



**Marin Clean Energy  
Technical Committee Meeting  
Monday, February 10, 2014  
9:00 A.M.**

Dawn Weisz  
Executive Officer

Damon Connolly  
Chair  
City of San Rafael

Kathrin Sears  
Vice Chair  
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Town of Tiburon

1 (888) 632-3674  
[mceCleanEnergy.org](http://mceCleanEnergy.org)

781 Lincoln Ave., #320  
San Rafael, CA 94901

**San Rafael Corporate Center, Boro Room  
750 Lindero Street, San Rafael, CA 94901**

**Agenda**

- 1. Board Announcements (Discussion)**
- 2. Public Open Time (Discussion)**
- 3. Report from Executive Officer (Discussion)**
- 4. MCE Syndicated Solar Program (Discussion/Action)**
- 5. MCE Compliance Obligations Related to Procurement (Discussion)**
- 6. Feed In Tariff Application Process (Discussion/Action)**
- 7. Members & Staff Matters (Discussion)**
- 8. Adjourn**



Agenda material can be inspected in the Marin County Sheriff's lobby, located at 3501 Civic Center Drive, San Rafael, CA 94903. The meeting facilities are in accessible locations. If you are a person with a disability and require this document in an alternate format (example: Braille, Large Print, Audiotape, CD-ROM), you may request it by using the contact information below. If you require accommodation (example: ASL Interpreter, reader, note taker) to participate in any MEA program, service or activity, you may request an accommodation by calling (415) 464-6032 (voice) or 711 for the California Relay Service or by e-mail at [djackson@mceCleanEnergy.org](mailto:djackson@mceCleanEnergy.org) not less than **four work days** in advance of the event.

## MCE SunShares (Retail Solar Cooperative)

### Summary of Key SunShares Program Parameters:

#### 1. Overview

- a. Opportunity for MCE customers to purchase power “directly” from a local PV project.
- b. Eliminates participatory barriers (that can be associated with PV Solar) for many customers: shading, roof orientation, non-owned structures/facilities, etc.
- c. Participation would be voluntary (similar to Deep Green).
- d. Initial “pilot program” would identify a new, locally situated PV generator and sell its electric output to participating customers.
- e. Customer participation would be limited based on projected annual energy production from the designated renewable resource – ~90% of expected energy production.
- f. Need to “match” annual energy requirements of participating customers with expected PV energy production – annual reporting/accounting will ensure program credibility/legitimacy.
- g. Participating customers would be purchasing a bundled, RPS-eligible (Bucket 1) product.
- h. MCE to retire associated RECs on behalf of participating customers – strong participation will marginally increase MCE’s reported RPS procurement percentage.
- i. As with all other MCE customers, PG&E delivery charges would still apply (this would not be a virtual net metering arrangement).

#### 2. Key differences relative to Deep Green

- a. 100% local – resource will be located within the MCE service territory.
- b. 100% new renewable generating capacity – existing resources will not be used.
- c. 100% solar –only PV solar would be used to supply participating customers.
- d. Cost would be considerably higher than Deep Green (likely 4-5 times the Deep Green premium amount of \$0.01/kWh).
- e. Potential to offer longer-term (beyond 12-months) rate certainty for participants.

#### 3. Retail Product Options (2)

- a. Full coverage - 100% of a participating customer’s energy use would be “covered” by production from the designated generator (as measured over a 12-month period).
- b. Solar “blocks” – participating customers would purchase blocks of electric output (100 kWh/month increments, for example) from the generating facility as their primary source of supply; all customer energy requirements in excess of the purchased block quantity would be supplied by MCE’s Light Green or Deep Green portfolio (priced at the participating customer’s otherwise applicable tariff); participating customers could purchase multiple blocks in consideration of monthly usage and cost implications.

#### 4. Retail Pricing Options

- a. Fixed price (energy and REC):
  - i. Flat energy rate, inclusive of energy and green attributes (RECs).
  - ii. SunShares rate would “replace” customer’s otherwise applicable gen rate.
  - iii. Opportunity to pass through contract benefits (long-term price/rate certainty/stability) to participating customers.
  - iv. Year-1 price would be based on underlying contract price plus modest admin fee, a rate approximating \$0.14/kWh.

- v. Initial monthly cost impact would range from \$25-50 for a typical residential customer, depending on MCE's then-current gen rates (2015).
  - b. Fixed premium (similar to Deep Green)
    - i. Otherwise applicable gen rate + SunShares premium.
    - ii. Per-kWh premium would likely range from 4-5x MCE's current Deep Green Premium, depending on MCE's then-current gen rates.
    - iii. Reduced rate stability/predictability.
    - iv. Impedes MCE's ability to pass through benefits of EDF contract: predictable rate, low annual escalator (1.5%/year).
5. Key issues related to implementation and program administration were recently discussed with Noble
- a. No major issues were identified.
  - b. Preference for "full coverage" product option (simplifies settlement and bill presentation).
  - c. Tracking of PV facility output would be completed by MCE.
  - d. MCE staff to work with Noble to determine projected customer energy usage for participating customers (will ensure that the PV project is not "over-sold").
  - e. Preliminary marketing to solicit interest from prospective customers – waiting list to be established.



# MCE Electric Procurement Regulatory Framework

MCE Technical Committee

February 10, 2014



- MCE must adhere to various regulations governing its procurement of electricity for the MCE program.
- This presentation provides an overview of these regulations.
- MCE also voluntarily adheres to certain MCE environmental policies relating to use of renewable energy and carbon-free resources that go beyond the minimum regulatory requirements.

# Key Regulatory Requirements

- Renewable Portfolio Standards (approx. 14% of power supply expenses)
- Resource Adequacy Program (approx. 7.5% of power supply expenses)
- Emissions Performance Standard (no direct cost)
- Storage (TBD)

# Renewable Portfolio Standards ("RPS")

- Requires specified minimum percentage of retail sales to be supplied from qualifying renewable resources.
- Percentages increase from 20% to 33% by 2020 over course of three multi-year compliance periods (2010-2013, 2014-2016, 2017-2020).
- MCE is under the same RPS requirement as PG&E, but MCE voluntarily exceeds the minimum standards.
- Production and transfer of Renewable Energy Certificates ("RECs") proves that an equivalent quantity of renewable energy was produced by an RPS eligible resource.
- RECs are "retired" by MCE to demonstrate regulatory compliance.

# Procurement Category Limits ("the Buckets")

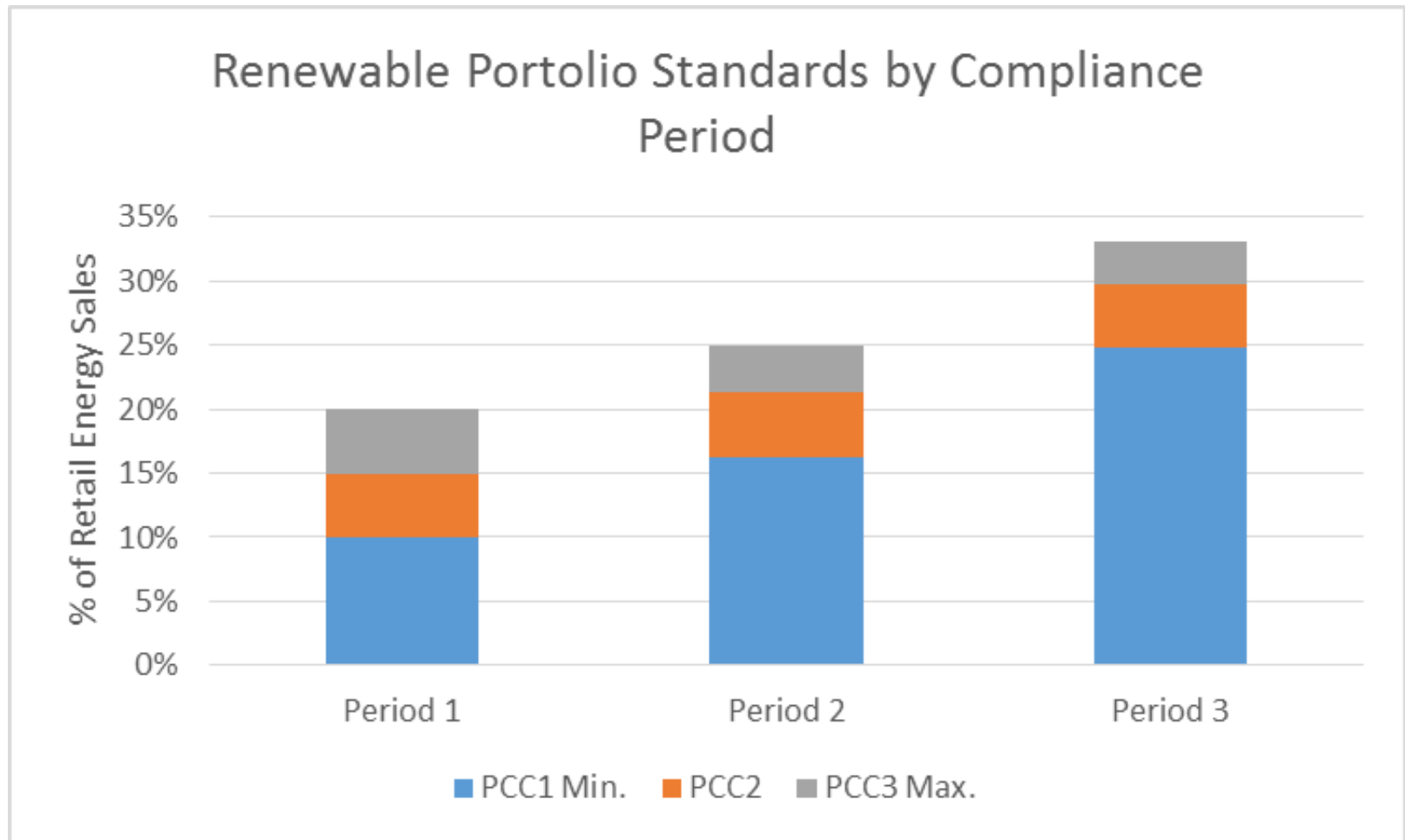
Limits are imposed on the type of renewable energy procurement that may be used to demonstrate compliance:

**Portfolio Content Category 1:** bundled purchase of energy and renewable energy certificate from in-state resource or resource meeting specified deliverability requirements. Cost premium relative to conventional energy  $\approx$  \$30 per MWh.

**Portfolio Content Category 2:** bundled purchase of energy and renewable energy certificate from out of state renewable resource, matched with energy import (to CA) from another resource (typically conventional). Cost premium relative to conventional energy  $\approx$  \$5-10 per MWh.

**Portfolio Content Category 3:** purchase of renewable energy certificate without regard to energy scheduling/delivery. Buyer typically matches unbundled REC with like volume of conventional energy, reconciled over annual period. Cost premium relative to conventional energy  $\approx$  \$1-2 per MWh.





# RPS Compliance

- RECs and certain scheduling information are used to demonstrate compliance; may also need to provide underlying contracts.
- Annual 33% RPS Compliance Report.
- Annual WREGIS Compliance Report.
- Periodic Certificate Retirement.
- Compliance Verification (as necessary and requested by CEC staff).

# RPS Issues and Trends

- What will the rules be post 2020?
- Are procurement content category distinctions meaningful outside of compliance context?
- Would locational distinctions (e.g., in-area vs. out-of-area) make better policy than the bundled vs. unbundled distinctions inherent in the procurement content categories?

# Resource Adequacy ("RA")

- Imposes requirements on Load Serving Entities to ensure sufficient generation capacity exists on forward basis to support grid reliability.
- Contracted resources must make themselves available to the CAISO for as-needed operation ("Must Offer Obligation").
- Separate compliance obligations for System RA and Local RA.
- Flexible RA obligation is planned for 2015.

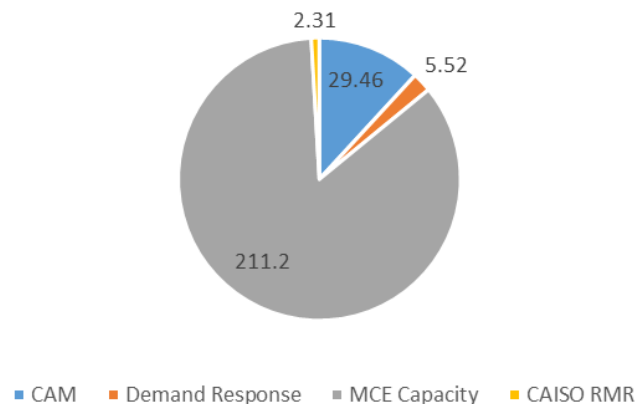
# System Resource Adequacy

- Requires that all load serving entities such as MCE have forward commitments for physical generation capacity to meet forecast peak demands (MW) plus 15% reserve margin.
- RA requirements are determined based on monthly “coincident peak” demands, adjusted for certain capacity allocations from utility demand response programs and reliability contracts (Capacity Allocation Mechanism resources and CAISO’s Reliability Must-Run resources).
- RA capacity generally must be located in Northern California (MCE has limited rights to import RA from out-of-state and from Southern California).

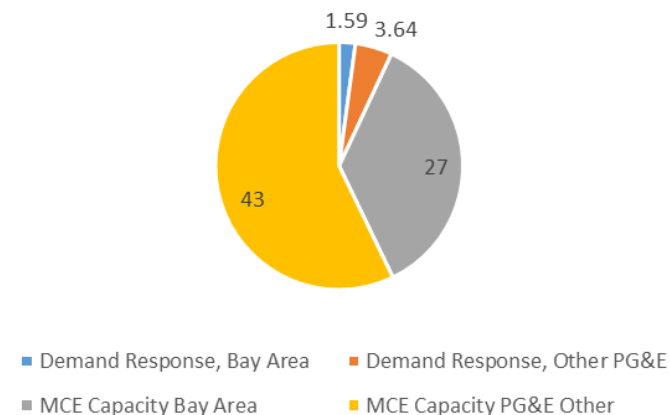
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- The map illustrates the proposed high-speed rail network across California, highlighting several key regions and major cities. The network is color-coded by region: North Coast/North Bay (light blue), Greater Bay Area (purple), Greater Fresno (pink), Kern (green), and San Diego (yellow). Major cities are marked with dots, and rail lines are shown as blue lines. The map also includes connections to neighboring states and Mexico, with arrows indicating the direction of travel. Key locations include Humboldt, Trinity, Olanda, Cottonwood, Table Mountain, Sierra, Palermo, Colgate, Rio Oso, Atlantic, Gold Hill, Brighton, Tracy, Bellona, Stockton, Newark, Delta, Tulucay, Varca Dison, Tesla, Metcalf, Los Banos, Moss Landing, Morro Bay, Diabolo Canyon, Kern, Gater, Midway, Vincent, Wheeler Ridge, Pardee, Sylmar, Gould, Rinaldi, Sylmar, Eagle Rk, Santiago Meia, Serrano, Valley, Devers, Mira Loma, Lugo, Victorville, Adelanto, and McCulloch. The map also shows connections to Oregon, Nevada, Arizona, and Mexico, with arrows indicating the direction of travel.

# MCE Resource Adequacy Sample

February 2014 Resource Adequacy Capacity (MW)



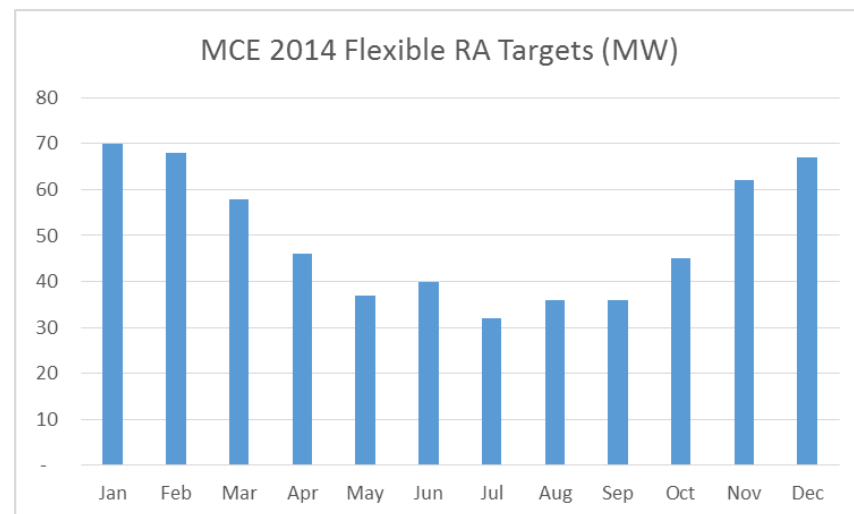
February 2014 Local Resource Adequacy Capacity (MW)



RA units committed for February include the Geysers (Calpine), Lincoln Landfill (Genpower), Los Medanos Energy Center (Calpine), Lodi Energy Center (NCPA), Collierville Hydro (NCPA), and CAISO import (SENA).

# Flexible Resource Adequacy

- Beginning in 2015, MCE is subject to specific requirements for Flexible Resource Adequacy capacity; i.e., resources that are capable of quickly ramping up and down to help manage the grid.
- Flexible capacity needs are projected to increase as intermittent renewable generation makes up a progressively larger portion of the state's resource mix.
- Market for Flexible Capacity product is developing – rules and specifications still evolving ahead of October 31 compliance deadline.





# Resource Adequacy Compliance

- Year-ahead and month-ahead obligations with compliance filings that identify specific generators that are contractually committed to MCE.
- Annual compliance filings require demonstration by October 31st of each year that: 1) 90% of monthly System Resource Adequacy obligation is met for five summer months of the following year; and 2) that 100% of Local and Flexible Resource Adequacy obligations are met for all months of the following calendar year.
- Monthly compliance filings require demonstration 45 days prior to start of month that 100% of System, Local and Flexible Resource Adequacy obligations are met.
- CAISO requires its own year-ahead and month-ahead compliance demonstrations (MCE used to simply provide CAISO with copy of CPUC templates but now CAISO requires separate templates with slightly different obligations).

# Resource Adequacy Issues and Trends

- Challenge of contracting for Flexible Capacity obligation while product is still being specified/defined.
- RA market is generally illiquid – this reality, coupled with somewhat unpredictable monthly RA obligations resulting from CAM allocations, has yielded certain inefficiencies when adjusting MCE's RA portfolio.
- Movement toward multi-year RA obligations and possibility of CAISO market.
- Could a longer term RA obligation replace or displace CAM?
- Will demand response, storage, or other technologies develop sufficiently to reduce supply side flexible capacity needs?

# Emissions Performance Standard

- Prohibits contracts of five years or more with baseload generation that has a GHG emissions rate that exceeds a specified threshold (1,100 lbs of CO<sub>2</sub> per MWh), equivalent to a natural gas combined cycle power plant.
- Essentially intended to prohibit long term contracts with coal generation.
- Effectively prohibits contracts of five years or more with unspecified resources.
- Requires annual advice letter filing attesting compliance with standard and providing relevant emissions data as applicable.
- Was originally framed as interim measure until AB32 cap and trade program was put in place. Unclear if requirement will continue indefinitely or be phased out.

- Requires procurement of energy storage equivalent to 1% of MCE's peak load by 2020 with installation no later than 2024.
- Storage requirement estimated at approximately 2 MW, based on current MCE peak demand.
- Biennial compliance reporting begins in January, 2016 demonstrating compliance toward meeting target and describing methodologies for cost-effective projects.

# MCE Voluntary Procurement Policies

- MCE maintains certain energy procurement policies that go beyond minimum regulatory compliance:
  - MCE voluntarily maintains a minimum renewable energy content of more than 50%.
  - MCE voluntarily uses a low GHG emissions supply mix.

Date Received: \_\_\_\_\_

FIT Record #: \_\_\_\_\_

Assigned MCE Staff: \_\_\_\_\_

## MCE FEED IN TARIFF (FIT) APPLICATION

MCE has established a Feed-In Tariff for eligible renewable generation units.

### Applicant Information

NAME	TITLE		
COMPANY			
STREET ADDRESS	CITY	STATE	ZIP
MAILING ADDRESS (If different from above)	CITY	STATE	ZIP
PHONE	EMAIL		

### Generating Unit Information – *Generator Must Be Located within MCE's Service Territory*

Location Address: \_\_\_\_\_ City: \_\_\_\_\_

Parcel Number: \_\_\_\_\_

Fuel Source/Resource Type: \_\_\_\_\_

Generator Output Capacity (at point of delivery): \_\_\_\_\_ kW (AC) **Note: Size limited to less than 1 MW.**

Expected Annual Energy Output: \_\_\_\_\_ kWh

Proposed Commercial Operation Date: \_\_\_\_\_

Is there Marin Clean Energy service at this address? ☐ Yes ☐ No

PG&amp;E Account Number: \_\_\_\_\_

Briefly describe any project-specific discussions with local planning authorities (identify applicable permitting requirements, related timelines, known environmental considerations/concerns, etc.; also identify pertinent points of contact, job titles and contact information):

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Briefly describe your progress and timeline for completing PG&E's Generator Interconnection Process:

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## Financial Plan & Qualifications

Agenda Item #6: FIT Application Process

Briefly describe your intended financing plan for the referenced generation unit (identify prospective partners and intended share of ownership assigned to each): \_\_\_\_\_

If applicant is a company rather than an individual, briefly describe the ownership structure of the company, including identification of all principals: \_\_\_\_\_

Briefly describe your experience and qualifications in developing and operating electric generation assets, including the principals in your organization who will be responsible for this generation unit: \_\_\_\_\_

Identify the three most recent renewable projects that were successfully completed by your team:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Development Checklist

All applicable items included on the following list must be completed and submitted to MCE prior to MCE's execution of a FIT power purchase agreement:

1. ☐ **Feed-In Tariff Application (this document)**
2. ☐ **Evidence of site control (Lease \_\_\_\_\_, direct ownership \_\_\_\_\_, other \_\_\_\_\_)**
3. ☐ **Financial statements for project participants (developer and financier, in particular), if applicable**
4. ☐ **PG&E Generating Facility Interconnection Application and PG&E notice of complete application**
5. ☐ **Copy of application for RPS certification (CEC) and assigned pre-certification number, if available**
6. ☐ **Evidence of environmental compliance review / notice of determination receipt**

- |   | <i>Eligible for FIT capacity reservation</i> | <i>Date expected</i> | <i>Date received</i> |
|---|--|----------------------|----------------------|
| 7. <input type="checkbox"/> Evidence of Use Permit and all applicable permits   | _____  | _____                | _____                |
| 8. <input type="checkbox"/> Proof of WREGIS account holder registration<br>(OR, generator registration assigned to MEA) | _____  | _____                | _____                |
| 9. <input type="checkbox"/> Proof of WREGIS generator registration (or delegation to MEA)                               | _____  | _____                | _____                |
| 10. <input type="checkbox"/> Qualified Reporting Entity Agreement (CAISO, MCE, OTHER)                                   | _____  | _____                | _____                |
| 11. <input type="checkbox"/> Execution of standby service agreement with PG&E, as necessary                             | _____  | _____                | _____                |
| 12. <input type="checkbox"/> Interconnection Agreement (executed by PG&E and developer)                                 | _____  | _____                | _____                |
| 13. <input type="checkbox"/> Signed FIT PPA (by Seller)   | _____  | _____                | _____                |
| 14. <input type="checkbox"/> Project pre-parallel testing date  | _____  | _____                | _____                |

Documented completion of Development Checklist items 1-6 will qualify the applicant for a FIT capacity allocation (at the currently applicable price, as determined in consideration of total installed FIT projects and other previously assigned FIT capacity allocations). The allocation will be valid for a period of six (6) months, or as otherwise agreed

or extended at MCE's sole discretion, beginning on the date when such documentation is provided to and accepted by MCE Staff. For purposes of this FIT Application, the date of completion for Development Checklist items 1-6 was determined to be \_\_\_\_\_. As of this date, the currently applicable FIT price for the proposed project is \$ \_\_\_\_\_. To remain eligible for the noted FIT price, documented completion of all remaining items on the Development Checklist (items 6-14) must be provided to and accepted by the Assigned MCE Staff member no later than \_\_\_\_\_. ***At MCE's sole discretion, any project that fails to demonstrate substantial progress toward completion of all outstanding development checklist items may have their FIT capacity allocation revoked at any time.***

Applicants should consult the Assigned MCE Staff member for additional information regarding currently applicable FIT pricing for the proposed renewable generating project. Such pricing may change frequently.

The applicant is encouraged to coordinate with assigned MCE staff regarding the completion status of any item on the Development Checklist. Please submit requisite documents to the Assigned MCE Staff member as such documents become available, referencing the applicant's assigned FIT record #. MCE will send email confirmation to the applicant following receipt of any requisite FIT materials, including items listed in the Development Checklist.

### Submit Completed Feed-In Tariff Application (this document) to MCE

**By email:**

Rafael Silberblatt  
Program Specialist  
[rsilberblatt@mcecleanenergy.org](mailto:rsilberblatt@mcecleanenergy.org)

**By Mail:**

Marin Clean Energy  
781 Lincoln Avenue, Suite 320  
San Rafael, CA 94901  
Attn: Feed-In Tariff

*Upon receipt, MCE will review the application for completeness. Incomplete applications will be rejected and returned to applicant with no further processing. Applicant may resubmit application with correction of deficiencies. Information received by MCE in conjunction with this application is considered public information. MCE has the right to reject any application. For any questions regarding this application for MCE's Feed-In Tariff program, please call 1 (888) 632-3674.*

### Generator Interconnection (PG&E)

*PG&E and MCE work in partnership to provide a broad range of services for their customers, and as the organization responsible for distribution system planning, maintenance and safety, PG&E will be your primary point of contact for all matters related to generator interconnection. FIT applicants will work directly with PG&E during the generator interconnection process. Following successful project interconnection, MCE will contract with eligible FIT generators for all electricity and environmental attributes produced by the project. For matters related to generator interconnection, all questions should be directed to [wholesalegen@pge.com](mailto:wholesalegen@pge.com). Applicants may also access the following website for additional information regarding PG&E's generator interconnection process: <http://www.pge.com/en/b2b/energytransmissionstorage/newgenerator/index.page>.*

*With regard to PG&E's wholesale generator interconnection application, this process is now administered online and can be accessed at the following link:*

<http://www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/egi/>

☐ *By submission of this FIT Application, I acknowledge review and acceptance of the PPA Terms and Conditions available at [www.mcecleanenergy.org](http://www.mcecleanenergy.org)*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date