EXEMPLARY, INDIRECT, PUNITIVE OR INCIDENTAL LOSSES OR DAMAGES, INCLUDING LOSS OF USE, LOSS OF GOODWILL, LOST REVENUES, LOSS OF PROFIT OR LOSS OF CONTRACTS EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND

NCPA AND EACH PARTICIPANT EACH HEREBY WAIVES SUCH CLAIMS AND RELEASES EACH OTHER AND EACH OF SUCH PERSONS FROM ANY SUCH LIABILITY.

The Parties acknowledge that California Civil Code section 1542 provides that: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor." The Parties waive the provisions of section 1542, or other similar provisions of law, and intend that the waiver and release provided by this Section of this Agreement shall be fully enforceable despite its reference to future or unknown claims.

12.4 Waiver. No waiver of the performance by a Party of any obligation under this Agreement with respect to any default or any other matter arising in connection with this Agreement shall be effective unless given by the Commission. Any such waiver by the Commission in any particular instance shall not be deemed a waiver with respect to any subsequent performance, default or matter.

12.5 Amendments. Except where this Agreement specifically provides otherwise, this Agreement may be amended only by written instrument executed by the Parties with the same formality as this Agreement.

12.6 Assignment of Agreement.

12.6.1 Binding Upon Successors. This Agreement shall inure to the benefit of and shall be binding upon the respective successors and assignees of the Parties to this Agreement.

12.6.2 No Assignment. Neither this Agreement, nor any interest herein, shall be transferred or assigned by a Party hereto except with the consent in writing of the other Parties hereto, which such consent shall not be unreasonably withheld, provided that such transfer or assignment shall be only to another NCPA Member.

12.7 Severability. In the event that any of the terms, covenants or conditions of this Agreement or the application of any such term, covenant or condition, shall be held invalid as to any person or circumstance by any court having jurisdiction, all other terms, covenants or conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect unless the court holds that such provisions are not severable from all other provisions of this Agreement.

12.8 Governing Law. This Agreement shall be interpreted, governed by, and construed under the laws of the State of California.

12.9 Headings. All indices, titles, subject headings, section titles and similar items are provided for the purpose of convenience and are not intended to be inclusive, definitive, or affect the meaning of the contents of this Agreement or the scope thereof.

12.10 Notices. Any notice, demand or request required or authorized by this Agreement to be given to any Party shall be in writing, and shall either be personally

delivered to a Participant's Commissioner or Alternate, and to the General Manager, or shall be transmitted to the Participant and the General Manager at the addresses shown on the signature pages hereof. The designation of such addresses may be changed at any time by written notice given to the General Manager who shall thereupon give written notice of such change to each Participant. All such notices shall be deemed delivered when personally delivered, two (2) Business Days after deposit in the United States mail first class postage prepaid, or on the first Business Day following delivery through electronic communication.

12.11 Warranty of Authority. Each Party represents and warrants that it has been duly authorized by all requisite approval and action to execute and deliver this Agreement and that this Agreement is a binding, legal, and valid agreement enforceable in accordance with its terms. Upon execution of this Agreement, each Participant shall deliver to NCPA a resolution of the governing body of such Participant evidencing approval of and authority to enter into this Agreement.

12.12 Counterparts. This Agreement may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument and as if all the signatories to all of the counterparts had signed the same instrument. Any signature page of this Agreement may be detached from any counterpart of this Agreement without impairing the legal effect of any signatures thereon,

and may be attached to another counterpart of this Agreement identical in form hereto but having attached to it one or more signature pages.

12.13 Venue. In the event that a Party brings any action under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.

12.14 Attorneys' Fees. If a Party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provisions of this Agreement, each Party shall bear its own fees and costs, including attorneys' fees, associated with the action.

12.15 Counsel Representation. Pursuant to the provisions of California Civil Code Section 1717 (a), each of the Parties were represented by counsel in the negotiation and execution of this Agreement and no one Party is the author of this Agreement or any of its subparts. Those terms of this Agreement which dictate the responsibility for bearing any attorney's fees incurred in arbitration, litigation or settlement in a manner inconsistent with the provisions of Section 12.1 were intentionally so drafted by the Parties, and any ambiguities in this Agreement shall not be interpreted for or against a Party by reason of that Party being the author of the provision.

12.16 No Third Party Beneficiaries. Nothing contained in this Agreement is intended by the Parties, nor shall any provision of this Agreement be deemed or construed

by the Parties, by any third person or any Third Parties, to be for the benefit of any Third Party, nor shall any Third Party have any right to enforce any provision of this Agreement or be entitled to damages for any breach by the Parties of any of the provisions of this Agreement.

IN WITNESS WHEREOF, NCPA and each Participant have, by the signature of its duly authorized representative shown below, executed and delivered a counterpart of this Agreement.

NORTHERN CALIFORNIA  
POWER AGENCY  
651 Commerce Drive  
Roseville, CA 95678

CITY OF ALAMEDA  
2000 Grand Street  
P.O. Box H  
Alameda, CA 94501

By: \_\_\_\_\_  
Title: Randy S. Howard  
Date: General Manager \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

By: \_\_\_\_\_  
Title: Jane Luckhardt  
Date: General Counsel \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF HEALDSBURG  
401 Grove Street  
Healdsburg, CA 95448

CITY OF LODI  
221 W. Pine Street  
Lodi, CA 95240

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

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Title: \_\_\_\_\_  
Date: \_\_\_\_\_

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Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

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Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF LOMPOC  
100 Civic Center Plaza  
Lompoc, CA 93436

CITY OF OAKLAND, acting by and through  
its Board of Port Commissioners  
530 Water Street  
Oakland, CA 94607

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

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Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF PALO ALTO  
250 Hamilton Avenue  
Palo Alto, CA 94301

PLUMAS-SIERRA RURAL  
ELECTRIC COOPERATIVE  
73233 Highway 70  
Portola, CA 96122

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

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Title: \_\_\_\_\_  
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By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF REDDING  
777 Cypress Avenue  
Redding, CA 96001

CITY OF SANTA CLARA  
1500 Warburton Avenue  
Santa Clara, CA 95050

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

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By: \_\_\_\_\_  
Title: \_\_\_\_\_  
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By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF SHASTA LAKE  
1650 Stanton Drive  
Shasta Lake, CA 96019

CITY OF UKIAH  
300 Seminary Avenue  
Ukiah, CA 95482

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

## EXHIBIT A: INITIATING MEMBERS

The following is a list of the Initiating Members who submitted a request for NCPA to purchase Renewable Energy Supply on their behalf. Their respective Initial Project Participation Percentage share of the Project\* are:

<b>Participant</b>	<b>MW (estimated)</b>	<b>GES (estimated)</b>	<b>Authorized Representative to Initiate Phases 2C and 2D</b>
Alameda	2.4	6.45%	
Healdsburg	1.8	4.84%	
Lodi	5.0	13.44%	
Lompoc	5.6	15.05%	
Palo Alto	0.7	1.88%	
Plumas-Sierra	4.7	12.63%	
Port of Oakland	2.0	5.38%	
Redding	10.0	26.88%	
Shasta Lake	3.0	8.06%	
Ukiah	2.0	5.38%	
<b>TOTAL</b>	<b>37</b>	<b>100.00%</b>	

\*Example only. Subject to change.

## EXHIBIT B: LIST OF PARTICIPANTS AND GES

Effective Date: \_\_\_\_\_

The following is a list of the Participants who are signatory to this Agreement, and their respective Generation

Entitlement Share for each facility contemplated under this Agreement.

**Participant GES for Each Site\***

Site Location	Site Description	Est. Size (MW)	ALA	HEA	LOD	LOM	PAL	PLU	PORT	REU	SVP	SHL	UKI
Alameda	Doolittle	2.4	100%										
Healdsburg	WWT	1.8		100%									
Lodi	Century	1.1			100%								
	Pixley Basin	4.9											
	Pixley West	1.4											
	Locust	0.5											
	World of Wonders	0.5											
	Awani	1.3											
Lompoc	Parcel 11003	5.6				100%							
Palo Alto	Golf Course	0.7					100 %						
Plumas-Sierra	Beckwourth	4.6						100%					
	Herlong	5.3											
	Marble	3.9											
	Army Depot	5.3											
Port of Oakland	Airport	2.0							100%				
Redding	East	13.9								100%			
	Landfill	10.3											
	Stillwater	3.1											
Ukiah	WWT	2.0											100%
	Carport?	TBD											

\*As of 1/12/2018 and subject to change. Assumes each participant participates 100% of its own generation.

## EXHIBIT C: LIST OF POTENTIAL SITES AND ESTIMATED CONTRACTOR COSTS PER PHASE

Participant	Site Description	Est. Size (MW)	Phase 2A	Phase 2B	Phase 2C	Phase 2D
Alameda	Doolittle (Capped Landfill)	2.4	NA	\$34,500	\$63,250	\$258,750
Healdsburg	WWT (Floating)	1.8	NA	\$34,500	\$63,250	\$258,750
Lodi	Century	1.1	\$25,760	\$33,350	\$69,000	\$270,250
	Pixley Basin	4.9				
	Pixley West	1.4				
	Locust	0.5				
	World of Wonders (Rooftop)	0.5				
	Awani (Capped Landfill)	1.3				
Lompoc	Parcel 11003	5.6	NA	\$27,600	\$69,000	\$253,000
Palo Alto	Golf Course (Carport)	0.7	NA	NA	\$63,250	\$253,000
Plumas-Sierra	Beckwourth	4.6	\$21,275	\$27,600	\$69,000	\$253,000
	Herlong	5.3				
	Marble	3.9				
	Army Depot	5.3				
Port of Oakland	Airport (Carport)	2	NA	\$27,600	\$69,000	\$258,750
Redding	East	13.9	\$16,790	\$27,600	\$80,500	\$270,250
	Landfill (Capped Landfill)	10.3				
	Stillwater	3.1				
Ukiah	WWT (Floating) or Carport TBD	2.0	\$15,000	\$28,000	\$69,000	\$270,250
Optional	Storage Feasibility Study	--	--	+\$15,000/site	--	--

**Notes:**

- 1) Figures above are based on high-side estimates as if each site were to be evaluated as a standalone project, plus 15% contingency. GES costs are not included.
- 2) Phase 2A costs only apply when multiple potential sites are identified for a single service territory.
- 3) Phase 2B, Phase 2C, and Phase 2D costs apply per site.
- 4) Phase 2D costs include California Environmental Quality Act (CEQA) expenses (\$25,000 est. for full study) and expenses to attain site control (\$80,000 est.). These costs may vary by site and not be entirely applicable for each site.
- 5) Storage Feasibility Study – Optional study to determine technical and financial feasibility of incorporating energy storage (e.g. batteries) at the site. Cost is per site.

## EXHIBIT D

### PROJECT DEVELOPMENT AUTHORIZATION FORM

This Project Development Authorization Form is made as of \_\_\_\_\_, 20\_\_\_\_ (the “Phase 2C/2D Effective Date”), by and between Northern California Power Agency (“NCPA”) and the certain signatories to the SECOND PHASE AGREEMENT FOR NCPA SOLAR PROJECT 1 that are directing NCPA to continue work into Phase 2 activities into pre-construction, project development, and financing (“Authorizing Participants”). NCPA and the Authorizing Participants of this Project Development Authorization Form are referred to herein as “Parties”.

#### RECITALS

- A. NCPA and the Authorizing Participants are party to the Second Phase Agreement For NCPA Solar Project 1, which has an effective date of \_\_\_\_\_ (“Second Phase Agreement”).
- B. Pursuant to the Second Phase Agreement, NCPA is developing Renewable Energy Supply on behalf of Participants, which consists of environmental analysis, pre-construction studies, design, and contract negotiation for several potential solar photovoltaic generation facilities located in or near Participants’ electric service territories.
- C. The Second Phase Agreement, as executed, authorizes NCPA to carry out certain feasibility assessments and screening analyses (i.e. Phase 2A and Phase 2B activities) to help inform Participants if proposed sites and projects are viable and/or economical to pursue, and Participants agree to provide funding to cover all related costs for activities conducted on their behalf.
- D. The Second Phase Agreement requires supplemental action and authorities from Participants prior to NCPA conducting any Phase 2C or Phase 2D activities.
- E. This Project Development Authorization Form is intended to serve as the requisite supplemental action and authority from Authorizing Participants to direct NCPA to conduct

Phase 2C and Phase 2D activities into pre-construction, project development, and financing on behalf of the Authorizing Participants; and is intended to serve as the Authorizing Participant(s) consent to provide funding to cover all related Phase 2C and Phase 2D costs for activities conducted on their behalf.

**NOW THEREFORE**, the Parties agree as follows:

**Section 1. Purpose.**

The purpose of this Project Development Authorization Form is for the Authorizing Participants signatory hereto to authorize NCPA to conduct Phase 2C and Phase 2D activities, as defined in the Second Phase Agreement, on their behalf; and for Authorizing Participant to agree to provide funding for all such activities.

**Section 2. Description of Site and Project.**

This Project Development Authorization Form pertains to the project at the location described below ("Authorized Project Site").

**Location (City):** \_\_\_\_\_  
**Facility Description:** \_\_\_\_\_  
**Approximate Acreage:** \_\_\_\_\_  
**Capacity (MW AC):** \_\_\_\_\_

**Section 3. List of Authorizing Participants & Site-Specific GES.**

The following Authorizing Participants encompass all Members interested in further development of the Authorized Project Site and lists each Authorizing Participant's GES of the Authorized Project Site.

<b>Authorizing Participant</b>	<b>GES (%)</b>	<b>GES (MW AC)</b>

#### **Section 4. Project Costs for Phase 2C and Phase 2D**

The not-to-exceed cost for Phase 2C and Phase 2D activities for the Authorized Project Site is \$\_\_\_\_,\_\_\_\_.00 (text description of NTE cost).

#### **Section 5. Authorities and Obligations.**

5.1 Authorization and Funding. The Authorizing Participants hereby authorize NCPA to conduct Phase 2C and Phase 2D activities, as defined in the Second Phase Agreement, for the Authorize Project Site identified above. The Authorizing Participants hereby agree to provide all necessary funds to NCPA to conduct these activities, with costs not to exceed the figures listed in Exhibit C of the Second Phase Agreement for the Authorized Project.

5.2 Obligations of NCPA. Upon full execution of this Project Development Authorization Form, NCPA shall commence work on all Phase 2C and Phase 2D activities, as defined in the Second Phase Agreement, for the Authorized Project Site on behalf of the Authorizing Participants.

5.3 Obligations of Authorizing Participants. Authorizing Participants hereby agree to continue to pay or advance to NCPA its allocated share of the costs in accordance with the Second Phase Agreement and this Project Development Authorization Form in connection with its participation in the Authorized Project.

IN WITNESS WHEREOF, NCPA and each Participant have, by the signature of its duly authorized representative shown below, executed and delivered a counterpart of this Agreement.

NORTHERN CALIFORNIA  
POWER AGENCY  
651 Commerce Drive  
Roseville, CA 95678

AUTHORIZING PARTICIPANT  
ADDRESS  
CITY, STATE ZIP

By: \_\_\_\_\_  
Title: Randy S. Howard  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

By: \_\_\_\_\_  
Title: Jane Luckhardt  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Analysis of Budget, Staffing and Operational Impacts Associated with the  
Expansion of Power Management Services on a Fee for Service Basis**

## Executive Summary of Findings and Recommendations

TBD

### Background

As part of the 2014 – 2019 strategic plan, NCPA received member authorization to begin offering power management services on a fee for service basis. Since that authorization was given, NCPA has made offers to eight entities<sup>1</sup>, been awarded contracts in four of those instances, executed contracts with three of the four entities (Merced Irrigation District (MEID), Placer County Water Agency (PCWA) and Pioneer Community Choice Energy (PCCE)), and is finalizing contract discussions with the fourth (East Bay Community Energy (EBCE)).

The process for extending service offers in response to requests for proposals (RFP's) varies. In some instances, the RFP's have requested firm offers, supported with documentation evidencing governing board authority that binds the agency to the offer. In other instances, indicative offers are provided, subject to final approval of the offer by the NCPA Commission.

Regardless of the initial form of service offering made in response to an RFP, all service offerings, including the service contract and fee for services, are reviewed through NCPA's standard governance review processes prior to being finalized. This process includes review, comment and approval through the Facilities Committee, Utility Directors and ultimately the NCPA Commission.

Incremental revenues associated with the provision of services to the four agencies described above under the fee for service arrangements will total approximately \$1.9 Million/year. Governance process approvals were based on these expected incremental revenues, with the further understanding that these specific services could be provided with existing staff<sup>2</sup>.

### Issue

NCPA is in the process of assisting and integrating PCWA, PCCE and EBCE into NCPA's scheduling and settlement systems, and is simultaneously evaluating staffing, facilities and operational impacts of supporting continued growth in the fee for service area. The purpose of this paper is to report on the agency's ability to support the continued growth of services on a fee basis, and to identify when additional staffing, facilities and operational modifications will be necessary to support the continued expansion of fee-based services.

---

<sup>1</sup> Proposals have been submitted to Marin Clean Energy, Merced Irrigation District, Southern California Public Power Association, Placer County Water Agency, Pioneer Community Choice Energy, City of Shasta Lake, City of Roseville, and Monterey Community Choice Energy. Separate and ongoing discussions are being held with the City Lathrop and South Feather Water and Power.

<sup>2</sup> Existing staff assumptions were estimates to be augmented by further staffing assessments in the form of this report

## Overview of Study Methodology and Project Scope

The services being provided on a fee for service basis impact staff in both the Power Management Division and the Administrative Services Division. As a result, impact assessments were performed in the following areas:

### Power Management Staffing

- Scheduling and Dispatch
- Planning and Pre-Scheduling
- Contracts and Interconnection Affairs

### Administration Staffing

- Information Services
- Settlements

### Operational Impacts

- Office Space (where additional staffing needs were identified)
- NERC/WECC Compliance

## Staffing Analysis

The staffing analysis was developed to assess the impact of adding new fee for service clients on:

- Work activities that can be characterized as highly structured and process oriented on an hourly, daily and weekly basis
- Work activities that can be characterized as less process oriented and which allow for greater individual discretion related to the timing and prioritization of work

Work activities that fell into the first category above include the organizational functions of Dispatch, Schedule Coordination, Pre-Scheduling and Settlements. Work activities that fall into the second category include the organizational functions of Planning, Contracts/Interconnection Affairs and Information Services.

### ***Dispatch***

Work load and staffing impact analyses in this area started with the development of task lists for activities that need to be completed over the course of a twelve hour shift. Activities were broken down into the sets of activities that need to take place within specific time frames (e.g. the first hour of coming onto a shift), process related activities that have to take place during every hour or nearly every hour of a shift, process activities that must be completed sometime within the overall twelve hour shift, and finally, intermittent activities that occur on a routine or emergency basis that arise during a shift. The initial set of tasks and estimated minimum, average and maximum time durations were reviewed,

validated and/or modified with multiple sets of SC's and Dispatchers to arrive at the final set of numbers provided in this report. The analyses included a simplified aggregated block analysis of common tasks described above, and a more complex Monte Carlo analysis that looked at the probabilities of being able to complete required tasks within an hour or within an entire shift. The Monte Carlo analysis was performed based on a triangular probability distribution because there was no data to develop actual probabilities. As a result, the Monte Carlo analysis produces results that suggest the average result, much like the simplified aggregate block analysis. A complete list of the tasks, and associated task timelines along with the aggregated block and Monte Carlo analyses are provided in **Attachment \_\_\_\_**. A summary of the simplified aggregate block analysis is provided in the table below.

Dispatch					
		Task Duration (Min)			
Day Shift (5am to 5pm)	Number of Tasks	Min	Median	Max	Time Limit
Starting Shift - first two hour activities	40	39.5	88.25	154.5	120
Shift tasks -performed in first six hours	7	10.5	17.5	29.5	240/360
Shift Tasks - performed in second six hours	24	29.25	57.25	85.25	360
Intermittent Tasks - Routine and Emergency	Varies				720
Night Shift (5pm to 5am)					
Starting Shift - first two hour activities	38	36.875	84.5	132.125	120
Shift tasks -performed in first six hours	7	13.5	24.5	37.5	240/360
Shift Tasks - performed in second six hours	17	52.25	89.5	126.75	360
Intermittent Tasks - Routine and Emergency	Varies				720

As can be seen in this table, activities that must be performed within the first two hours of starting a shift consume a substantial amount of the time available. In subsequent hours, there is greater ability to complete required tasks within the time allowed, not counting the intermittent/emergency activities that might arise. Once PCWA and PCEE scheduling activities begin, staff estimates that approximately 10 minutes will be added to routine hourly activities that must be addressed in first and second six hour shift periods.

As routine hourly tasks consume greater percentages of each operating hour, Dispatchers are less able to respond to intermittent routine and emergency issues and risks of errors increase as dispatchers have to decide where to focus their attention when the number of tasks exceeds the time available to attend to all of the needed task activities. While the numbers above demonstrate some flexibility still exists to absorb more tasks within the time allowed, experience has shown that emergencies and contingencies have occurred with sufficient frequency, that the organization should be cautious in expanding beyond the four fee for service clients relative to the Dispatch function.

Absent further operating experience with PCWA, PCEE and EBCE, and based on the numbers above, coupled with current operating experience, we conclude that current Dispatch staffing levels may not support continued growth in additional complex generation based fee for service provision without Dispatch staff or technology augmentation.

In the event services continue to be expanded in the area of complex generation services, staff proposes starting with the addition of a day time dispatch desk, such that there would always be two dispatchers on duty during the day shift. (Shift schedule options need to be developed. Will need to look at role of reliefs and how reliefs and new employees could be scheduled to provide required coverage levels that provide for two daytime 12 hour shifts and one nighttime twelve hour shift and/or whether there is some other shift based schedule that could be adopted to provide the needed coverage).

Staff is proposing the addition of a second daytime dispatch desk to address the work volume issues that may not be able to be handled by a single dispatcher, and to also assess the effectiveness of the second dispatch desk via a phased increase in staff. While the numbers suggest a similar Dispatcher work volume issue could arise on the night shift, staff is proposing to utilize SC staff during the night shift to assist the Dispatcher on duty, as the SC night shift has more flexibility and time available to provide assistance.

#### **Schedule Coordination**

The analysis for the Schedule Coordination function was performed in the same manner as the analysis for the Dispatch function. The simplified aggregate block analysis for the Schedule Coordination function is provided in the table below.

<b>Schedule Coordination</b>					
		<b>Task Duration (Min)</b>			
<b>Day Shift (5am to 5pm)</b>	<b>Number of Tasks</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>	<b>Time Limit</b>
5:00 am to 10:00 am	31	148	186	257	300
10:00 am to 12:00 am	2	2	3	5	120
12:00 am to 5:00 pm	24	113	157	246	300
Contingency		Varies			720
Hourly Activity	4	15	24	37	60
<b>Night Shift (5pm to 5am)</b>					
5:00 pm to 6:30 pm	1	5	7.5	10	90
6:30 pm to 10:00 pm	2	25	26	27	210
10:00 pm to 12:00 pm	3	10	27.5	45	120
12:00 pm to 5:00 am	5	52.25	89.5	126.75	360
Contingency		Varies			720

As can be seen in the table above, Schedule Coordination functional tasks can generally be completed within the time required. The primary pinch point tends to occur for tasks that must be completed between 5:00 am and 10:00 am, or the hour before the CAISO market closes. While the summary demonstrates that work tasks may bump up against available time lines, in practice, staff indicates that they are generally able to complete their work within the time limits. Notwithstanding this experience however, the hour before the market closes, will always be the busiest time for Schedule Coordination

staff. This occurs because contingencies will always occur in regards to load or supply information unexpectedly changing in the hour prior to the market closing, and the Schedule Coordination staff will always try and get the changes submitted in order to mitigate cost risk. This issue will persist whether services are expanded or not.

Absent further operating experience with PCWA, PCEE and EBCE and based on the numbers above, in combination with current operating experience, we conclude that current Schedule Coordination staffing levels will likely support continued growth in additional fee for service provision (both in the complex generation area and in the load based CCA area) without the need for additional staff. This conclusion is based on the assessment above and the fact that relief staff are frequently available during the weekdays to augment and assist the on shift Schedule Coordinator during the hour prior to the CAISO market closing.

### Pre Scheduling

The analysis for the Pre-Scheduling function was performed in the same manner as the analysis for the Dispatch and Schedule Coordination functions. Unlike the Dispatch and Schedule Coordination functions, there are two Pre Scheduling positions that handle each day's activities, with the activities split by scheduling portfolio between the two Pre Schedulers. The simplified block analysis of tasks for the Pre Scheduling functions are provided in the tables below.

	Deadline	Portfolio	Task	Average Duration	Aggregate	Available Time
1	6:00		Open ICEChat and WebICE	1	58	60
2			Read Outlook emails	10		
3			Read Dispatch Log	10		
4			Review Outages	10		
5			Tailboard with Dispatcher and Scheduler	10		
6		LEC	Run LMP Forecast	2		
7		LEC	Record Gas price	1		
8		LEC	Get LEC ambient derate value	1		
9		LEC	Run LEC Forecast Model	1		
10		LEC	Run LEC Backcast Model (Optional)	1		
11		LEC	Check PG&E Pipe Ranger website	1		
12		LEC	Request Fuel from EDFT	10		
13	7:00	LEC	Submit LEC Prescheduler Module	5	87	90
14		LEC	Send PWRPA trade info to APM	2		
15		Calaveras	Estimate Collierville Generation	5		
16		Pool	Create NCPA Collierville bids	10		
17		Pool	Run A/S Market report	5		
18		Pool	Review A/S Market results	10		
19		Pool	Submit NCPA Prescheduler Module	30		
20			Create TABS Case	15		
21		LEC	Create LEC Bid Steps	5		
22	8:30		Hand off TABS Case to Scheduler	2	2	15
23	8:45	SCL	Seattle City Light Exchange Bookout	15	15	75
24	10:00	Pool	Create E-tags	15	15	90
25	11:30	Pool	Request NCPA Base Resource	5	10	120
26		Pool	Check NCPA Balance	5		
27	13:30		Review IFM Awards	20	40	90
28		LEC	Request Additional Fuel for Thermal Units	10		
29		LEC	Publish LEC FMM Strategy Document	5		
30	15:00		Publish Dispatch Notes	5		

	Deadline	Portfolio	Task	Average Duration	Aggregate	Available Time
1	6:00		Open ICEChat and WebICE	1	91	105
2			Read Outlook emails	10		
3			Read Dispatch Log	10		
4			Review Outages	10		
5			Tailboard with Dispatcher and Scheduler	10		
6		Calaveras	Evaluate Calaveras Project	20		
7		Calaveras	Set Spicer Draft Flow	10		
8		Calaveras	Forecast McKay's Storage	10		
9		Calaveras	Estimate Collierville Generation	5		
10	7:45	Calaveras	Communicate Calaveras info	5		
11		MEID	Evaluate MEID River System	20	45	45
12		MEID	Process MEID Water Delivery Schedules	5		
13		MEID	Run Exchequer Forecast Model	5		
14	8:30	MEID	Submit MEID Prescheduler Module	15	82	390
15		BRT1	BRT1 Supplemental Purchase Price	5		
16		Calaveras	Submit WaterRelease Prescheduler Module	2		
17		BRT1	Request BRT1 Base Resource	10		
18		BRT1	Process BRT1 E-tags	20		
19			Review IFM Awards	10		
20		Calaveras	Create Collierville RT Incs and Decs	10		
21		MEID	Create Exchequer RT Incs and Decs	10		
22		BRT1	Request Supplemental Energy for BRT1	10		
23	15:00	BRT1	Submit BRT1 Prescheduler Module	5		

As can be seen in the two tables above, both Pre Schedule positions are fully loaded for the first two and a half hours each morning as there are a significant number of tasks that have to be completed by 8:30 each day. Experience has shown that there is some flexibility during this first two and a half hour period associated with the categories of reading emails, reading dispatch log, reviewing outages and tailboards with the Dispatchers and SC's. Additionally, staff will be assessing process and automation upgrades that might free up additional time. As one example, the "*Prescheduler Application*" entries must be completed before the results can be pushed from that application to the Trading and Bidding System "*TABS Application*" used by the Schedule Coordinators. To the extent that portions of the *Prescheduler* could be incrementally pushed to *TABS*, both the Preschedule and SC staff may be able to more efficiently complete work and reduce the time pressures currently expressed in the tables above. While more analysis will be necessary to evaluate the implications of having multiple scheduling cases open simultaneously, this is the type of process/procedure improvement that the agency will be evaluating for future efficiency improvements.

The two Prescheduling positions are backed up by Planning staff. Two of the four Planning staff members, along with the Manager of the Planning department are fully trained and available to provide back-up coverage in the event of illness, vacation or training needs.

Absent further operating experience with PCWA, PCEE and EBCE and based on the numbers above, in combination with current operating experience, we conclude that current Preschedule staffing levels will likely support continued growth in additional fee for service provision without the need for additional staff. This conclusion is based on the belief that planned additions in fee for service clients will not materially change the assessments above, and that automation and process improvements can relieve some of the bottlenecks currently experienced.

### ***Planning, Contracts and Interconnection Affairs***

As indicated in the description of the staffing analysis above, work activities in these divisions can be characterized as less process oriented, and as a result, allows for greater individual discretion related to the timing and prioritization of work. As a result of this flexibility, the analysis in this area is limited to the anecdotal assessment below, and a request for member feedback as also described further below.

Over the last year, significant effort has been dedicated to developing offers related to fee for service responses, securing member approvals of those offers, developing final contract terms and integrating the new clients into NCPA and CAISO systems. Despite this additional work, it is staff's sense that members' priority needs are being met, and that all high priority issues are being addressed. That said, staff welcomes member feedback and input in this area, particularly where additional support and assistance are needed and even more importantly, where those additional support and assistance needs should be specifically prioritized over fee for service activities.

Going forward, the expected level of work activity in the Planning, Contracts and Interconnection Affairs divisions associated with fee for service clients, is anticipated to decline. This reduction is anticipated as the initial start-up/integration activities associated with current clients will be completed and future proposals will benefit from experience and standardized materials that have been prepared to support the current fee for service clients.

While the analysis above was based on the knowledge, skills and abilities of current staff, going forward, work in this area will be affected by staffing changes (Asst. General Manager and Energy Resource Analyst IV) that have been announced. In anticipation of these changes, both vacancies will be filled, along with an additional position in the contracts division that has been authorized, included in the budget, but left unfilled for many years. The new position will require an electrical engineering degree, will assist with all of the work previously handled by the Energy Resource Analyst IV, and will take on additional responsibilities associated with all aspects of transmission related issues, including planning, project comment and review, regulatory advocacy support and rate design.

Absent feedback to the contrary from the membership regarding the sufficiency of current support levels, and further operating experience with PCWA, PCEE and EBCE, we believe that the proposed staffing levels will support members' ongoing needs and continued growth in fee for service provision.

### ***Information Services and Settlements***

TBD

## Operational Impacts

### Office Space

There is sufficient vacant office/cubicle space within the headquarters office to accommodate any increases in staff identified as part of this assessment. The Dispatch office has been configured to support an additional dispatch position, so no additional work is anticipated to be needed in the dispatch office. While there are sufficient vacant cubicles located throughout the headquarters office, some slight reconfiguring of existing office space may be pursued in order to optimize work environment needs and to keep new employees in proximity to existing employees in order to maintain cohesion amongst working groups.

### NERC/WECC Compliance

NERC Impact Rating Levels (Low, Medium, and High) for Control Centers and backup Control Centers are only relevant for Critical Infrastructure Protection (CIP) Standards, not Operations and Planning (O&P) Standards. NCPA is currently a low impact entity, which is the default for any GO/GOP.

#### Low Impact Rating only subject to:

- CIP-002-5.1 (future CIP-003-6, Maybe in March 2018, no changes affecting GO/GOPs).
- CIP-003-6 (future CIP-003-7)
  - Four Plans are currently required: Cyber Security Awareness, Incident Response, Physical Security (Sept 2018), and Electronic Security (Sept 2018).
- CIP-003-7 (future maybe effective March 2018)
  - In addition to the Four Plans listed above, two new plans are required: A Transient Cyber Asset and Removable Media malicious code risk mitigation Plan; and a Declaring and responding to CIP exceptional circumstances Plan are required (both probably required by October 2019).
  - Also the Physical and Electronic Security Plans due date will probably change from September 2018 to October 2019.
- CIP-012 Communications between Control Centers: may affect low impact entities in the future. Depends on the future Control Center definition. Nothing has been approved yet to go forward for NERC board or FERC for approval.

#### Medium Impact Rating if any of the following occurs:

- NCPA Dispatch or Backup Dispatch Center Controls  $\geq$  1500 MW net Real Power of Generation ( $nRP = \text{Gross Generation} - \text{Auxiliary load} - \text{losses}$ ). WECC Auditors have stated this means peak coincident BES and non-BES Generation controlled by NDC. The letter of the standard says the aggregate nameplate rating of all BES only generators under NCPA control.
- Nov 2017 NCPA/MEID aggregate nameplate Generation = 1,142 MW BES & 282 MW non-BES
- Aug 28, 2017 NCPA/MEID coincident Peak = 1,197 MW (BES & non-BES) (WECC Audit Approach)
- 2017 Diversity = Coincident/aggregate BES & non-BES =  $1,197 / (1,142 + 282) = 84.1\%$
- In Jan 2018 add 202 MW of BES and 23.5 MW non-BES Generation for PCWA
- Jan 2018 NCPA/MEID/PCWA aggregate nameplate Generation = 1,344 MW BES & 306 MW non-BES
- Projected 2018 Coincident Peak using diversity =  $84.1\% * (1,344 + 306) = 1,387 \text{ MW}$
- 2018 Estimated headroom  $1,499 - 1,344 = 155 \text{ MW}$  (Letter of Standard)

- 2018 Estimated headroom 1,499 - 1,387 = 112 MW (WECC Audit Approach)
- Thus estimated headroom is somewhere between 112 and 155 MW
- After summer of 2018 we need to rerun Coincident NCPA/MEID/PCWA Generation

**Medium Impact NERC requirements: In addition to all Low Impact requirements:**

- CIP-004 Personnel and Training
- CIP-005 Electronic Security Perimeters
- CIP-006 Physical Security Management
- CIP-007 System Security Management
- CIP-008 Incident Reporting and Response Planning
- CIP-009 Recovery Plans for BES Cyber Systems
- CIP-010 Configuration Change Management and Vulnerability Assessments
- CIP-011 Information Protection
- CIP-012 Communications between Control Centers (future)
- CIP-013 Supply Chain Risk Management
- Estimated additional one time capital cost \$400-500K (computer hardware, software, and consultant for new plans/procedures).
- Estimated annual cost: Additional IS FTE \$250K + \$100K Misc.

**Commented [DD1]:** Values are preliminary and are under review as part of a more detailed IS analysis

**Commented [DD2]:** Values are preliminary and are under review as part of a more detailed IS analysis

**High Impact Rating if any of the following occurs:**

- NCPA controls a Power Plant or Group of Units at one location >= 1500 MW aggregated
- If CAISO, PG&E, or Peak RC designate a NCPA controlled Unit as necessary to run in order to avoid an adverse reliability impact or as critical to the derivation of Interconnection Reliability Operating Limits (IROLs).

**High Impact NERC requirements: In addition to all Low and Medium Impact requirements:**

- CIP-006 Physical Security Management, in addition to medium impact requirements:
  - Part 1.3 utilize two or more difference physical access controls to collectively allow unescorted physical access into Physical Security Perimeter to only those individuals who have authorized unescorted physical access.
- CIP-007 System Security Management, in addition to medium impact requirements:
  - Part 4.4 review a summarization of sampling of logged events as determined by the Responsible Entity at intervals no greater than 15 days to identify undetected Cyber Security Incidents.
- CIP-009 Recovery Plans for BES Cyber Systems, in addition to Medium impact requirements:
  - Part 2.3 test each of the recovery plans in Requirement R1 at least every 36 months through an operational exercise of the recovery plans in an environment representative of the production environment.
- CIP-010 Configuration Change Management and Vulnerability Assessments: In addition to medium above:
  - Part 1.5 slightly more testing and documentation of testing needs to be performed in a test environment to insure CIP-005 and 007 Cyber Security Controls are not adversely impacting, prior to making a change with the baseline configuration.
  - Part 2.1 Monitor at least every 35 day for changes to the baseline configuration and investigate unauthorized changes.
  - Part 3.2 at least every 36 months perform and document an active vulnerability assessment in a test environment or an active assessment in a production environment.

- Part 3.3 Prior to adding a new applicable Cyber Asset to a production environment perform and document an active vulnerability assessment.
- In addition to medium impact estimated costs: \$200K Capital and \$100K annual.

**Commented [DD3]:** Values are preliminary and under review as part of a more detailed IS analysis

Note: Per NERC, we have two years after reaching the medium or high impact rating to comply with the applicable medium and high impact CIP standards.

## Forecast Revenues and Expenses

Full year revenue associated with the four currently awarded contracts will be \$1,865,000. Additional revenues (roughly estimated) associated with three entities now in discussions could result in an additional \$1,020,000 per year in new revenues.

A table summarizing forecast revenues is provided below:

Revenue Forecast		
Executed/In Progress		
2017 June	Merced Irrigation District	\$ 390,000
2018 Jan	Placer County Water Agency	\$ 410,000
2018 Feb	Pioneer CCE	\$ 425,000
2018 Jun	East Bay CE	\$ 640,000
	Subtotal	\$ 1,865,000
Discussing		
2018 Aug	San Jose CE	\$ 600,000
2019 Jun	South Feather Water & Power	\$ 400,000
2018 Sep	Nevada Irrigation District	\$ 20,000
	Subtotal	\$ 1,020,000
End of Contract Possibilities		
?	Peninsula CE	\$ 300,000
?	Marin Clean Energy	\$ 800,000
?	Silicon Valley Clean Energy	\$ 350,000

Compliance related expenses will take the form of one time and ongoing expenditures. When and if the organization moves from a low impact NERC/WECC rated entity to a medium or high impact NERC/WECC rated entity, the organization will incur both one time and ongoing expenditures. Given the small amount of headroom that exists between NCPA's current low impact rating, and the medium or high impact ratings, staff expects that sufficient new resources will be added either by NCPA members or on behalf of the currently contracted fee for service clients such that the higher impact rating

obligations will be triggered in 2019 or 2020. Once triggered, the agency will have two years to come into compliance with the new requirements. Estimated compliance costs are \$400K-\$600K in one time costs and approximately \$250K in ongoing going costs associated with an additional IT staff person.

**Commented [DD4]:** Subject to further analysis of values underway

As explained in the staffing analysis above, the point at which additional Dispatch staff would need to be added is somewhat uncertain, but based on experience to date, coupled with the staffing analysis, it appears that at least two additional dispatchers would be needed to staff a second desk during the day shift and that these positions would need to be filled if and when the South Feather and Nevada Irrigation<sup>3</sup> projects were added. The estimated annualized staff costs of adding two Dispatcher positions would be approximately \$500,000 per year and would start in 2020 if the South Feather contract was executed.

Insert IS and Settlement needs/explanation here

Based on the forecast of revenues and expenses explained above, a hypothetical pro forma is provided below.

Hypothetical Proforma						
	2017	2018	2019	2020	2021	2022
<b>Revenues (\$1,000's)</b>						
Merced Irrigation District	195	390	397.8	405.8	413.9	422.1
Placer County Water Agency	0	410	418.2	426.6	435.1	443.8
Pioneer Community Energy	0	425	433.5	442.2	451.0	460.0
East Bay Community Energy	0	640	652.8	665.9	679.2	692.8
Subtotal	195.0	1865.0	1902.3	1940.3	1979.2	2018.7
San Jose Clean Energy	0	150	600	612	624.2	636.7
South Feather Water and Power	0	0	0	400	408.0	416.2
Nevada Irrigation District	0	0	20	20.4	20.8	21.2
Subtotal	0.0	150.0	620.0	1032.4	1053.0	1074.1
<b>Total</b>	<b>195.0</b>	<b>2015.0</b>	<b>2522.3</b>	<b>2972.7</b>	<b>3032.2</b>	<b>3092.8</b>
<b>Expenses (\$1,000's)</b>						
NERC one time expenses	0	0	300	300	0	0
NERC annual expenses (IT Staff)	0	0	0	250	256.3	262.7
Dispatch staff (if hydro added)	0	0	0	500	512.5	525.3
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>300.0</b>	<b>1050.0</b>	<b>768.8</b>	<b>788.0</b>
<b>Net Revenue</b>	<b>195.0</b>	<b>2015.0</b>	<b>2222.3</b>	<b>1922.7</b>	<b>2263.5</b>	<b>2304.9</b>

Update as additional expenses are identified (e.g. IS/settlements)

<sup>3</sup> The Nevada Irrigation project would start with one 5 Mw project. That project alone would not lead to the need for additional staff, however, Nevada Irrigation representatives have expressed their intention to incrementally add generators (both new and existing) to the initial contract.

## Cost Risk Mitigation Factors

Factors that can mitigate the risk of unexpected costs and/or the risk of incurring ongoing costs without sufficient revenue to cover those costs include:

- Contract termination provisions
- Ability to modify contract pricing for Significant Operational Changes
- Historical turnover rates

Contracts with fee for service clients have been developed to provide for an initial term of two years with an automatic renewal provision at the end of the first two year term. Parties are able to terminate the agreement on various terms, that have ranged from 90 to 180 days after the end of the initial two year term.

All contracts also include provisions that allow for a reopener in the event of a significant operational change. The provisions address significant increases in load (greater than 15%), and/or the addition of major new resource scheduling obligations.

Historical turnover rates in power management have averaged three employees per year between 2012 and 2017. To the extent contracts with fee for service clients were terminated, eliminating the need for new staff hired to support the fee for service clients, it appears that natural turnover would be sufficient to reduce staff to pre-fee for service staffing levels. A table showing turnover between 2012 and 2017 is provided below.

Historic Turnover in Power Management				
	Dispatch	Pre Schedule	Planning	Total
2012	3	1	1	5
2013	2	0	0	2
2014	0	0	0	0
2015	4	1	2	7
2016	0	1	0	1
2017	2	0	1	3
Average	1.83	0.50	0.67	3.00