MCE RFQ (Request for Qualifications) 2026-05
for Original Equipment Manufacturer (OEM) Integration with MCE VPP Program and eDERMS
September 9, 2026

MCE is seeking qualifications from interested vendors for Original Equipment Manufacturer (OEM) integration with MCE's Virtual Power Plant (VPP) program ("Program"). This Program, funded by the California Energy Commission (CEC), enables flexible load participation during MCE-dispatched load events, which are coordinated through MCE's Enterprise Distributed Energy Resource Management System (eDERMS) and communicated via OpenADR.

MCE is creating a list of qualified OEMs and equipment that can integrate via OpenADR with MCE's eDERMS to receive load-modification event signals to support grid benefits and cost savings for customers participating in the Program. Vendors that submit the required documentation will be evaluated against the minimum qualification criteria set forth in these application materials. Vendors that satisfy these criteria and are selected by MCE will be added to MCE's list of qualified vendors. MCE may provide technical assistance at no charge to selected OEMs, as described below. This assistance does not include payments or reimbursements to OEMs. Except for the assistance MCE expressly agrees to provide, OEMs are responsible for their own participation, certification, and integration costs.

I. ABOUT MCE

MCE's mission is to confront the climate crisis by eliminating fossil fuel greenhouse gas emissions, producing renewable energy, and creating equitable community benefits.

MCE is a not-for-profit public agency and the preferred electricity provider for more than 600,000 customer accounts and 1.5 million residents and businesses across Contra Costa, Marin, Napa, and Solano counties. Setting the standard for clean energy in California since 2010, MCE leads with 100% renewable power at stable rates, delivering a 1200 MW peak load and significantly reducing greenhouse emissions and reinvesting millions in local programs.

MCE's vision is to lead California to an equitable, clean, affordable, and reliable energy economy by serving as a model for community-based renewable energy, energy efficiency, and cutting-edge clean-tech products and programs.

II. PROGRAM BACKGROUND

MCE's VPP is an aggregation of DERs synchronized to respond to dispatch signals sent by MCE. The Program builds upon past pilot efforts in Richmond, California, and expands the offering to all MCE customers, including commercial, industrial, agricultural, public, and residential, throughout MCE's entire service area! MCE's long-term vision is for the Program to evolve into a self-sustaining, market-integrated program that operates independently of ongoing government subsidies. To this end, MCE aims to realize a 20% return on investment through its VPP.

As part of the Program, residential and non-residential DERs—such as energy storage, building energy management systems, smart thermostats, EV chargers, lighting controls, heat pump water heaters, and other load-shifting equipment or technologies—will be integrated into a unified, managed system that leverages MCE's eDERMS to send and coordinate load-modification event signals. The eDERMS will shift loads, collect data, and optimize energy use to aggregate flexible capacity into the California Independent Systems Operator (CAISO) wholesale energy markets.

MCE has developed a novel value-sharing *VPP Tariff* (see Appendix A) that is integrated into a *VPP Participant Agreement* (in draft form, see Appendix B) to establish long-term, mutually beneficial relationships between participating MCE customers and MCE. In exchange for allowing MCE to dispatch customer-sited DER assets, participating customers earn fair and transparent compensation through monthly on-bill credits. Residents earn credits for a term of 5 years; commercial, industrial, agricultural, or public-facility customers earn credits for 7 years. This unique value-sharing tariff is designed to support adoption of advanced energy solutions among hard-to-reach markets and create bankable revenue streams that can increase lender confidence over time and help customers access lower cost capital to finance DER installations.

III. INTEGRATION PATHWAY

To support scalable, secure, and repeatable integration of qualified DER technologies, MCE has established a standardized approach to eDERMS integration that leverages the open communication standard OpenADR along with a technical onboarding process. A full description of this integration pathway is provided in the *MCE DERMS OpenADR 3 Integration Guide* (see Appendix D). Additional roles, responsibilities, Program requirements and participation expectation applicable to selected OEMs are described in the *OEM Integration Partner MOU* (see draft in Appendix C).

By using OpenADR as a common integration layer, MCE enables interoperability across heterogeneous DERs while maintaining flexibility to support evolving device capabilities and market participation requirements. This approach supports long-term VPP scalability and aligns with industry best practices for utility-led DER orchestration. MCE is committed to supporting qualified OEMs in gaining OpenADR certification as needed to help support a broadly interoperable, scalable VPP.

OpenADR Integration Process

MCE's eDERMS integration strategy is anchored in the use of OpenADR communication protocols. Qualified OEMs and platform providers must demonstrate the ability for their hardware or software systems to receive, interpret, and respond to OpenADR payloads issued by MCE's eDERMS. These payloads will be used to enable situational awareness, initiate load-modification events, coordinate DER dispatch, and support real-time and post-event data exchange.

MCE will provide qualified respondents with access to a defined, repeatable integration pathway described in the *MCE DERMS OpenADR 3 Integration Guide* (see Appendix D) that establishes consistent technical requirements, testing procedures, and documentation standards. These steps are summarized in Table 1, below. Once these steps are complete, the equipment will be ready to begin participating in the Program.

Table 1: OpenADR Integration Process

1. Device & Software Setup	2. Security & Connection Establishment	3. Registration & Resource Configuration	4. Capability & Telemetry Validation	5. Event & Dispatch Testing	6. Production Approval
DER, gateway, or OEM platform installed and operational. Virtual End Node (VEN) software configured.	Security credentials installed. VEN establishes secure connection to the Virtual Top Node (VTN).	VEN registers with the VTN. VTN validates the VEN and creates the resource record. DERs, sites, and customer assets are mapped to the VEN.	VEN advertises telemetry and control capabilities. VTN confirms required reports and validates telemetry.	Test events are issued. VEN acknowledges events and demonstrates successful device response.	Resource is approved for participation in the VPP and production events.

To support this pathway, MCE will provide:

- Clearly defined OpenADR signal structures, event types, and response expectations
- Standardized data fields for telemetry, status updates, and performance reporting
- Integration documentation outlining security, authentication, and data exchange protocols
- Coordinated technical support facilitated by MCE staff and MCE's designated VPP implementation partners

This standardized process is intended to minimize custom development effort for OEMs while ensuring consistent performance, reliability, and observability across all integrated resources.

Testing and Validation

MCE will use an OpenADR Test Tool to support systematic validation of communications between its eDERMS and the hardware and software ecosystems of qualified respondents. This testing environment will be used to verify that:

- OpenADR signals successfully transmit from MCE's eDERMS to OEM systems
- OEM systems correctly receive, interpret, and execute dispatch instructions
- Event acknowledgments, telemetry, and performance data are returned as expected
- Data flows are consistent, timely, and free of material errors or gaps

Testing will be conducted in a controlled environment prior to deployment to installed devices and may include iterative validation cycles to address issues identified during integration. Successful testing is required prior to full enrollment of devices into VPP operations.

Integration and Onboarding Support

All qualifying OEMs with equipment capable of receiving and acknowledging OpenADR signals are invited to submit proposals. To reduce barriers to participation and accelerate integration timelines, MCE will support selected OEMs as they gain OpenADR 3.0 certification by providing technical assistance at no charge to OEMs, subject to available resources. This assistance may be provided by MCE staff or its implementation partners and may include funding some costs associated with technical coordination, system configuration, integration, and testing. These funds may be used to support:

- Configuration and management of OpenADR interfaces within MCE's eDERMS
- Development and maintenance of standardized integration documentation
- Definitions of eDERMS signals
- Coordination of technical onboarding, testing schedules, and issue resolution
- Operation and administration of OpenADR testing and validation environments
- Internal engineering, management, and quality assurance resources required to support integration

If available OpenADR 3.0 certification funding or technical support resources are insufficient to support all qualified respondents, then respondents with existing OpenADR 3.0 certification will be prioritized for eDERMS integration before those that have not received a certification. MCE-provided technical assistance for OpenADR certification will be allocated based on the highest overall scores awarded to respondents during evaluation (see Evaluation Criteria in Section VIII). Selection as a qualified vendor does not guarantee receipt of technical assistance for certification or integration.

IV. BENEFITS OF VPP PARTICIPATION FOR OEMs

MCE will provide a range of customer acquisition, enrollment, retention, and technical integration support services designed to help participating OEMs expand equipment adoption, increase customer enrollment, and support long-term Program participation. Benefits available to qualified and selected OEMs may include:

1. **Customer Acquisition and Co-Marketing Support.** MCE will leverage its role as the default electricity provider in 38 Bay Area communities and its extensive customer engagement experience to promote VPP participation among eligible customers. Outreach efforts may include targeted customer communications, bilingual marketing and educational materials, digital enrollment pathways, and coordinated co-marketing campaigns with participating OEMs. MCE may also provide standardized Program messaging, branding guidance, and customer-facing information regarding eligibility requirements and VPP compensation opportunities.

2. **Access to MCE's VPP Tariff and Customer Value Proposition.** Customers who own or install qualified OEM equipment and agree to allow dispatch of eligible devices through MCE's VPP may enroll in MCE's VPP Tariff (see Appendix A) and VPP Participation Agreement (see Appendix B). Through this framework, participating customers may receive ongoing bill credits and other Program benefits, creating a compelling value proposition that supports equipment adoption, enrollment, and long-term customer retention.

3. **Pre-Qualified Vendor Status and Market Access.** Participating OEMs may be added to MCE's list of pre-qualified vendors for the Program and future MCE DER initiatives. Inclusion on these lists may facilitate customer participation and provide preferred exposure to more than 600,000 customer accounts throughout MCE's service area, as well as opportunities to support future deployments implemented by MCE and its program partners.

4. **Enrollment, Participation, and Retention Support.** MCE will maintain standardized enrollment and onboarding processes to streamline customer participation in the Program, including coordination of customer consent, tariff enrollment, agreement execution, and applicable data-sharing requirements. MCE will also administer Program participation activities

such as tariff administration, bill credit processing, and customer support, enabling OEMs to focus on equipment performance, integration, and innovation.

5. **OpenADR Certification and Technical Integration Support.** To promote interoperability and reduce barriers to participation, MCE may provide technical support at no charge to selected OEMS for OpenADR certification, integration, testing, and related implementation activities, subject to Program needs and available technical support resource. MCE may also support equipment integration coding necessary for participation in the Program. This support consists of assistance provided by MCE staff or its implementation partners and does not include payments or reimbursements to OEMs. OpenADR-certified products benefit from increased interoperability and compatibility with a growing number of utility and distributed energy resource programs, enhancing the marketability of participating OEM products within MCE's service area and beyond.

V. SCOPE OF SERVICES

A full scope of services can be found in the *OEM Integration Partner MOU* (see Appendix C). The MOU will identify the OEM's integration and participation responsibilities and any technical assistance MCE agrees to provide at no charge. OEMs will remain responsible for their own costs except for assistance expressly provided by MCE. Key services that shall be performed by qualified, selected OEMs include:

- **OpenADR Integration:** Coordinate with MCE and its other selected VPP implementation partners and eDERMS provider to complete OpenADR integrations to support remote dispatch and operational control functions necessary for participation in MCE-authorized VPP operations.

- **Testing and Validation:** Participate in MCE's standardized OpenADR testing and validation process using MCE-designated testing environments, tools, and procedures as required by MCE and/or MCE's eDERMS provider.

- **Telemetry, Data Exchange, and M&V Support:** Provide secure and timely access to post-event performance and telemetry data sufficient to support measurement and verification (M&V), performance-based compensation arrangements, settlements, and market participation activities. Support standardized data exchange, ensure data availability, and maintain dispatch records and operational logging.

- **Program Coordination and Enablement:** Attend trainings on Program offerings. Coordinate with MCE to refine and communicate offerings to customers. Support customer outreach, education, enrollment, and ongoing participation activities, including continued execution and administration of MCE VPP Agreement and VPP Tariff.

- **Security, Privacy, and Compliance:** Maintain cybersecurity, system integrity, and data privacy controls consistent with industry best practices and applicable regulatory requirements. Promptly notify MCE of any cybersecurity incidents or loss of operational capability, cooperate with MCE in reasonable incident response, and support continuity and recovery following cybersecurity events or system disruptions. Execute required non-disclosure agreement, and implement data privacy controls as applicable.

- **Ongoing Operations and Support:** Maintain operational readiness, system reliability, communications availability, and operational responsiveness necessary to support recurring VPP operations over multi-year participation periods. Support integrated equipment for the duration of applicable customer VPP agreement terms (from 5-7 years, see details in Program Background section).

VI. MINIMUM QUALIFICATIONS

Qualification Requirements

A full list of qualifications can be found in the attached *OEM Qualification Requirements* (see Appendix E). Key minimum qualifications include:

- **Organizational History:** Minimum 2 years of commercial operations
- **Market Presence:** Active deployment of eligible DER equipment in MCE's service territory (Marin, Contra Costa, Solano, or Napa Counties) with at least one commercially deployed project
- **OpenADR Capability:** Capability of receiving and acknowledging OpenADR signals
  Note: OpenADR certification is not required prior to selection, though OpenADR implementation will be required for participation in the VPP
- **Dispatchability and Load Modification Capability:** Demonstrated ability to modify load or dispatch DER output in response to external control signals suitable for recurring VPP events over multi-year participation
- **Telemetry and Data Availability:** Ability to provide telemetry data at hourly resolution
- **Cybersecurity:** Use of industry-standard encryption for data in transit
- **Data Privacy:** Ability to support customer consent and data authorization consistent with CPUC requirements and applicable law
- **Exclusivity:** Certification that equipment proposed under this request is not currently enrolled in or can be removed from another utility-operated, third-party, or privately operated demand response or VPP program
- **Integration Readiness:** Ability to complete initial integration and validation within a mutually agreed upon, short-term timeline

NOTE: By responding to this RFQ, respondents agree to adhere to all MCE requirements provided herein. Selected OEMs must execute required non-disclosure agreements, agree to data privacy requirements and to applicable federal, state, and local regulatory requirements.

Eligible Equipment Types

MCE is seeking integration with a variety of grid-edge DERs that can support load modification for participating MCE customers. The following list is not complete but is indicative of eligible equipment types and categories. Technology not listed is still eligible for integration assuming it is not aggregated into an existing demand response or load-modification program and is able to receive and respond to OpenADR signals provided by MCE's eDERMS after an integration process is completed. Priority will be given to any equipment that is OpenADR-certified or that has already been used in one of MCE's many customer programs. This is not a requirement for a response.

<u>Metering and Telemetry Devices</u>

- Non-Intrusive Load Monitoring System (NILMS)
- Home Area Network (HAN) Devices
- Circuity "CT" Clamps or other comparable Metering Equipment
- Meter Generator Output (MGO) meters

<u>Distributed Energy Resources</u>

- Smart Thermostats
- Building Energy Management Systems (BEMs) and other load control systems
- Lighting Control Systems
- Energy Storage Systems:
  - Battery Energy Storage
  - Thermal Energy Storage
  - Kinetic Energy Storage
  - Hydrogen based storage technologies
  - Other emerging technologies with active project deployments in MCE's service area
- Solar inverters able to control charging or dispatch of paired energy storage systems
- HVAC Heat Pump
- Heat Pump Water Heaters (HPWHs)
- Heat Pump Dryers
- Mini Splits
- CTA-2045 Controllers
- Plug Load Controllers
- Variable Speed Fans
- Electric Vehicle Service Equipment (EVSE)
- Variable Speed Pumps and Motors
- Pump Controls
- Electric or fossil free Backup Generators (BUGs)
- Refrigeration control technologies
- Smart Sensors (i.e., Air Quality, Water Quality, Moisture Detection, Temperature Gauge, Traffic, Weather)
- Other DERs not identified above that are able to respond to VPP signals and provide measurable load modification outcomes are also eligible for submission

VII. INSTRUCTIONS TO RESPONDENTS

MCE will begin evaluating responses for inclusion in the qualified OEM vendor pool as they are received, if they are received by the Submission Deadline of **4:00 pm PDT on Sunday, October 18, 2026**. Evaluation will continue until the Anticipated Vendor Selection Deadline, estimated to be **Friday, November 13, 2026**. Respondents must not have any contact with MCE personnel, nor should respondents lobby evaluators or any member of MCE's staff or Board of Directors during the evaluation process. Any communications outside of the procedures set forth in this RFQ may result in disqualification of respondent.

MCE reserves the right to re-release this RFQ, in whole or in part, and to accept additional applications in future solicitation rounds if MCE determines that additional qualified OEMs are needed to support Program objectives.

To complete proposals, respondents must:

☐ Review the *OEM Integration Partner MOU* (Appendix C) with your legal department. If Respondent requires any deviations from these contract terms, Respondent must attach a redlined contract and/or detail of requested changes with sufficient detail explaining the need for such an edit.

- ☐ Compile the following application materials:
  - ☐ Respondent Application Form (Attachment 1)
- ☐ Other documents, as required:
  - ☐ Income Statement (required)
  - ☐ Balance Sheet (required)
  - ☐ Case Studies, Product Specification Sheets, and/or Architecture Diagrams (required)
  - ☐ OpenADR Documentation or Certification (optional)
  - ☐ Sample Telemetry Data (optional)
  - ☐ Alternative Scope of Services (optional)
  - ☐ Redlined OEM Integration Partner MOU Terms, Conditions, and Requirements and/or detail of changes requested (Appendix C) (optional)

☐ Submit all application materials via the following Egnyte upload link, in either .pdf or .docx (Word) file format:

https://mea.egnyte.com/ul/VIkwwz2vwP

Egnyte will prompt the following required fields:

- Name: List company name
- Email Address: List email address of the contact submitting the response
- Company Name: Leave blank

☐ Submit all responses no later than **4:00 p.m. PDT on Sunday, October 18, 2026**.

Incomplete applications may be disqualified. Any applications received after the deadline will not be considered.

VIII. EVALUATION CRITERIA

Evaluation Process

Applications will be screened to ensure minimum qualifications are met and then independently scored by a selection committee comprised of MCE staff using the criteria listed below. Qualified respondents with the highest scores will be selected for inclusion in the pool of qualified OEM vendors.

Point Allocation by Evaluation Category

Evaluation Category	Maximum Points
1. Eligible Equipment Description (see Attachment 1 [Respondent Application Form], Section B)	10
2. Equipment Deployment & Market Presence (see Attachment 1 [Respondent Application Form], Section C)	20
3. Case Studies, Product Specification Sheets, and/or Architectural Diagrams (see Attachment 1 [Respondent Application Form], Section D)	20

4. OpenADR Capability (see Attachment 1 [Respondent Application Form], Section E)	25
5. Dispatchability & Load Modification (see Attachment 1 [Respondent Application Form], Section F)	15
6. Telemetry & Data Availability (see Attachment 1 [Respondent Application Form], Section G)	10
Total Possible Points	**100**

IX. KEY DEADLINES

Deadline	Date
Date Issued	Wednesday, September 9, 2026
Pre-Submission Webinar	Tuesday, September 22, 2026 From 12:00-2:00 p.m. PDT
Deadline for Questions	Friday, September 25, 2026 at 4:00 p.m. PDT
Deadline for MCE Responses	Tuesday, October 6, 2026
Submission Deadline	Sunday, October 18, 2026 at 4:00 p.m. PDT
Anticipated Selection of Vendor	Friday, November 13, 2026

Notice of Interest: No later than the deadline for submitting questions, all parties interested in responding to this RFQ are encouraged, but not required, to notify MCE via email of the intent to submit qualifications. This notice creates no obligation to submit qualifications but will ensure that interested parties are copied on MCE's responses to questions submitted by potential respondents. Notices must be sent to contracts@mcecleanenergy.org and should include the company's name and email contact information, referencing "MCE RFQ 2026-05 – Notice of Interest" in the subject line.

Pre-Submission Webinar: MCE will be hosting a non-mandatory informational **Pre-Response Webinar from 12:00 to 2:00 p.m. PDT on Tuesday, September 22, 2026**, for all parties interested in learning more about this RFQ. The webinar will be held remotely and will be recorded and posted to MCE's solicitation page. The webinar is open to all interested parties, and registration is required for live admittance. Please use the following link and follow on-screen instructions to complete the registration:

https://cloud.info.mcecleanenergy.org/vpp-pre-bid-webinar

Those who register for the webinar will receive an email confirmation of their registration.

Questions Deadline: Any questions relating to the content of this RFQ must be submitted to the Contracts Manager no later than **4:00 p.m. PDT on Friday, September 25, 2026**.

Response Deadline: MCE will issue a written response to questions submitted. This response will be available on MCE's website (https://mcecleanenergy.org/solicitations/) and emailed to all parties that submitted a notice of interest.

Submission Requirements: All application materials must be submitted via the Egnyte upload link provided in Section VII in either .pdf or .docx (Word) file format.

Submission Deadline: Subject to the General Terms and Conditions below, MCE is accepting submissions from the date this RFQ is issued until **4:00 pm. PDT on Sunday, October 18, 2026**.

Selection Date: Subject to the General Terms and Conditions below, MCE anticipates that the selection process will be completed by **4:00 p.m. PDT on November 13, 2026**.

X. OTHER VPP PARTNERSHIP PATHWAYS

MCE will use this RFQ to create a list of qualified OEMs that MCE can contract with over the course of the Program. Please note that separate solicitations will be or have been made available for developers, aggregators, and financiers. Firms are encouraged to apply for multiple roles as applicable. In determining which role(s) to apply for, respondents should consult the following table, which summarizes key functions, provides guidance in choosing a VPP participation pathway, communicates the availability of performance-based compensation structures, and forecasts anticipated solicitation release dates for each role.

Table 2: VPP Participation Pathways

	Key Functions	Pathway Recommendations	Pay-for-Performance	Anticipated Date
Original Equipment Manufacturer	Provides new and existing customer-sited equipment for integration into the VPP using OpenADR Equipment is featured in Program offerings and on pre-qualified vendor lists	Firms seeking to provide load management services should also consider applying through the Developer or Aggregator pathway	N	September 2026
Developer	Designs, installs, and operates customer-sited distributed energy resources (DERs) Collaborates with MCE on customer outreach, engagement, and participation	Firms seeking to provide a portfolio of DERs connected through a single Virtual End Node (VEN) should consider applying through the Aggregator pathway Developers will be invited, though not required, to	Y	September 2026

	Oversees asset deployment and enrollment Provides active load management services	provide financing for their own projects Firms able to offer financing for projects deployed by other DER implementation partners should also consider applying through the Financier pathway		
Aggregator	Coordinates a portfolio of DERs located throughout MCE's service area through a single VEN Provides active load management services Enables market-facing participation functions	MCE functions as its own Scheduling Coordinator and Demand Response Provider, and aggregations will be registered to MCE At this time, MCE is not seeking Proxy Demand Resource (PDR) formation, registration, scheduling, or settlement services from aggregators	Y	April 2027
Financier	Provides financing options for projects deployed by developers, installers, and other DER implementation partners	Firms seeking to provide financing exclusively for their own projects should consider applying through the Developer pathway	N	April 2027

XI. RFQ TERMS AND CONDITIONS

MCE's Reserved Rights: MCE may, at its sole discretion: withdraw this Request for Qualifications at any time, and/or reject any or all offers or proposals submitted without awarding a contract. Respondents are solely responsible for any costs or expenses incurred in connection with the preparation and submittal of an offer or proposal.

Public Records: All documents submitted in response to this solicitation will become the property of MCE upon submittal, and will be subject to the provisions of the California Public Records Act and any other applicable disclosure laws. Upon submission, all proposals shall be treated as confidential until the selection process is complete. Once a contract is awarded, all proposals shall be deemed public records. MCE is required to comply with the California Public Records Act as it relates to the treatment of any information marked "confidential." **Respondents requesting that portions of its submittal should be exempt from disclosure must clearly identify those portions with the word "Confidential" printed on the lower right-hand corner of the page.** Each page shall be clearly marked and separable from the proposal in order to facilitate public inspection of the non-confidential portion of the proposal. MCE will consider a respondent's request for an exemption from disclosure; however, if MCE receives a request for documents under the California Public Records Act, MCE will make a decision based upon applicable laws. Respondents should not over-designate material as confidential, and any requests or assertions by a respondent that the entire submittal, or significant portions thereof, are exempt from disclosure will not be honored.

No Guarantee of Contract: MCE makes no guarantee that a vendor submitting documents under this solicitation will be selected to enter into an OEM Integration Partner MOU. The successful vendor, if any, will enter into MCE's *OEM Integration Partner MOU*, attached hereto as Appendix C. The MOU establishes integration and participation responsibilities and does not provide for payments or reimbursements to the OEM. By submitting a response, you agree to abide by the terms included in the attached Agreement; however, MCE reserves the right to modify the terms based on the scope of work agreed to by MCE and the selected vendor.

Insurance: Selected vendors shall provide proof of insurance coverage meeting or exceeding the following minimum requirements prior to contracting with MCE: Commercial General Liability ($1,000,000 per occurrence, $2,000,000 aggregate for bodily injury and property damage), Motor Vehicle Liability Insurance ($1,000,000) (as applicable), Workers' Compensation and Employer's Liability Insurance (per statute), Cybersecurity Liability Insurance ($5,000,000).

Genuine Response: By submitting a response to this RFQ, the Responded ensures the submission is genuine, and not sham or collusive, nor made in the interest or on behalf of any person not named therein; the submitting firm has not directly or indirectly induced or solicited any other submitting firm to put in a sham submission, or any other person, firm or corporation to refrain from submitting a submission, and the submitting firm has not in any manner sought by collusion to secure for themselves an advantage over any other submitting firm.

XII. QUESTIONS

To promote accuracy and consistency of information provided to all participants, questions will only be accepted via email submitted to the Contracts Manager at contracts@mcecleanenergy.org and the subject line of the email must read "MCE RFQ 2026-05 Question." The deadline for submitting questions is **4:00 p.m. PDT on Friday, September 25, 2026**.

MCE will provide a written response to the questions submitted via email by 4 p.m. PDT on Tuesday, October 6, 2026 to all respondents who submitted questions and/or provided a complete Notice of Interest. MCE reserves the right to combine similar questions, rephrase questions, or decline to answer questions, at its sole discretion.

All questions must be submitted through the above process. No questions will be answered over the telephone or in person. Respondents may not have any contact regarding this procurement with any MCE official or staff from the time of issuance of this solicitation until the award of contract, other than through the process for submitting questions. Any contact in violation of these provisions will be grounds for disqualification.

Thank you for your interest!

APPENDIX A

APPROVED

Date: September 5, 2025

MARIN CLEAN ENERGY

Electric Schedule for Virtual Power Plant Tariff (VPPT)

APPLICABILITY: The Virtual Power Plant Tariff (VPPT) is available to MCE customers that have executed the MCE Virtual Power Plant Agreement (VPPA), and that have installed one or more qualified and fully operational distributed energy resources (DER) using an MCE-authorized Designee, with remote monitoring and dispatchable direct load control capabilities, behind the customer's utility electric meter, as verified by MCE. Customers that participate in MCE's Virtual Power Plant (VPP) Pilot can reduce their annual electricity costs, increase their resiliency, contribute to improving the health of their local grid conditions, support the advancement of cutting-edge innovative energy technology, while also earning valuable monthly bill credits for participation through this tariff.

SERVICE AREA: This schedule is available to MCE customers.

SUBSCRIPTION LIMIT: Subscription to this schedule is limited to 50,000 customers.

ELIGIBILITY: This optional schedule is available to MCE customers that meet the conditions detailed below. To be eligible for the VPPT, a customer must meet and maintain the following requirements:

1. Customers must have an active MCE residential, commercial, or industrial account with service address that is in good standing.

2. The customer account may not be enrolled in utility or third-party demand response programs or other behind-the-meter DER aggregations, including MCE's programs like Peak FLEXmarket. Accounts that are enrolled in a utility or other third-party demand response program or aggregation must disenroll in the third-party program prior to enrolling in the VPP. Enrollment can be determined using a standard form, the Customer Information Service Request (CISR) form.

3. Customers participating in the VPP must comply with the terms and conditions described in their governing VPPA, and have installed a qualified and fully operational DER compatible for monitoring and dispatchability by MCE pursuant to this tariff.

4. Customer DER installations must be compliant with the rules, stipulations, and restrictions of all manufacturer warranties and state and local codes and regulations, including applicable interconnection requirements. By enrolling in the VPP, customers warrant that they have all necessary authorizations and authority to enroll, and have provided any necessary notices to property owners, managers, or other stakeholders.

5. Customers must be enrolled in one of the following rate schedules:
   a. Residential: E-TOU-A, E-TOU-B, E-TOU-C, E-TOU-D, EV2, E-6 and EM-TOU.
   b. Commercial: B-1, B1-ST, B-6, B-10, B-19, B-20, BEV and SB.

   Other rate schedules as determined by MCE will be noted at www.mcecleanenergy.org/rates

6. Customers who change onto an ineligible rate schedule will be removed from the VPPT and monthly bill credits will be discontinued immediately.

7. Customers must have an installed revenue grade meter, such as an AMI Meter (aka- "Smart Meter"), MV-90 Meter, or equivalent load meter capable of providing 15-minute interval data.

8. Customers must provide any information reasonably requested by MCE or its authorized designees that is necessary for MCE to administer this VPPT, such as specifications for pre-existing DER installations.

9. If a participating customer opts-out of MCE service, the customer will be immediately removed from the VPPT on the effective date of the opt out and will be ineligible for further bill credits, including any applicable Program Year True-Up Payment, as defined below.

10. All customers taking service under the VPPT must have their DER located behind the utility electric meter and the enrolled DERs must be fully operational for as long as they remain on the VPPT. If the customer anticipates that the DER will become non-operational for any reason for a period longer than 30-days, the customer must notify MCE at least 30-days prior to the start of the period of non-operation and provide MCE with the expected start and end dates of the non-operation. In such instances, and subject to MCE's verification and approval, MCE may suspend bill credits for up to 90-days. If the DER becomes non-operational for longer than 30-days, and the customer has not received approval for a temporary suspension of the bill credits, the customer may be removed from this VPPT and the bill credits will be discontinued immediately. If a DER unexpectedly becomes unresponsive, the customer may receive a notice via email from MCE or an MCE-authorized designee alerting them to the malfunction. Notified customers will have 30 days from the date of their notice to reconnect the unresponsive DER before MCE may disenroll the customer from the VPP and terminate future bill credits.

11. Participants who have completed a VPPA, agree to allow MCE and its authorized designees, to operate the DER consistent with this tariff and guidelines contained in the VPPA. A participating customer shall allow MCE to operate the DER at MCE's discretion, subject to the following limitations:

    a. MCE may, at its discretion, dispatch the DERs (i.e., charge, discharge, load shift, load shed, load shape, load shimmy, and/or otherwise affect asset behavior), no more than recommended by the applicable DER vendor and/or manufacturer's warranty, except as outlined in the Special Conditions a and b below.

    b. MCE and partners intend to program the DERs to shift customer load to non-peak hours to reduce cost and reliance on fossil fuel, except as described in Special Condition a below.

    c. If connectivity to MCE's VPP is lost (including due to unplanned outages, emergencies, or other instance), DERs will be preprogrammed to go into an autonomous, self-operating mode until the situation is resolved and connectivity is resumed; see Special Conditions a, b, and c below.

16. MCE reserves the right to withhold incentives for any participating customers determined to be violating the terms and conditions of the governing VPPA.

17. Customers may elect to disenroll from the VPP and stop participation in VPPT at any time by contacting MCE at: virtualpowerplant@mcecleanenergy.org. All applicable terms and conditions of the governing VPPA will apply to any withdrawal. Termination of participation in VPPT, and the credits for participation, will be effective at the end of the customer's current billing cycle.

18. All VPP participants may elect to continue service under the VPPT upon expiration of their existing VPPA, through execution of a new VPPA.

Special Conditions for Participants:

a) Public Safety Power Shutoffs. In the event that PG&E calls a pending Public Safety Power Shutoff event (PSPS) in the vicinity of a customer, MCE will attempt to charge the participating energy storage system (ESS) that are expected to be impacted by the outage to full capacity in advance of the PSPS event. If necessary, MCE may charge the ESS to full capacity during any time of day, including "peak" periods, to maximize resiliency benefits for customers. Once the PSPS event has been resolved, and power has been restored, MCE will resume its normal dispatching of all DERs.

b) Unplanned Grid Outages. MCE will instruct the participating DERs to operate independently in the event of an unplanned outage of the electric grid. If the DER is an ESS, it will be charged using on-site generation resources if available, and only discharged to provide power for on-site usage. Once grid power has been restored, MCE will resume its normal dispatching of the DER.

c) Loss of Connectivity. It is the customer's responsibility to ensure continued connectivity of the DERs to the VPP. If MCE loses connectivity to a DER, such as due to interruption of internet or cellular connection, the DER will revert to autonomous control until connectivity is restored.

RATES AND INCENTIVES:

Rate Schedule: All usage billed under this schedule will be in accordance with the customer's otherwise-applicable MCE rate schedule.

Monthly Bill Credits: In addition, customers served under this schedule will receive a performance payment in the form of a monthly bill credit. The monthly bill credit amount will be determined as follows:

Residential MCE VPP Customer

Residential customers are compensated for participation in the MCE VPP based upon the number and type of DER devices enrolled by the customer, detailed below. Equipment specifications (including make, model, etc.) will be detailed in the customer agreement. This Residential Monthly Advanced Payment (RMAP) will be paid monthly, subject to the maximum credit amount listed below, in the form of a bill credit. The monthly bill credit amount will be based on the RMAP Product Menu below.

RMAP Product Menu:

- $2/month per enrolled smart major appliance (limited to eligible washers, dryers, dishwashers, refrigerators, freezers, and smart outlets with $\geq$ 1kW load)
- $5/month per enrolled eligible HAN/Smart Gateway
- $5/month per enrolled eligible smart thermostat (limited to all-electric HVAC systems)
- $5/month per enrolled eligible mini-split air conditioner
- $5/month per enrolled eligible heat pump hot water heater
- $10/month per enrolled eligible Level 2 electric vehicle (EV) charger
- $20/month per enrolled eligible bi-directional (i.e., V2B, V2G, V2X) Level 2 EV charger
- $10/month per enrolled eligible battery energy storage system under 20 kWh
- $20/month per enrolled eligible battery energy storage system equal or over 20 kWh

  The maximum RMAP bill credit for a customer utilizing the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) discounts is $50/month. The maximum RMAP bill credit for all other eligible residential customers (i.e., who are <u>not</u> on a CARE or FERA rate schedule) is $40/month.

<u>Commercial or Industrial MCE VPP Customer</u>

Commercial and Industrial customers are paid a Commercial Monthly Advanced Payment (CMAP) in the form of a bill credit as well as an annual performance payment of $0.11 per kWh of measured load flexibility shift that is delivered to MCE's VPP annually. The monthly bill credit amount will be based on the CMAP Load Shift Calculation methodology and subject to the maximum credit amount. CMAP will be calculated for the Program Year (January 1st through December 31st) in which a customer is enrolled in the VPP.

At the end of a Program Year, if the customer has generated more credit during the Program Year than has been paid to the customer through their CMAP for that Program Year, the customer is eligible to receive the balance owed, subject to the maximum bill credit amounts listed below (Program Year True-Up Payment). The Program Year True-Up Payment will be paid out as an additional bill credit prior to March 31st of the following Program Year. The calculation, as detailed below, is based on the total kWh of flexible load delivered to MCE's VPP, using MCE's Measurement and Verification (M&V) method and independently validated through third-party audit (as detailed in the VPPA).

CMAP Load Shift Calculation:

A. FIRST PROGRAM YEAR: In the First Program Year that the customer enrolls in the VPP, MCE and/or MCE Authorized Designee will provide an Estimated Annual kWh of Load Shift for the proposed installations. Customer will receive a monthly bill credit valued at 33% of the Estimated Annual kWh Load Shift multiplied by $0.11, then divided by 12, subject to the maximum bill credit listed below.

B. AFTER THE FIRST PROGRAM YEAR: For each Program Year thereafter, the previous Program Year's Actual Verified kWh of Load Shift, as validated annually through MCE's M&V method, will be used to set the Delivered kWh of Load Shift Amount. Customer will receive a monthly bill credit valued at 50% of the DKLSA multiplied by $0.11, then divided by 12, subject to the maximum bill credit listed below.

The maximum CMAP bill credit for an eligible commercial customer to receive is $300/month. The maximum CMAP bill credit for an eligible industrial customer to receive is $750/month.

APPENDIX B

Marin Clean Energy (MCE) Virtual Power Plant Participation Agreement (VPPPA) - Intent to Proceed Form

A. Participant Information

Participant Name		Contact Name (if Participant is an entity)
Title (if applicable)	Phone	e-mail
Participation Type (select one): ☐ New DER ☐ Existing DER - Integrated with eDERMS ☐ Existing DER - Manual Dispatch		

B. Project Developer (MCE Authorized Designee)

Company Name	Contact Name	Phone or e-mail

C. Project Installer (Subcontractor to Project Developer and is an MCE Authorized Designee, if applicable)

Company Name		
Contact Name	Phone	e-mail

D. Project Site Information

Site Address	City	State	Zip
[MCE to provide] PG&E Universally Unique Identifier (UUID) Number(s) for the Site(s) where the Participating Resource is enrolled. ___________________ Eligible electric Rate Schedule per Virtual Power Plant Tariff (as of date of agreement): ___________ Attachments: ☐ Proof of change to a rate schedule eligible for the Virtual Power Plant Tariff (if applicable)			

E. MCE Financier Loan (if applicable)

$ Total Cost of DER(s)	DER(s) Installer:
$ Loan Amount	Payee*:

F. VPP FLEX Grant Funding Allocation (if applicable)

$ Total Grant Funding Allocated	Payee*:
$ Amount subject to prorated repayment upon early termination, if applicable	
Repayment period and proration calculation: See VPP Tariff	

G. Monthly Bill Credit for Distributed Energy Resource (DER) Management and Control
(Select the applicable tier. For Tier 1 or 2, enter the monthly bill credit. Tier 3 is paid at the rate below.)

MONTHLY BILL CREDIT $ ________ / month	**PRICING TIER (select one):** ☐ Tier 1 - Residential Fixed Credit ☐ Tier 2 - Residential Program Transition Credit ☐ Tier 3 - Residential or Commercial Performance Rate: $0.11 per verified kWh Payee*: ______________________________

*If Payee is someone other than Participant, the Payee designation is subject to MCE's written approval.

H. Installation Deadline (if applicable)

All work related to this VPPPA must be installed and Fully Operational (see:Definitions, Section 1) no later than ____________. Failure to meet this deadline due to Participant's actions or inaction may result in adjustment or forfeiture of MCE Agreement Funding hereunder. Delays in Permission To Operate, interconnection approval, or other utility action outside Participant's reasonable control will not, by themselves, constitute a breach or result in forfeiture, provided Participant has timely completed all required actions and documentation. Incentive payments will not start until connectivity is confirmed.

I. Agreement Term

Agreement term (select one): ☐ 1 year (Program Transition) ☐ 5 years (Fixed Credit, Residential) ☐ 7 years (Commercial) Select Contract Start Date: ☐ On this Date: ________________________ OR ☐ Start Date Equals PTO Date *Note: Start date must match billing cycle.*

J. Participant Agreement and Signature

This VPPPA is made and entered into by and between Marin Clean Energy ("MCE") and Participant and becomes effective on the signature date below. By signing, Participant represents to MCE that (i) Participant has read, understands, and agrees to be bound by the terms, conditions and requirements of this VPPPA between MCE and Participant (including this Intent to Proceed form, the VPPPA Terms, Conditions and Requirements and all attachments hereto) ("Agreement") and the Conditions and Requirements of the Virtual Power Plant Tariff, (ii) if Participant is an entity rather than an individual, its authorized representative listed below ("Authorized Representative") has the authority to sign this Agreement on behalf of the Participant, and (iii) all accompanying Project documentation is complete, true, and accurate to the best of their knowledge.

Consent to Electronic Disclosure and Contracting. By signing below, Participant consents and agrees to receive electronically all communications, agreements, documents, notices, records, legal disclosures, and other information (collectively, "Electronic Records") that MCE provides in connection with this Agreement. Participant further agrees and consents to the use of electronic signatures (such as clicking, checking, signing using a digital pen, or otherwise manifesting assent) in the processing of Electronic Records. Participant has the right to withdraw this consent at any time by calling 1 (888) 632-3674 or emailing info@mcecleanenergy.org. Participant must notify MCE of any change in Participant's e-mail by using the contact information above.

Consent to Sharing Agreement with select MCE Authorized Partners, including Financier, Developer, Measurement & Verification Provider, and Original Equipment Manufacturer: By signing below, Participant hereby consents and agrees to the provision of this Agreement and/or data contained in this Agreement to financiers, developers, measurement & verification provider(s), California Energy Commission (CEC) Project team (including Community Energy & Equity Resources [CEER], Lawrence Berkeley National Laboratory [LBNL], and Serious Controls) and original equipment manufacturer as necessary for evaluation of Participant's eligibility for financing of the Project, enrollment and participation in the Program, verification of Program eligibility and performance, administration of incentive and tariff benefits, device integration and operation, measurement and verification activities, customer support, and other purposes reasonably necessary to implement and administer the Program, as necessary for evaluation of Participant's eligibility for financing of the Project, enrollment and participation in the Program, verification of Program eligibility and performance, administration of incentive and tariff benefits, device integration and operation, measurement and verification activities, customer support, and other purposes as reasonably necessary to implement and administer the Program. Any such financing arrangements shall be negotiated and subject to a further agreement between Participant and the identified financier. If Participant is approved, financing will be provided by the financier.

Authorized Representative of Participant (if Participant is an entity; please print):	Title:	Signature Date:
Signature of Participant or Authorized Representative of Participant (if Participant is an entity):		

VPPPA Terms, Conditions and Requirements

Overview: MCE's Virtual Power Plant Program (VPP Program) provides eligible MCE customers with payments, funding, or other benefits, as applicable, for participating with eligible DERsintegrated with MCE's Enterprise DERMS (eDERMS). DERs may be newly installed or existing, and may be operated through manual or digital dispatch. Depending on the participant type, MCE may monitor and automatically dispatch a DER through eDERMS, send Dispatch Notifications requesting manual operation of an existing DER. The VPP Program is intended to reduce peak demand, reduce the cost of serving MCE customers, reduce greenhouse gas emissions, support grid reliability, and provide resiliency benefits.

1. Definitions.

"Agreement" refers to this Virtual Power Plant Participation Agreement (VPPPA), including the Intent to Proceed Form, the Virtual Power Plant Participation Agreement Terms, Conditions and Requirements and all attachments hereto. Agreement may also be referred to herein as "VPPPA".

"CMAP" means the Commercial Monthly Advanced Payment calculated under the Tariff and Worksheet A.

"CPUC" refers to the California Public Utilities Commission.

"DER" means one or more eligible behind-the-meter distributed energy resources located at the Site, including energy storage or other equipment approved by MCE for participation in the VPP.

"Dispatch Notification" means an email, text message, or other communication from MCE or an MCE Authorized Designee notifying a Manual Dispatch DER Participant of a requested dispatch event and providing the available event instructions.

"eDERMS" means MCE's Enterprise Distributed Energy Resource Management System, including associated software and communication systems used to monitor, manage, or dispatch participating DERs.

"Existing Integrated DER Participant" means a Participant enrolling an existing DER that is integrated with and capable of automated communication and dispatch through MCE's eDERMS. An Existing Integrated DER Participant does not receive equipment or installation funding under this Agreement unless MCE expressly agrees otherwise in writing.

"Manual Dispatch DER Participant" means a Participant enrolling aDER that will not be integrated with eDERMS and is instead manually operated by the Participant in response to Dispatch Notifications. A Manual Dispatch DER Participant does not receive equipment or installation funding under this Agreement unless MCE expressly agrees otherwise in writing.

"Fully Operational" means: (a) for a New DER Participant, the DER has been installed, has received any required permission to operate, and is successfully communicating with MCE's eDERMS; (b) for an Existing Integrated DER Participant, MCE has confirmed that the DER is operational and successfully communicating with eDERMS; (c) for a Manual Dispatch DER Participant, MCE has confirmed that the DER is operational and the Participant can receive Dispatch Notifications.

"New DER Participant" means a Participant receiving a new eligible DER that will be integrated with and capable of automated communication and dispatch through MCE's eDERMS.

"MCE" refers to Marin Clean Energy or its employees, subcontractors or agents

"MCE Agreement Funding" has the meaning set forth in Section 11.c.

"MCE Authorized Designee" refers to a vendor that has been approved by MCE to work in the VPP and is identified on the Intent to Proceed Form.

"M&V" refers to measurement and verification

"Participant" is a residential, commercial, industrial, or agricultural MCE customer that has become eligible to participate in the Program by completing this VPPPA.

"Participation Type" means the Participant's designation as a New DER Participant, Existing Integrated DER Participant, or Manual Dispatch DER Participant, as identified on the Intent to Proceed Form.

"Participating Resource" means, as applicable, a newly installed DER, an existing DER integrated with eDERMS, an existing DER operated in response to Dispatch Notifications.

"Party" (individually) or "Parties" (collectively) refers to MCE and Participant

"Personally Identifiable Information" refers to any information that relates to an identified or identifiable individual, including, but not limited to, an individual's name, address, telephone number, email, or as otherwise recognized as "personal information," "personal data," or "personally identifiable information" in accordance with applicable laws and regulations

"Project" means the design, engineering, and installation of a new DER for a New DER Participant. Existing Integrated DER and Manual Dispatch DER participation does not constitute a Project unless agreed to in writing by MCE.

"**Project Developer**" means an MCE-authorized installer responsible for installing a new DER for a New DER Participant.

"**Program Transition**" means an MCE-approved transition of an eligible residential Participant from another MCE customer program or payment arrangement into the VPP Program. Eligibility and the approved bill credit must be documented in Tier 2 of Worksheet A.

"**Program Year**" means January 1 through December 31.

"**Qualifying DER**" means a DER approved by MCE for participation in the VPP Program. A Qualifying DER may be automatically monitored and dispatched through eDERMS or manually operated by a Manual Dispatch DER Participant in response to a Dispatch Notification.

"**RMAP**" means the Residential Monthly Advanced Payment calculated under the Tariff and Worksheet A.

"**Site**" refers to the site (or sites) where the DER will be located.

"**Tariff**" or "**VPPT**" refers to the MCE Virtual Power Plant Tariff applicable to Participants of the Virtual Power Plant.

2. **Agreement Eligibility.** During the Term, Participant must: (a) be and remain an active MCE customer with an account in good standing; (b) satisfy the requirements applicable to the Participation Type identified on the Intent to Proceed Form; (c) maintain an eligible Participating Resource at the Site; and (d) comply with this Agreement and the applicable Tariff; (e) complete, sign, and submit a current PG&E Customer Information Service Request (CISR) form authorizing the release of customer information and energy-usage data reasonably required for participation in the VPP Program; (f) not be enrolled simultaneously in a utility or third-party demand response program or another behind-the-meter DER aggregation, or disenroll from any such program or aggregation before enrollment in the VPP Program; and (g) maintain an installed revenue-grade meter, such as AMI, MV-90 (or equivalent), capable of providing 15-minute interval data. Participant must execute an updated CISR form upon MCE's request if the existing authorization expires, becomes invalid, or requires modification. MCE may determine whether a DER qualifies for enrollment and may change the Participant's aggregation assignment as reasonably necessary for program or market participation.
3. **Authorization.** Participant has authority to enroll the Participating Resource and authorize MCE's activities under this Agreement. A New DER Particiption Type must be authorized to approve installation of the DER and any necessary modifications to the Site's electrical system, either as the legal Site owner, the authorized representative of the Site owner, or with the Site owner's prior written approval. An Existing Integrated DER Participation Type or Manual Dispatch DER Participation Type must have authority to operate and enroll the existing DER.
4. **Ownership.** Participants must own or otherwise have sufficient legal authority to operate and enroll the participating DER during the Term, unless MCE agrees otherwise in writing. If any participating DER or associated solar system is owned or controlled by another person, Participant is responsible for confirming that participation does not conflict with any lease, power purchase agreement, warranty, financing arrangement, or other third-party agreement and for obtaining any required consent.
5. **Participating Resource Requirements.** A Participant seeking to enroll a new DER Participation Type must install a Fully Operational Qualifying DER through an MCE Authorized Designee and maintain a functioning high-speed internet or other approved data connection that enables continuous communication between the DER and MCE's eDERMS. A Participant seeking to enroll an Existing Integrated DER Participation Type will not receive installation funding under this Agreement unless MCE expressly agrees otherwise in writing and must maintain an operational Qualifying DER and the communications necessary for continuous eDERMS integration in order to access the monthly bill credits. A Manual Dispatch DER Participation Type will not receive installation funding under this Agreement unless MCE expressly agrees otherwise in writing and must maintain an operational Qualifying DER and current contact information for receiving Dispatch Notifications by email, text message, or another method approved by MCE. Upon receiving a Dispatch Notification, the Participant with Manual Dispatch DER Participation Type is responsible for manually initiating any requested DER operation in accordance with the notification in order to access the monthly bill credits.
6. **Participating Resource Operations.** Participant must operate and maintain the Participating Resource in accordance with applicable manufacturer requirements, warranties, laws, codes, and regulations. Participants with new DER Participation Types and Existing Integrated DER Participation Types must maintain the DER's connection to MCE's eDERMS except during required maintenance, repairs, communications outages, or safety-related shutdowns. Participants with manual Dispatch DER Participation Types must maintain the enrolled DER in operable condition and use reasonable efforts to respond to Dispatch Notifications. Each Participant must promptly notify MCE of any condition that materially affects the availability or eligibility of the Participating Resource. If Participant anticipates that an enrolled DER will be non-operational for more than 30 days, Participant must notify MCE at least 30 days before the expected period of non-operation and provide the expected start and end dates. Subject to MCE verification and approval, MCE may suspend bill credits for up to 90 days. If MCE notifies Participant that an enrolled DER is unexpectedly unresponsive, Participant will have 30 days from the notice date to restore connectivity before MCE may disenroll the Participating Resource and terminate future bill credits.
7. **Modification of Participating Resource.** Participants must notify MCE before materially modifying, disconnecting, removing, replacing, or decommissioning an enrolled DER, except when immediate action is reasonably required for safety or emergency purposes. Participant must notify MCE promptly following any emergency action. Manufacturer-recommended maintenance and software upgrades are permitted, provided they do not materially interfere with participation or, for a New DER Participation Type or Existing Integrated DER Participation Type, MCE's ability to communicate with or control the DER through eDERMS.

8. Removal of Equipment. This section applies only to equipment installed, replaced, or funded in connection with a New DER Participation Type's Project or to MCE-owned measurement or communications equipment installed at the Site. If Participant decides to remove batteries, they must dispose of replaced batteries or other equipment in accordance with applicable laws and manufacturer requirements. Participant may not relocate, transfer, or reinstall an MCE-funded DER during the Term without MCE's prior written consent. Upon termination, MCE may remove its equipment. This section does not require an Existing Integrated DER Participation Type or Manual Dispatch DER Participation Type to remove independently owned equipment unless otherwise agreed in writing.

9. Site Access and Inspections. Upon reasonable notice and during reasonable hours, Participant will provide MCE and its authorized representatives with access to the Site to the extent reasonably necessary to inspect, install, maintain, repair, or remove MCE-provided measurement or communications equipment; verify the eligibility or condition of a Participating Resource; conduct program audits; or satisfy applicable measurement, verification, regulatory, or market requirements. Installation-related access applies only when equipment is being installed or serviced at the Site. MCE will use reasonable efforts to minimize interference with Participant's normal Site operations.

10. Measurement and Verification Equipment. MCE or its authorized measurement and verification (M&V) provider may establish and update an M&V plan for the Participating Resource, subject to the VPP Tariff and applicable market rules. M&V may use DER telemetry, utility meter data, submeter data, eDERMS records, Dispatch Notification records, Participant response records, or other reasonably available data. New DER and Existing Integrated DER performance may be measured through eDERMS and DER telemetry. Manual Dispatch DER performance may be measured using meter data, available DER data, Dispatch Notification records, and Participant responses. Participant authorizes the installation and continued operation of approved M&V equipment identified by MCE and agrees not to remove, modify, or tamper with that equipment.

11. Project Installation. This section applies only to New DER Participation Types. A New DER Participation Type's equipment must be installed by a Project Developer or MCE Authorized Designee approved by MCE. Participant is responsible for entering into and administering any installation agreement, monitoring the installation work, and resolving disputes with the installer. Participant must require the installer to comply with applicable federal, state, and local laws, codes, permits, and interconnection requirements. MCE does not warrant or guarantee the acts, omissions, workmanship, equipment, or services of a Project Developer or MCE Authorized Designee. This Section does not apply to an Existing Integrated DER Participant or Manual Dispatch DER Participant unless MCE is installing measurement, communications, or other program equipment at the Site.

12. Available Funding . Any amounts charged to the CEC grant funds must comply with the applicable CEC grant agreement. MCE's approval of an exception under this Agreement does not waive applicable grant requirement or replace any required CEC approval.

a. **Installation and Grant Funding.** Installation funding, grant funding, or other Project-related funding is available only to a New DER Participation Type when an amount is expressly identified on the Intent to Proceed Form. Existing Integrated DER Participation Types and Manual Dispatch DER Participation Types are not eligible for installation and those Participants are not eligible for Project funding under this Agreement unless MCE expressly agrees otherwise in writing.

b. **Participation Payments.** A Participant may receive monthly bill credits, performance payments, true-up payments, or other compensation applicable to the Participation Type, as set forth on the Intent to Proceed Form, in the VPP Tariff, or in an applicable worksheet. Eligibility for and the amount of any payment may depend on enrollment status, resource availability, eDERMS connectivity, measured performance, response to Dispatch Notifications, applicable market rules, and compliance with this Agreement.

c. **MCE Agreement Funding.** "MCE Agreement Funding" includes only installation funding, grant funding, incentives, bill credits, performance payments, true-up payments, or other amounts provided by MCE under this Agreement, including amounts paid directly to an approved payee on the Participant's behalf for the Participant's Project or participation. Repayment obligations apply only to amounts actually paid to or on behalf of the Participant and only as expressly provided in this Agreement. MCE may recover duplicate payments, amounts paid in error, Project funding exceeding the cap, and amounts obtained through materially inaccurate or misleading information provided by the Participant. MCE will provide written notice identifying the basis and calculation of any requested repayment and a reasonable opportunity for the Participant to respond. These recovery rights do not requirement repayment solely because CMAP exceed verified annual performance payments where Worksheet A expressly provides otherwise.

d. **No Guaranteed Payment or Market Revenue.** MCE does not guarantee any minimum number of dispatch events, Dispatch Notifications, market awards, bill credits, performance payments, or other revenues. MCE may revise payment amounts or methodologies in accordance with the VPP Tariff and applicable law.

e. **Cap on Project Funding.** For a New DER Participation Type, the combined amount of Project-related MCE Agreement Funding and other funding or incentives applied to the same eligible Project costs may not exceed those costs. Participants must disclose other funding or incentives received or approved for those costs, and provide supporting documentation reasonably requested by MCE. MCE may adjust unpaid Project funding to prevent duplicate reimbursement or funding above eligible Project costs. Recovery of amounts already paid is subject to the repayment provisions of this Agreement. This limitation does not apply to payments earned solely for ongoing participation or measured performance unless required by the applicable CEC grant agreement, VPP Tariff, or law.

13. **Term.** The term of this Agreement (the "Term") is the 1-year, 5-year, or 7-year period selected in the Agreement Term field on the Intent to Proceed Form. The Term begins on the signature date on the Intent to Proceed form. The payments begin when the Participating Resource becomes Fully Operational. For a New DER Participation Type, this generally occurs after any required permission to operate has been received and the DER is successfully connected to MCE's eDERMS. For an Existing Integrated DER Participation Type, this occurs when MCE confirms enrollment of the DER and successful eDERMS communication. For a Manual Dispatch DER Participation Type, this occurs when MCE confirms enrollment of the DER and Participant's ability to receive Dispatch Notifications.
14. **Early Termination.** Either Party may terminate this Agreement as otherwise permitted herein. Upon termination, Participant will no longer earn new bill credits, performance, payments, or other VPP benefits for participation after the termination date. Payments attributable to participation before the termination remain subject to the applicable verification, true-up, payment, correction provisions. If a Participant with a New DER Participation Type terminates early or MCE terminates for an uncured material breach, MCE may require repayment of Project-related MCE Agreement Funding on a prorated basis to the extent stated on the Intent to Proceed Form, in the applicable worksheet, or in the VPP Tariff. The applicable repayment terms must identify the funding subject to repayment, the repayment period, and the proration calculation and must be provided to the Participant before execution of this Agreement. A Participant with an Existing Integrated DER Participation Type or Manual Dispatch DER Participation Type will not be required to repay installation funding that was not paid to or on behalf of the Participant. Any payment adjustment for periods before termination will be based on the applicable payment and M&V methodology.
15. **Breach of the Agreement.** Participant materially breaches this Agreement if Participant: (a) ceases to be an active MCE customer; (b) knowingly provides materially inaccurate enrollment, equipment, account, or performance information; (c) materially modifies, removes, disconnects, decommissions, or fails to maintain an enrolled DER without providing required notice; (d) materially interferes with approved M&V or communications equipment; (e) repeatedly fails to satisfy obligations applicable to Participant's Participant Type; (f) permits another person to control an automatically dispatched DER in conflict with this Agreement; or (g) materially violates another provision of this Agreement or the applicable VPP Tariff. For a Manual Dispatch DER Participation Type, occasional failure or inability to respond to a Dispatch Notification will not alone constitute a material breach unless the Participant repeatedly fails to respond or otherwise does not satisfy an applicable participation requirement. Except where immediate action is reasonably necessary for safety, legal, regulatory, or market-compliance reasons, MCE will provide Participant with notice of a breach and at least ten days to cure it; provided, however, that any longer notice, reconnection, suspension, or cure period stated in the Tariff will control. If the breach is not cured, MCE may suspend payments, remove the Participating Resource from an aggregation, terminate this Agreement, and exercise any other remedy provided herein.

16. **Monitoring and Participation Requirements.** Participant authorizes MCE to administer the Participating Resource in the manner applicable to the Participation Type. A Participant with a New DER Participation Type or Existing Integrated DER Participation Type authorizes MCE to monitor and automatically dispatch the enrolled DER through MCE's eDERMS, subject to the VPP Tariff and applicable operating limitations. A Participant with a Manual Dispatch DER Participation Type authorizes MCE to monitor available performance data and send Dispatch Notifications but remains responsible for manually operating the DER.
    a. MCE Control. For Participants with a New DER Participation Type or Existing Integrated DER Participation Type, MCE will be the entity authorized under this Agreement to dispatch the enrolled DER through MCE's eDERMS during the Term, and Participant will not authorize another person to control the DER in a manner that materially conflicts with MCE's dispatch ability. For a Participant with a Manual Dispatch DER Participation Type, MCE may request dispatch through a Dispatch Notification, but MCE will not directly control the DER unless the Parties separately agree in writing.
    b. Dispatching DER. MCE may automatically dispatch a New DER or Existing Integrated DER through MCE's eDERMS at its discretion, subject to the VPP Tariff, equipment limitations, customer-program requirements, and applicable law. MCE may send a Dispatch Notification by email, text message, or another approved method to Participants with a Manual Dispatch DER Participation Type. This Participant is responsible for manually initiating the requested DER operation and may be required to confirm its response. The frequency, duration, timing, and performance requirements for dispatch events will be governed by the VPP Tariff or applicable program materials.
    c. Access to DER Data. Participant authorizes MCE and its authorized representatives to collect, receive, process, use, and retain data reasonably necessary to administer the VPP Program, measure performance, calculate payments, manage aggregations, comply with regulatory or market requirements, and evaluate program results. Depending on the Participation Type, such data may include DER telemetry, charging and discharging data, solar production, utility meter data, Site-load data, eDERMS records, Dispatch Notifications, Participant responses, equipment status, and account information ("Data"). MCE may use Data in identified form as reasonably necessary to administer this Agreement and may use Data in de-identified or aggregated form for Program operations, planning, evaluation, regulatory reporting, grant reporting, research, and other lawful business purposes. Within applicable parameters, MCE may disclose Data to its agents, contractors, scheduling coordinators, utilities, regulators, CAISO, or other entities when reasonably necessary to administer participation or to comply with applicable law or market requirements. MCE will handle Personally Identifiable Information in accordance with applicable California privacy and data-security requirements.
    d. CAISO Participation. Participant authorizes MCE, at MCE's discretion and without requiring additional approval for each enrollment or transaction, to enroll, aggregate, reassign, bid, schedule, dispatch, or remove the Participating

Resource in or from an eligible utility, regulatory, or wholesale-market program, product, or aggregation, subject to the CAISO Open Access Transmission Tariff, the VPP Tariff, applicable law, and then-effective market rules. MCE may modify the composition of an aggregation or discontinue a particular participation model if required by CAISO, a utility, a regulator, or applicable market rules. Unless expressly provided otherwise on the Intent to Proceed Form or in the VPP Tariff, MCE will be entitled to market revenues associated with the Participating Resource, and Participant will receive only the bill credits, participation payments, or other compensation expressly provided under this Agreement.

17. Indemnification. MCE will not be liable for claims arising from the acts or omissions of a Project Developer, MCE Authorized Designee, equipment manufacturer, service provider, or other third party, including claims relating to installation, operation, maintenance, repair, dispatch, or performance of a Participating Resource. Participant releases MCE from claims arising from Participant's manual operation of a DER in response to a Dispatch Notification, except to the extent caused by MCE's gross negligence, willful misconduct, or violation of applicable law. To the fullest extent permitted by law, Participant will indemnify, defend, and hold harmless MCE and its officers, employees, directors, authorized designees, contractors, and agents from third-party claims, liabilities, losses, costs, damages, and expenses arising from Participant's breach of this Agreement, negligence, willful misconduct, unauthorized modification of a Participating Resource, or failure to follow applicable safety requirements.

18. LIMIT OF LIABILITY. TO THE FULLEST EXTENT PERMITTED BY LAW, NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, MULTIPLE, OR PUNITIVE DAMAGES ARISING FROM THIS AGREEMENT. MCE DOES NOT GUARANTEE THAT A PARTICIPATING RESOURCE WILL BE DISPATCHED, THAT A DISPATCH NOTIFICATION WILL BE RECEIVED OR ACTED UPON, OR THAT AN AGGREGATION WILL RECEIVE A MARKET AWARD OR PAYMENT. MCE'S TOTAL AGGREGATE LIABILITY ARISING FROM THIS AGREEMENT WILL NOT EXCEED THE MCE AGREEMENT FUNDING ACTUALLY PAID TO PARTICIPANT, EXCEPT TO THE EXTENT A DIFFERENT LIMIT IS REQUIRED BY APPLICABLE LAW.

19. No Warranty. MCE does not warrant or guarantee: (a) the performance, availability, useful life, or output of a DER; (b) the amount of energy generated, stored, discharged, curtailed, or consumed; (c) the receipt, timing, or successful delivery of any Dispatch Notification; (d) any electricity-cost savings; (e) any market award, bill credit, performance payment, or other revenue; or (f) the continued availability or pricing of any tariff, net-metering arrangement, incentive, tax credit, utility program, or wholesale-market participation model. Customer load, electricity rates, market rules, and payment methodologies may change during the Term. Participant remains responsible for complying with applicable equipment warranties and third-party agreements.

20. Miscellaneous

a. **Agreement/Terms and Conditions Changes**. MCE may modify, suspend, or terminate the VPP Program only as permitted by the VPP Tariff and applicable law. MCE will provide Participant reasonable notice of any change that materially affects Participant's rights or obligations, unless immediate action is required by law, a regulator, market rules, or an emergency. Any amendment to this Agreement remains subject to Section 20.f. Termination of the VPP Program will end future participation and benefits on the effective date stated in the notice, without affecting accrued payment rights or obligations that survive termination. Upon program termination, MCE or its Authorized Designees may access the Site in accordance with Section 8 to remove M&V Equipment.

b. **Taxes**. Participant shall be responsible for the payment of any and all taxes associated with the Project or incurred as a result of any incentive, grant, Monthly Bill Credit, Program Year True-Up Payment, or MCE Agreement Funding.

c. **Insurance**. Participant has and agrees to maintain customary property and liability insurance with respect to the Site, including sufficient coverage for any damage to the Participating Resource and associated equipment at the Site during the Term.

d. **Use of Non-Usage Data**. Participant agrees to allow MCE and its authorized contractors and agents to use Participant's name, Site location, Participation Type, size or type of DER installed or integrated, and other information gathered through participation in the Agreement ("Non-Usage Data") for regulatory and grant reporting, ordinary business use, industry forums, case studies, or other activities reasonably necessary to MCE.

e. **Acknowledgment**. If applicable to the Participation Type, Participant agrees to allow MCE-designed stickers containing MCE's logo and/or generation service designation to be placed on an installed DER or other participating equipment. MCE or its MCE Authorized Designee will provide and place any applicable stickers.

f. **Amendment**. This Agreement may not be amended without the mutual, written agreement of both Parties.

g. **Assignment**. This Agreement may not be assigned by either MCE or Participant without the prior written consent of the other party, not to be unreasonably withheld, conditioned, or delayed. Subject to ten (10) days prior written notice, Participant may assign this Agreement if the new Site owner or lessee enters into a written assignment and assumption agreement assuming all the obligations of Participant prior to the transfer of Site ownership or control.

h. **Jurisdiction and Venue**. This Agreement shall be construed in accordance with the laws of the State of California and the Parties hereto agree that venue shall be in Marin County, California.

i. **Survival**. The following sections will survive the termination of this Agreement: Sections 11, 13, and 16 through 20.

j. **Severability**. In the event any provision in this Agreement is found to be legally invalid or unenforceable, that provision will be revised to the degree allowed by law to give it the maximum effect allowed by law, or, if revision is not possible, will be severed and the remaining provisions of this Agreement will remain in full force and effect.

Worksheet A

MCE VIRTUAL POWER PLANT

Three-Tier Participation Worksheet

Select one participation tier and complete the corresponding section.

Participant Name		Account # / UUID	
Site Address		Prepared By / Date	

Participation Tier (select one)

TIER 1	TIER 2	TIER 3
☐ Residential fixed monthly credits	☐ Residential program transition	☐ Residential or commercial performance rate

TIER 1 | RESIDENTIAL FIXED MONTHLY CREDITS

Complete this section only when Tier 1 is selected.

Eligible Measure	Make and Model	Qty.	Credit / Unit	Line-Item Credit
Smart Refrigerator			$2	$
Smart Freezer			$2	$
Smart Outlet (1 kW minimum peak load)			$2	$
Smart Thermostat			$5	$
HAN / Smart Gateway			$5	$
Mini-split Air Conditioning			$5	$
Heat-Pump Water Heater			$5	$
Level 2 EV Charger			$10	$
Bi-directional Level 2 EV Charger			$20	$
Battery Energy Storage System (BESS) under 20 kWh			$10	$
BESS larger than 20 kWh			$20	$
			TOTAL MONTHLY TIER 1 CREDIT	**$**

Maximum monthly credit: $50 for income qualified CARE/FERA customers; $40 for non CARE/non FERA customers.

#	Program Measure / Activity	Date Enrolled	Program / Notes	Monthly Bill Credit
☐	Program "A" Solar + Storage			$
☐	Program "B" MCE Sync			$
☐	Program "C"			$
☐				$
☐				$
☐				$

Approved total monthly Tier 2 credit: $ ____________________

Program Transition Notes

Approval

MCE Representative	Approval Date
Participant Initials	Effective Date

TIER 3 | RESIDENTIAL OR COMMERCIAL PERFORMANCE RATE

Performance rate: $0.11 per verified kWh of load shift.

☐ Residential customer ☐ Commercial customer

FIRST YEAR CMAP AND PROGRAM YEAR TRUE-UP

Estimated annual kWh of load shift	*a.*	______
Estimated annual performance payment: Line a × $0.11	*b.*	______
First-year CMAP*: Line b × 0.33 ÷ 12	*c.*	______
PROGRAM YEAR TRUE-UP		______
Verified annual kWh of load shift**	*d.*	______
First-year annual performance payment: Line d × $0.11	*e.*	______
Participation months in program year	*f.*	______
Total annual CMAP: Line c × Line f	*g.*	______
Program Year True-Up Payment: greater of $0 or Line e minus Line g	*h.*	______

** CMAP maximum: $300/month for commercial rate customers and $750/month for industrial rate customers. Verified load shift is determined under MCE's approved M&V methodology.*
*** Total kWh of measured load shift delivered to the MCE VPP during each Program Year (January 1st to December 31st) will be verified by MCE and its program partners at the conclusion of each program year using the MCE approved Measurement and Verification methodology, which will be independently validated through third-party audit. The Program Year True-Up Payment will be paid no later than March 31 of the following Program Year.*

AFTER FIRST YEAR CMAP AND ANNUAL PERFORMANCE PAYMENT

Prior-year verified annual kWh of load shift (from Line d)	*i.*	______
Estimated annual performance payment: Line i × $0.11	*j.*	______
After-first-year CMAP: Line j × 0.50 ÷ 12	*k.*	______
PROGRAM YEAR TRUE-UP		______
Verified annual kWh of load shift	*l.*	______
Annual performance payment: Line l × $0.11	*m.*	______
Participation months in program year	*n.*	______
Total annual CMAP: Line k × Line n	*o.*	______
Program Year True-Up Payment: greater of $0 or Line m minus Line o	*p.*	______

All calculations are made under MCE's M&V plan, which may be updated from time to time. A Program Year True Up Payment will never be less than $0, and Participant will not owe repayment solely because CMAP paid exceeds the verified annual performance payment. This protection does not establish eligibility of the excess CMAP amounts for CEC reimbursement. MCE will charge such excess amounts to CEC grant funds only to the extent permitted under the applicable CEC grant agreement. Program Year True Up Payments are delivered after verification under the applicable program process.

Payment Eligibility and Verification

The Participant is eligible only for the compensation identified in the selected tier. Payments are subject to enrollment status, applicable tariff requirements, MCE's measurement and verification plan, and then-effective program and market rules.

Memorandum of Understanding

Between

***Marin Clean Energy** and*

[OEM Integration Partner].

This Memorandum of Understanding ("MOU") is entered into by and between Marin Clean Energy (hereinafter "MCE"), a California Joint Powers Authority, and [OEM Integration Partner] (hereinafter "Partner"), a [INCORPORATION STATE] [CORPORATE FORM] (collectively "the Parties") for the purpose of [participation in the Virtual Power Plant Program]. This MOU has been created to clearly define roles and expectations for the two primary partners (Marin Clean Energy and Partner).

I. **Background**

MCE is developing and administering a Virtual Power Plant ("VPP") program ("Program") that utilizes distributed energy resources ("DERs") to provide load flexibility, grid reliability, resilience, and market participation benefits. As part of the Program, MCE seeks to integrate qualified Original Equipment Manufacturers ("OEMs") and their technologies with MCE's Enterprise Distributed Energy Resource Management System ("eDERMS") using OpenADR and other approved communications protocols.

Partner manufactures, owns, controls, or supports DER equipment and platforms capable of participating in the Program and desires to collaborate with MCE to support customer enrollment, device integration, interoperability, telemetry exchange, and ongoing Program participation.

The Parties desire to enter into this MOU to establish a framework for cooperation concerning the integration and operation of eligible DER technologies within the Program.

II. **Partner Roles and Responsibilities**

The Parties agree to be direct and proactive with each other in raising any concerns related to this MOU. The expectations of each partner with regard to [participation in the Virtual Power Plant Program] are specified below:

A. Partner represents and warrants that it:
1. is the original equipment manufacturer of the proposed equipment or owns and controls the software or firmware necessary to support Program participation;
2. has maintained commercial operations for at least two (2) years;
3. has at least one commercially deployed project utilizing the proposed equipment;
4. maintains active deployment of eligible equipment within MCE's service territory or otherwise demonstrates an ability to support deployment therein; and
5. possesses the operational capability to support participating equipment and Program integration for the duration of customer participation obligations.

B. Partner agrees to:

OpenADR and Technical Integration

1. Participate in MCE's technical onboarding, interoperability testing, validation, and integration processes. Attend training and coordinate with MCE staff and identified project partners.
2. Maintain equipment, software, firmware, communications pathways, and operational systems necessary to support integration with MCE's eDERMS.
3. Comply with MCE's then-current *MCE DERMS OpenADR 3.0* Integration Guide and testing requirements, as modified from time to time.
4. Provide reasonably requested technical documentation, capability matrices, API specifications, and interoperability information.
5. Maintain equipment capable of responding to external dispatch instructions and disclose equipment response times, operational constraints, customer override functionality, safety limitations, state-of-charge limitations, and other factors reasonably affecting dispatchability.

6. Participate in testing, validation, troubleshooting, remediation, and revalidation activities reasonably requested by MCE to maintain interoperability throughout the Term.

Telemetry and Data Exchange

7. Provide access to telemetry, operational status, event-performance data, and other information reasonably necessary for Program administration, customer compensation, measurement and verification, reporting, settlement activities, and market participation.
8. Maintain telemetry and operational records for at least twenty-four (24) months and provide such records to MCE upon reasonable request.
9. Use commercially reasonable efforts to maintain reliable communications and data availability.

Customer and Program Support

10. Cooperate with customer enrollment and participation activities.
11. Support participating customers throughout the applicable customer participation term.
12. Promptly notify MCE of any material issue affecting eligibility, dispatchability, telemetry, interoperability, or customer participation.

Cybersecurity and Data Protection

13. Maintain commercially reasonable administrative, physical, and technical safeguards designed to protect customer information, telemetry data, and Program information from unauthorized access, use, or disclosure.
14. Notify MCE in writing without undue delay, and in no event later than **forty-eight (48) hours** after discovering any actual or reasonably suspected cybersecurity incident, unauthorized access event, data breach, compromise of credentials, malicious code event, vulnerability materially affecting Program systems, or other security incident that may affect MCE, customers, Program operations, telemetry availability, or integration with MCE systems.
15. Promptly investigate, contain, mitigate, remediate, and document any such incident and shall cooperate with MCE in good faith, including by providing reasonably requested information regarding the nature and scope of the incident, affected systems or data, corrective actions, and measures taken to prevent recurrence. Partner shall not make any public statement identifying MCE or the Program in connection with an incident without MCE's prior written consent, except as required by law.
16. Provide MCE with documentation reasonably sufficient to demonstrate Partner's compliance with this Section, which may include current security policies, security certifications, summary audit reports, penetration testing summaries, vulnerability remediation status, or other equivalent documentation, subject to reasonable confidentiality protections.
17. Ensure that any subcontractor, vendor, cloud provider, or other third party that has access to Program systems, customer information, telemetry data, or MCE information is bound by written obligations no less protective than those set forth in this MOU. Partner shall remain responsible for the acts and omissions of such third parties.
18. Comply with applicable federal, state, and local privacy and data protection requirements.

Customer Information and Program Data

19. To the extent Partner receives customer information, customer energy-use information, telemetry data, enrollment information, or other customer-related information in connection with the Program, Partner shall:
    (a) use such information solely for purposes of evaluating eligibility, enrolling customers, integrating equipment, administering participation, providing customer support, performing measurement and verification activities, and otherwise implementing the Program;
    (b) not sell, disclose, or use such information for unrelated marketing purposes;
    (c) maintain commercially reasonable administrative, technical, and physical safeguards to protect such information;
    (d) promptly notify MCE of any unauthorized access, disclosure, or security incident involving such information; and
    (e) comply with applicable privacy and data protection laws.

Notification of Material Changes and Exclusivity

20. Provide commercially reasonable advance written notice before implementing material firmware changes, platform deprecations, API changes, communications architecture modifications, cloud platform migrations, or other changes reasonably expected to affect interoperability, telemetry delivery, customer participation, or dispatch functionality.
21. Partner shall not impose contractual, technical, operational, or proprietary restrictions that would prevent an enrolled customer from participating in the Program or that materially interfere with MCE's ability to dispatch, monitor, or administer Program resources.

C. <u>MCE</u> agrees to:

1. Maintain and administer the Program and associated eDERMS platform.
2. Provide Program information, onboarding materials, technical requirements, and integration documentation.
3. Conduct testing, validation, and onboarding activities for qualified technologies.
4. Administer customer enrollment, customer agreements, VPP Tariff participation, and bill-credit administration.
5. Maintain and publish lists of qualified OEMs and eligible equipment as determined by MCE.
6. Provide Program-related communications and customer outreach activities at MCE's discretion.
7. Subject to Program needs, funding availability, and MCE discretion, provide technical assistance regarding OpenADR certification and interoperability activities.
8. Lead and support outreach campaigns to ellible customers with qualified equipment for program enrollment and subsequent bill credit/tariff assignment

D. The <u>Parties</u> mutually agree to:

1. Cooperate in good faith to support Program implementation and operation.
2. Maintain a designated technical contact.
3. Communicate promptly regarding operational issues affecting Program participation.
4. Use commercially reasonable efforts to resolve interoperability, telemetry, cybersecurity, and customer-participation issues affecting Program operations.

III. Additional Mutual Understandings

<u>Non-Exclusive Relationship</u>: Nothing in this MOU shall be construed as granting either Party exclusive rights of any kind. MCE may qualify additional OEMs, permit participation by other technologies, establish additional qualification pathways, release future solicitations, or modify Program participation requirements at its discretion.

<u>No Guaranteed Business Opportunity</u>: Partner acknowledges and agrees that participation in the Program does not guarantee any minimum level of customer enrollment, customer referrals, dispatch events, financing opportunities, revenue opportunities, market participation, market revenues, or any other business opportunity.

<u>Customer Relationships</u>: Customers remain free to select their preferred equipment providers, contractors, developers, financiers, service providers, and technologies. Nothing in this MOU grants Partner any ownership interest in MCE customer relationships or customer accounts.

IV. Term of Agreement

This MOU shall become effective upon execution and remain in effect until December 31, 2029, unless earlier terminated pursuant to this MOU. Either Party may terminate this MOU without cause upon thirty (30) days prior written notice to the other Party.
MCE may terminate this MOU immediately upon written notice in the event of:

- material breach of this MOU;
- material cybersecurity or data-security failure;
- failure to maintain required qualifications;
- repeated interoperability or operational failures materially affecting Program operations; or
- violation of applicable law.

Termination shall not affect any rights or obligations that expressly survive termination.

V. Payment

The Parties acknowledge and agree that this MOU does not obligate either Party to compensate the other Party. Except as expressly provided in a separate written agreement executed by both Parties, each Party shall bear its own costs associated with performance under this MOU.
Nothing in this MOU shall be construed as a commitment by MCE to purchase goods or services from Partner, nor as a commitment by Partner to provide goods or services to MCE.

VI. Miscellaneous Terms and Conditions

A. Confidentiality

Each Party may receive non-public information of the other Party in connection with the Program, including technical information, business information, customer-related information, operating procedures, telemetry data, and Program materials ("Confidential Information"). Each Party agrees to:

- use Confidential Information solely for purposes of implementing and administering the Program;
- protect Confidential Information using at least the same degree of care it uses to protect its own confidential information, but in no event less than reasonable care;
- not disclose Confidential Information to third parties except as authorized by the disclosing Party or as required by law; and
- restrict access to personnel and subcontractors with a legitimate need to know who are bound by confidentiality obligations no less protective than those contained herein.

Confidential Information shall not include information that is publicly available, independently developed, lawfully obtained from a third party, or already known without confidentiality restrictions.

B. Jurisdiction and Venue

This MOU shall be construed in accordance with the laws of the State of California and the parties hereto agree that venue shall be in Marin County, California.

C. No Recourse Against Constituent Members of MCE

MCE is organized as a Joint Powers Authority in accordance with the Joint Exercise of Powers Act of the State of California (Government Code Section 6500, et seq.) pursuant to the Joint Powers Agreement and is a public entity separate from its constituent members. MCE shall solely be responsible for all debts, obligations and liabilities accruing and arising out of this MOU. Partner shall have no rights and shall not make any claims, take any actions or assert any remedies against any of MCE's constituent members in connection with this MOU.

D. Data Ownership and Use Rights

Partner retains ownership of its products, firmware, software, source code, APIs, documentation, trademarks, proprietary technical information, and other intellectual property existing independently of this MOU.

MCE retains ownership of its Program materials, VPP Tariff, customer agreements, enrollment materials, branding, customer information provided by or on behalf of MCE, Program records, and data generated or collected by MCE in connection with Program administration.

For purposes of this MOU:

- **"Customer Personal Information"** means information that identifies, relates to, describes, or can reasonably be associated with an individual customer or customer account.
- **"Customer Energy-Use Information"** means customer-specific energy usage, load, interval, DER, dispatch, enrollment, account, or participation information.
- **"Telemetry Data"** means operational, performance, availability, status, dispatch response, equipment, and communications data associated with enrolled devices or Program operations.

- **“Aggregated or De-Identified Data”** means information that has been aggregated, anonymized, or de-identified so that it does not identify and cannot reasonably be used to identify a specific customer, household, account, or device owner.
- **“Partner Proprietary Data”** means Partner’s confidential technical, business, product, system, or operational information that is not Customer Personal Information, Customer Energy-Use Information, or Program Data.
- **“Program Data”** means enrollment, eligibility, participation, event, performance, settlement, reporting, measurement and verification, and other data generated through administration or operation of the Program.

Each Party shall use Customer Personal Information and Customer Energy-Use Information solely for purposes of evaluating eligibility, enrolling customers, integrating equipment, administering Program participation, providing customer support, performing measurement and verification, supporting dispatch and operational activities, complying with legal and regulatory obligations, and otherwise implementing this MOU. Neither Party shall sell Customer Personal Information or Customer Energy-Use Information or use such information for unrelated marketing purposes without appropriate customer authorization.

MCE may use Program Data, Telemetry Data, Customer Energy-Use Information, and customer participation information in identifiable form as reasonably necessary to administer the Program, operate and evaluate dispatch events, provide customer compensation or bill credits, comply with applicable laws and regulatory requirements, conduct measurement and verification, perform reporting, and manage Program operations.

MCE may use Aggregated or De-Identified Data for Program administration, forecasting, reporting, grant compliance, regulatory compliance, measurement and verification, research, evaluation, planning, and future Program development, provided that MCE does not use such data to identify individual customers except as permitted by law and applicable customer authorizations.

Partner shall not use MCE customer information, Customer Energy-Use Information, Program Data, or Telemetry Data for any purpose outside the Program without MCE’s prior written consent and any required customer authorization.

E. Indemnification

To the fullest extent permitted by law, Partner shall indemnify, defend, and hold MCE and its employees, officers, directors, representatives, and agents (“MCE Parties”), harmless from and against any and all actions, claims, liabilities, losses, costs, damages, and expenses (including, but not limited to, litigation costs, attorney's fees and costs, physical damage to or loss of tangible property, and injury or death of any person) arising out of, resulting from, or caused by: a) the negligence, recklessness, intentional misconduct, fraud of all Partner Parties (Partner Parties includes any employees, members, officers, subcontractors, and agents of Partner); b) the failure of a Partner Party to comply with the provisions of this Agreement or Applicable Law; or c) any defect in design, workmanship, or materials carried out or employed by any Partner Party.

F. Insurance

During the Term, Partner shall maintain insurance coverage meeting or exceeding the following minimum requirements prior to contracting with MCE: Commercial General Liability ($1,000,000 per occurrence, $2,000,000 aggregate for bodily injury and property damage), Motor Vehicle Liability Insurance ($1,000,000) (as applicable), Workers’ Compensation and Employer’s Liability Insurance (per statute), Cybersecurity Liability Insurance ($5,000,000).

G. Limitation of Liability

Neither Party shall be liable to the other for any indirect, incidental, consequential, punitive, or special damages arising out of this MOU.
MCE makes no representation or warranty regarding customer adoption rates, dispatch frequency, future market participation opportunities, financing availability, OpenADR certification funding, Program revenues, or future Program expansion.

H. Survival
The provisions relating to data rights, confidentiality, cybersecurity, indemnification, limitation of liability, jurisdiction and venue, and any obligations that by their nature should survive termination shall survive termination or expiration of this MOU.

The Parties to this MOU hereby acknowledge and agree, by executing this document, that the provisions herein shall constitute legally binding and enforceable obligations in accordance with applicable laws.

MCE

By:

Name:

Title:

Date:

[OEM INTEGRATION PARTNER]

By:

Name:

Title:

Date:

TECHNICAL INTEGRATION GUIDE

MCE DERMS OpenADR 3

VEN onboarding, secure connectivity, resource registration, event context, and standards-aligned reporting

Status	DRAFT — NOT FOR PRODUCTION RELIANCE
Document version	1.4 Draft
Draft date	02 September 2026
Prepared for	MCE
Prepared by	Serious Controls / MCE integration team
Reference standard	OpenADR 3.0.1 Definition and User Guide
MCE deployment profile	VTN API path currently documented as /openadr3/3.1.0 — confirm with credential bundle
Classification	Controlled technical draft

DRAFT CONTROL
This revision is a documentation-level alignment draft. It does not certify the deployed VTN, VEN client, certificates, scopes, or optional subscription support. Complete the verification plan in Section 13 before release.

Document control

This edition reconciles the prior MCE guide with the OpenADR 3.0.1 reference documents and separates portable OpenADR behavior from the MCE deployment profile.

Revision history

Revision	Date	Status	Summary
1.2	22 Jul 2026	Prior release	Source manual internal version; filename supplied as v1.3.
1.4	02 Sep 2026	DRAFT	Clarified baseline/profile versions; corrected report relationships and payload typing; added conformance, security, error, test, and operations guidance.

Approval record

Role	Name	Decision/date
MCE program owner	____________________________	____________________________
MCE security	____________________________	____________________________
VTN operator / Serious Controls	____________________________	____________________________
Integration owner	____________________________	____________________________

Normative precedence
For standard OpenADR semantics, the OpenADR 3.0.1 OpenAPI definition is authoritative. The OpenADR User Guide is non-normative guidance. MCE-specific routes, security controls, private attributes, and credential values are governed by the current MCE integration bundle and deployed VTN configuration.

Contents

How to use this guide
Use Sections 1–3 to identify the applicable profile, Sections 4–11 to implement, and Sections 12–14 to harden and verify. Items labeled **MCE PROFILE** are deployment-specific; items labeled **CONFIRM** must be validated against the current VTN and credential package.

1. Purpose, audience, and conventions

This guide supports engineers integrating a VEN or client application with the MCE DERMS VTN. It covers portal onboarding, credentials, VEN and resource objects, program/event context, interval reports, error handling, and release verification.

1.1 Audience

- Application developers implementing an OpenADR 3 client.
- MCE and Serious Controls operators provisioning identities, resources, programs, and report context.
- Security and QA reviewers validating transport, OAuth scopes, ownership, schemas, and operational behavior.

1.2 Conventions

Label	Meaning
OPENADR	Portable requirement or behavior derived from OpenADR 3.0.1.
MCE PROFILE	MCE-specific route, field, workflow, or stricter security requirement.
CONFIRM	Deployment value or optional capability that must be checked before production.
Example identifiers	Illustrative only; replace every value enclosed in angle brackets.

1.3 Scope boundary

Enrollment, program eligibility, commercial terms, telemetry settlement, and customer authorization are out-of-band business processes. This guide begins after the integration account and applicable program participation have been approved.

2. Conformance profile and architecture

2.1 Version statement

OPENADR
This manual is reviewed against OpenADR 3.0.1 (Definition and User Guide dated 23 August 2024). Standard object semantics and endpoint behavior should be validated against the matching OpenAPI YAML.

MCE PROFILE — CONFIRM
The prior manual documents the deployed base path as **https://vtn3.seriouscontrols.com:8444/openadr3/3.1.0**. Treat 3.1.0 in this URL as an MCE API/profile path—not as the reference-document version—and confirm it in the current credential bundle before use.

2.2 Object and transport model

Layer	OpenADR 3.0.1	MCE deployment profile
Transport	REST over HTTPS; JSON representations.	HTTPS on the issued host and port; mutual TLS is required by MCE.
Authorization	OAuth 2.0 bearer token; role/scope enforcement.	Client-credentials grant plus the assigned certificate and scopes.
Objects	program, event, report, subscription, ven, resource.	Core objects plus private fields and report-context workflow.
Delivery	Pull CRUD; push via subscription/webhook where implemented.	Pull workflow is documented. Subscription support must be confirmed.

2.3 Logical flow

1 Provision	2 Authenticate	3 Register	4 Operate
Portal account, client ID/secret, certificate, key, CA chain	mTLS + OAuth token	VEN, then resources	Discover context, send reports, reconcile

3. Quick start

Complete the sequence once in a non-production environment before automating it.

Step	Action	Pass condition
1	Obtain the current integration bundle.	Host, port, API path, client ID, secret, client certificate, private key, CA chain, scopes, and expiry contacts are recorded.
2	Validate TLS and mutual-TLS trust.	Handshake succeeds with hostname validation; certificate chain and key pairing are valid.
3	Request an OAuth token.	A bearer token with expected expiry and scopes is returned; secrets are absent from logs.
4	Create or locate the VEN.	Persist the VTN-issued VEN ID; repeat execution does not create duplicates.
5	Create or reconcile resources.	Each resource name is unique within the VEN and its VTN-issued ID is persisted.
6	Obtain program/event context.	A valid programID and eventID are known for every report.
7	Submit a small status report.	201 Created; returned ID, timestamps, and normalized content are stored.
8	Submit a daily/interval report.	Interval count, timestamps, units, data quality, and payload types pass validation.
9	Run negative and retry tests.	Expected Problem responses are parsed; POST is not blindly replayed.

Release gate
Do not promote credentials or enable unattended reporting until the conformance checks in Section 13 are signed off by the VTN operator and integration owner.

4. DERMS portal onboarding

Portal access is provisioned by Serious Controls. Use the supplied account to navigate to DERs, create or select a DER, and download the OpenADR integration bundle.

4.1 Sign in and inspect the dashboard

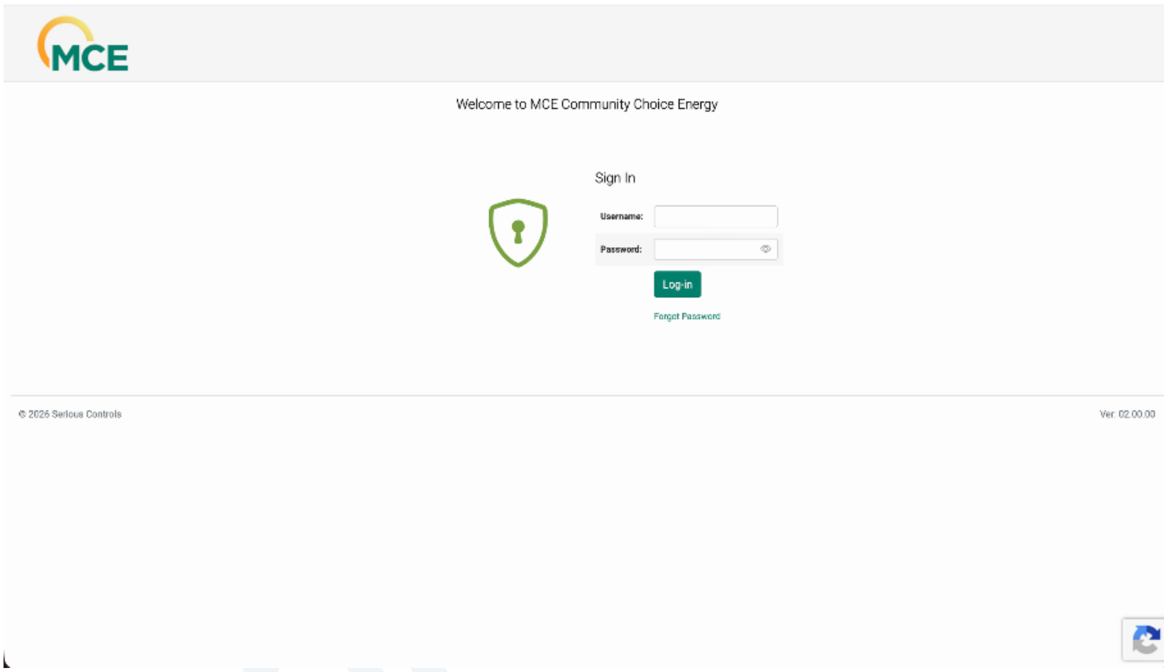

Figure 1. MCE DERMS sign-in screen. Never share or embed portal credentials in client code.

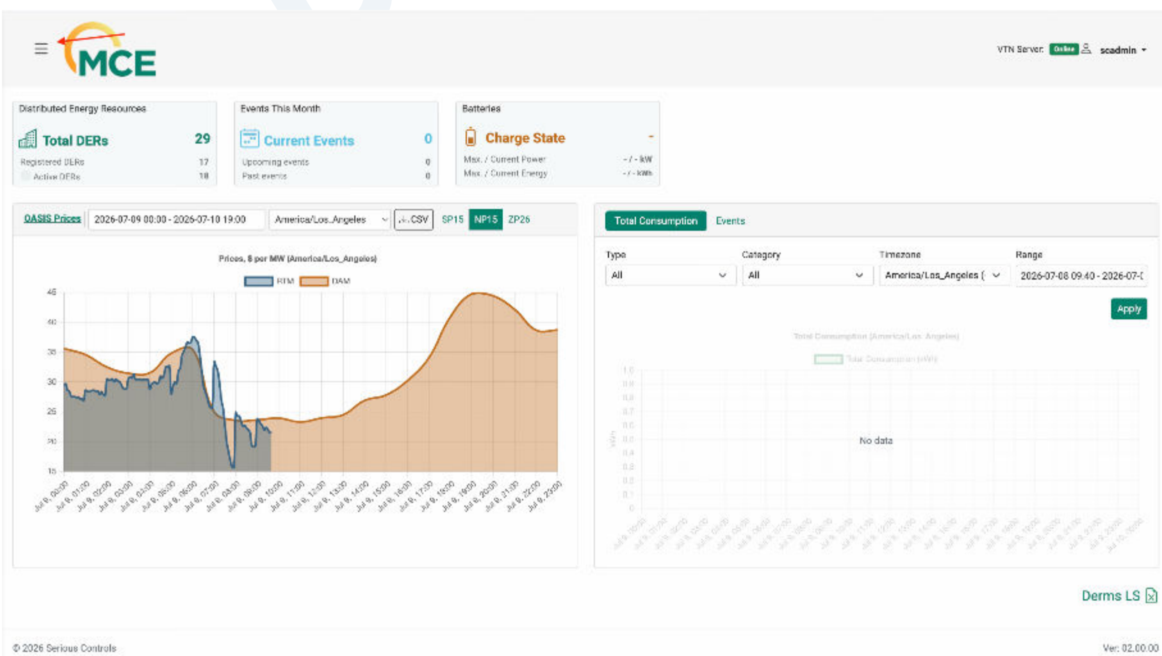

Figure 2. Main DERMS dashboard after authentication.

4. DERMS portal onboarding — continued

4.2 Open the DER panel

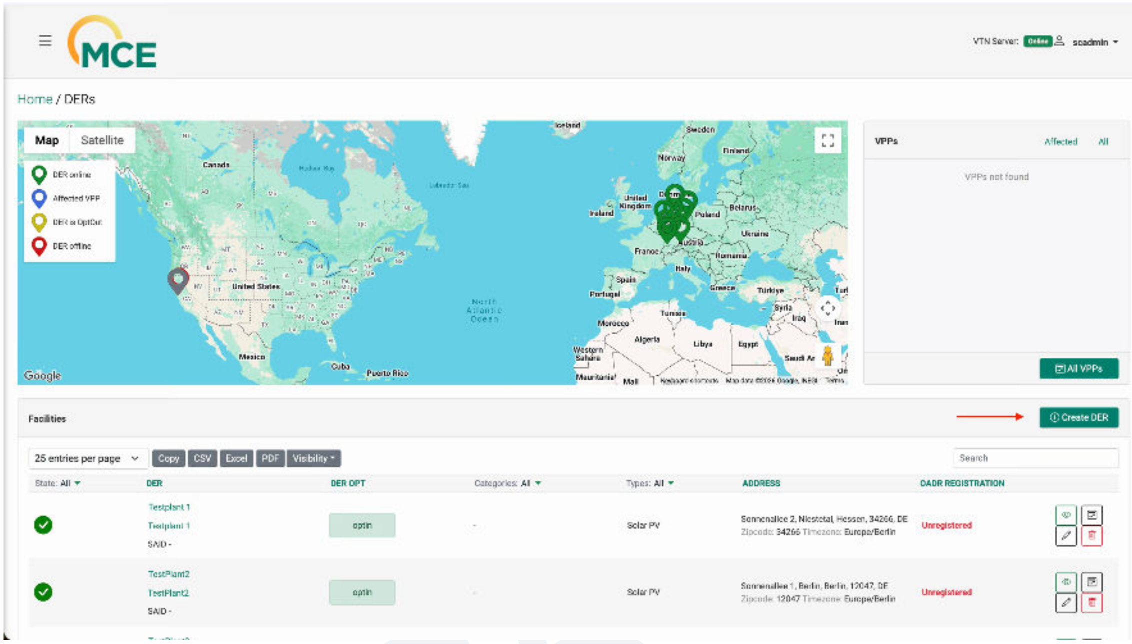

Figure 3. DER panel showing mapped assets and OpenADR registration state.

4.3 Create an OpenADR 3 DER

- Select **Create DER**; set the OpenADR version offered by the portal.
- Enter the DER name, category, type, address, and other required business fields.
- Enter the issued OAuth client ID in the designated field. Do not enter the client secret into descriptive fields.
- Save, open the DER detail page, and verify that the expected account and target association appear.

> **CONFIRM**
> Portal labels and screen layout may change. The version selected in the portal, the API path, and the downloaded bundle must describe the same deployed profile.

4. DERMS portal onboarding — bundle and status

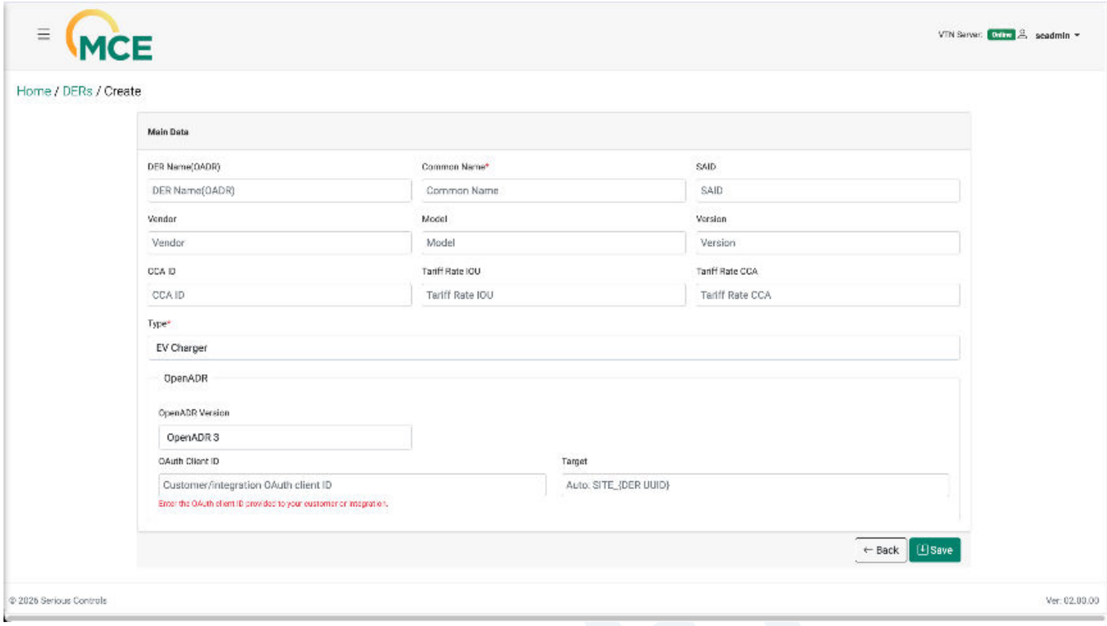

Figure 4. Create DER form with OpenADR configuration.

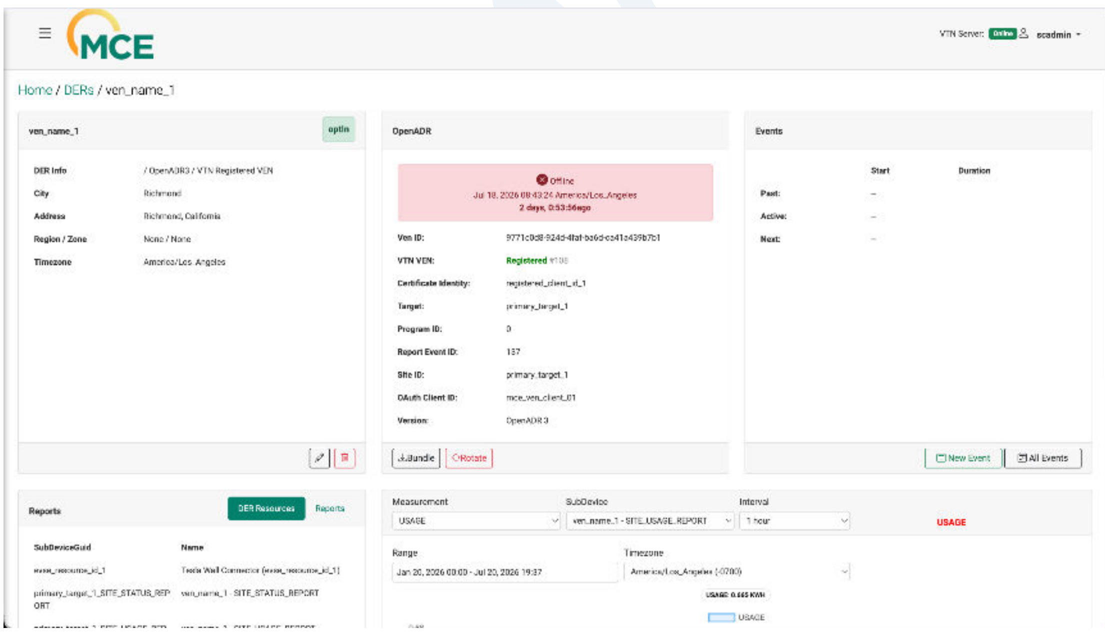

Figure 5. DER detail page with OpenADR identity, registration, event, resource, and report information.

4.4 Download and inventory the bundle

- Record filename, issue time, certificate subject/SAN, serial number, not-before/not-after dates, CA fingerprint, client ID, assigned scopes, base URL, and token endpoint.
- Store the private key and client secret in an approved secrets manager. Restrict export and file permissions.
- Use separate identities and certificates by environment. Never reuse a production identity in development or test.

5. Connection and security profile

5.1 Connection profile

Setting	Value / rule
Base URL	https://vtn3.seriouscontrols.com:8444/openadr3/3.1.0 — CONFIRM before use.
Content type	application/json for request and response bodies.
Transport	TLS 1.2 minimum; prefer TLS 1.3 when mutually supported.
Client authentication	MCE requires mutual TLS in addition to OAuth 2.0 bearer authorization.
Hostname validation	Required. Do not disable certificate or hostname verification.
Compression	A client may advertise gzip support with Accept-Encoding where supported.

5.2 Credential handling

- Treat the private key, client secret, and bearer token as secrets. Do not place them in source control, tickets, screenshots, or logs.
- Verify that the client certificate matches its private key and chains to the issued trust anchor.
- Monitor certificate and secret expiration. Alert before renewal lead time is exhausted.
- Rotate compromised material immediately and revoke the affected identity through the VTN operator.

5.3 Minimal TLS check

```
# Paths are illustrative. Keep key material outside the repository.
curl --cert <client-cert.pem> --key <client-key.pem> \
  --cacert <mce-ca-chain.pem> \
  https://vtn3.seriouscontrols.com:8444/openadr3/3.1.0/<health-or-authorized-route>
```

Do not weaken verification
Options that bypass CA or hostname validation are not acceptable for troubleshooting or production. Fix trust, hostname, clock, certificate, or key-pair problems instead.

6. Authentication and token lifecycle

OpenADR 3 uses OAuth 2.0 bearer tokens. The MCE profile adds mutual TLS to the token and API connections. Authentication endpoint details are implementation-specific; use the token URL in the current integration bundle.

6.1 Token request

```
curl --cert <client-cert.pem> --key <client-key.pem> --cacert <mce-ca-chain.pem> \
  -X POST "<token-endpoint>" \
  -H "Content-Type: application/x-www-form-urlencoded" \
  --data-urlencode "grant_type=client_credentials" \
  --data-urlencode "client_id=<client-id>" \
  --data-urlencode "client_secret=<client-secret>" \
  --data-urlencode "scope=<assigned-scope>"
```

6.2 Lifecycle rules

Condition	Client behavior
Token issued	Cache only in protected memory/storage; calculate renewal from expires_in or token metadata.
Approaching expiry	Refresh early with clock-skew margin; avoid a synchronized refresh storm across clients.
401 Unauthorized	Obtain a new token and retry once only when the request can be safely repeated.
403 Forbidden	Do not retry. Validate scope, role, object ownership, and environment assignment.
Token endpoint unavailable	Use bounded exponential backoff with jitter; do not send cached expired tokens indefinitely.

6.3 API request

```
curl --cert <client-cert.pem> --key <client-key.pem> --cacert <mce-ca-chain.pem> \
  -H "Authorization: Bearer <access-token>" \
  -H "Accept: application/json" \
  "<base-url>/vens?venName=<url-encoded-name>"
```

7. VEN lifecycle

A VEN represents the client/integration identity in the OpenADR object model. **venName** must be unique across the VTN. Persist the server-assigned VEN ID and use it as the relationship key for resources.

7.1 Create a standard VEN

```
POST <base-url>/vens
Content-Type: application/json

{
  "venName": "<stable-unique-ven-name>",
  "attributes": [
    {"type": "DESCRIPTION", "values": ["MCE DERMS integration"]}
  ]
}
```

Server-generated fields
On create, the VTN assigns the object **id**, **createdDateTime**, **modificationDateTime**, and top-level **objectType**. Do not rely on client-supplied values for these fields; persist the representation returned by the VTN.

7.2 MCE private registration fields

The prior guide uses private strings such as SITE_ID, UTILITY_UUID, EV_RESOURCE_ID, and a request discriminator VEN_VEN_REQUEST. These are not portable OpenADR 3.0.1 enums. Send them only when required by the MCE-published schema/profile.

```
{
  "objectType": "VEN_VEN_REQUEST",
  "venName": "<stable-unique-ven-name>",
  "attributes": [
    {"type": "SITE_ID", "values": ["<mce-site-id>"]},
    {"type": "UTILITY_UUID", "values": ["<utility-uuid>"]}
  ]
}
```

7.3 Reconcile, update, delete

- Before POST, query by the stable VEN name when supported. A 409 may indicate a uniqueness conflict.
- PUT is a full replacement of editable content. Read the current object, merge intentionally, and send a complete representation.
- Before DELETE, check dependent resources, reports, ownership, and business retention requirements. Confirm deletion by GET and portal reconciliation.

8. Resource lifecycle

A resource is owned by a VEN. **resourceName** must be unique within that VEN. Use stable names and store the VTN-issued resource ID.

8.1 Standard route

```
POST <base-url>/vens/<venID>/resources

{
  "resourceName": "<stable-resource-name>",
  "attributes": [
    {"type": "DESCRIPTION", "values": ["Battery inverter at Site 123"]},
    {"type": "MAX_POWER_EXPORT", "values": [250]}
  ]
}
```

MCE PROFILE
The prior MCE guide documents top-level /**resources** and /**resources**/**{resourceID}** routes with venID in the body. OpenADR 3.0.1 defines resources beneath /**vens**/**{venID}**/**resources**. Use only the route published by the deployed MCE OpenAPI contract; do not interchange the two forms.

8.2 MCE top-level request shape — if required

```
POST <base-url>/resources

{
  "objectType": "VEN_RESOURCE_REQUEST",
  "venID": "<ven-id>",
  "resourceName": "<stable-resource-name>",
  "attributes": [
    {"type": "SITE_ID", "values": ["<mce-site-id>"]},
    {"type": "EV_RESOURCE_ID", "values": ["<mce-resource-id>"]}
  ]
}
```

8.3 Resource rules

- Use values arrays even when an attribute has one value.
- Standard attributes include LOCATION, AREA, MAX_POWER_CONSUMPTION, MAX_POWER_EXPORT, and DESCRIPTION; other strings are private by agreement.
- Use the special resourceName AGGREGATED_REPORT only when the report values truly represent a sum/aggregation over multiple resources.
- Reconcile resource inventory routinely; flag unexpected additions, deletions, owner changes, and stale mappings.

9. Program and event context

Every standard report is associated with a program and an event. The report must carry both **programID** and **eventID**. These are VTN-assigned object IDs, not names or client-defined labels.

9.1 Standard discovery

Object	Standard route	Purpose
Programs	/programs and /programs/{programID}	Discover program metadata and target context.
Events	/events and /events/{eventID}	Obtain active/report-only event and its programID.
Reports	/reports and /reports/{reportID}	Create, inspect, update, or delete reports under assigned authorization.
Subscriptions	/subscriptions and /subscriptions/{subscriptionID}	Optional push notification configuration when supported.

9.2 MCE report-context workflow

```
GET <base-url>/report-context?venID=<ven-id>          # MCE profile only
```

The MCE route is a convenience extension, not a standard OpenADR endpoint. The integration should obtain or derive both IDs:

- If the response contains reportProgramID and reportEventID, validate both by GET before reporting.
- If it returns only reportEventID, GET /events/{eventID} and read programID from the event.
- Reject missing, expired, unauthorized, or environment-mismatched context.

9.3 Pull and optional push

Polling is the documented MCE workflow. OpenADR 3 also defines subscriptions/webhooks; do not assume the deployed MCE VTN enables them. If enabled, require HTTPS callbacks, validate the challenge and signatures, reject private/reserved callback destinations, use strict timeouts, and apply bounded delivery backoff.

10. Reporting model and interval rules

10.1 Required relationships and consistency

Rule	Implementation check
Object references	programID and eventID are present and resolve to the intended program/event.
Payload typing	Each descriptor payloadType exactly matches the corresponding interval payload type.
Values	values is always an array, including a single scalar.
Units/readings	units and readingType are compatible with the selected standard payload.
Intervals	IDs are deterministic; start and duration use ISO 8601; array length matches the described period.
Time basis	Prefer UTC timestamps. If local time is used by agreement, document offset and daylight-saving behavior.
Data quality	Use OK, MISSING, ESTIMATED, or BAD. Avoid ambiguous association when multiple data payloads share one interval.

10.2 Standard payload choices

Need	Preferred standard type	Typical unit / note
Instantaneous telemetry	READING	KW, VOLTAGE, or other supported enum; readingType DIRECT_READ when applicable.
Energy over interval	USAGE	KWH; interval duration is essential.
Demand	DEMAND	Use the agreed unit and aggregation window.
Commanded target	SETPOINT	Use for an intended target, not a measured value.
Reference comparison	BASELINE	Identify agreed baseline meaning in program documentation.
Device state	OPERATING_STATE	Use the standard state vocabulary supported by the profile.
Quality qualifier	DATA_QUALITY	Attach unambiguously to the companion data.

10.3 Daily intervals and daylight saving

A full UTC day at PT15M contains 96 intervals. A local civil day can contain 92 or 100 intervals at daylight-saving transitions. Prefer UTC boundaries; otherwise implement the convention explicitly agreed with the VTN and never pad or discard data silently.

11. Corrected report examples

11.1 Status / instantaneous power report

This example uses the standard READING payload for an instantaneous output-power observation. Replace identifiers and confirm field optionality against the deployed schema.

```
POST <base-url>/reports

{
  "programID": "<program-id>",
  "eventID": "<event-id>",
  "clientName": "<integration-client-name>",
  "reportName": "site-output-power",
  "payloadDescriptors": [{
    "payloadType": "READING",
    "readingType": "DIRECT_READ",
    "units": "KW"
  }],
  "resources": [{"resourceName": "<resource-name>"}],
  "intervals": [{
    "id": 0,
    "intervalPeriod": {"start": "2026-09-02T16:00:00Z", "duration": "PT1M"},
    "payloads": [{"type": "READING", "values": [125.4]}]
  }]
}
```

Correction from prior guide
The previous status example declared descriptor payloadType OUTPUT_POWER but sent interval type SITE_OUTPUT_POWER and omitted programID. This draft uses one matching type and includes both required object relationships. If MCE requires a private SITE_OUTPUT_POWER type, use that exact same type in both locations and document its units and meaning in the MCE profile.

11. Corrected report examples — continued

11.2 Daily energy usage report

```
POST <base-url>/reports

{
  "programID": "<program-id>",
  "eventID": "<event-id>",
  "clientName": "<integration-client-name>",
  "reportName": "daily-site-usage",
  "payloadDescriptors": [{
    "payloadType": "USAGE",
    "readingType": "DIRECT_READ",
    "units": "KWH"
  }],
  "resources": [{"resourceName": "<resource-name>"}],
  "intervals": [
    {
      "id": 0,
      "intervalPeriod": {"start": "2026-09-01T00:00:00Z", "duration": "PT15M"},
      "payloads": [{"type": "USAGE", "values": [18.72]}]
    },
    {
      "id": 1,
      "intervalPeriod": {"start": "2026-09-01T00:15:00Z", "duration": "PT15M"},
      "payloads": [{"type": "USAGE", "values": [17.95]}]
    }
  ]
}
```

Generate all remaining intervals mechanically. For a complete UTC day, IDs 0–95 cover consecutive PT15M windows. Confirm whether the VTN expects each interval start explicitly, a report intervalPeriod, or both.

11.3 Quality handling

- Do not replace missing values with zero unless zero is a valid measured quantity.
- Use the profile-supported DATA_QUALITY representation for MISSING, ESTIMATED, or BAD data.
- If a quality payload could apply to more than one data value, split the values into separate intervals or reports so the association is unambiguous.

Private metrics
Battery state of charge, forecasts, EV counts, and other custom metrics may be useful, but use standard payload types where they fit. Any MCE-private type must be defined with its unit, cardinality, sign convention, valid range, aggregation, and quality rules.

12. HTTP behavior and production operations

12.1 Expected status codes

Method	Success	Common failures
GET	200	400 malformed filter; 403 scope/ownership; 404 not found; 500 server error.
POST	201	400 validation; 403 authorization; 404 referenced object; 409 conflict; 500.
PUT	200	400 validation; 403 authorization; 404 object/reference; 409 conflict; 500.
DELETE	200	400 request; 403 authorization; 404 object; 500.

12.2 Problem responses

For 4xx and 500 responses, parse the Problem object. Capture title, status, detail, endpoint, method, safe object ID, and a request/correlation ID when provided. Redact tokens, secrets, certificates, keys, and sensitive customer/site data.

12.3 Retry policy

Situation	Policy
GET timeout / 5xx	Retry with bounded exponential backoff and jitter.
PUT/DELETE timeout	Retry only after checking outcome and idempotency implications.
POST timeout	Do not blindly retry. Query by a stable business key or use an operator-approved idempotency mechanism.
400 / 403 / 404 / 409	Do not loop. Correct request, authorization, relationship, or uniqueness state.
429 if emitted	Honor Retry-After; rate-limit locally.

12.4 Querying and pagination

Use supported filters plus skip and limit. Filters are additive. Continue until a short/empty page according to the deployed API behavior; de-duplicate by VTN-issued ID and tolerate concurrent modification.

12.5 Observability

- Log operation, duration, status, safe IDs, interval counts, retry count, and request ID—not payload secrets.
- Track token failures, certificate expiry, report lag, rejection rates, duplicates, missing intervals, and reconciliation drift.
- Alert on sustained failures and retain audit evidence according to MCE policy.

13. Verification and acceptance plan

Documentation review improves implementability but does not certify server conformance. Execute these tests against the deployed MCE VTN and archive evidence before changing this document from DRAFT.

13.1 Contract and schema

ID	Test	Expected result / evidence
C-01	Validate every example against the deployed MCE OpenAPI schema.	No schema errors; MCE extensions and required fields are documented.
C-02	Compare API path/profile version with portal bundle.	Portal, certificate bundle, token endpoint, and base URL agree.
C-03	Confirm standard vs MCE resource route.	One authoritative route and request schema are published.
C-04	Confirm /report-context response and lifecycle.	Both report IDs can be derived and validated; expiry/rotation behavior is known.
C-05	Confirm subscription support.	Supported, secured, and tested—or explicitly marked unsupported.

13.2 Functional smoke tests

ID	Test	Pass condition
F-01	mTLS + token	Valid materials succeed; expired/untrusted certificate and invalid secret fail safely.
F-02	VEN create/read/update	Server fields assigned; uniqueness honored; PUT replacement behavior confirmed.
F-03	Resource create/read/update	Correct owner and route; stable mapping; uniqueness within VEN.
F-04	Status report	201; program/event resolve; descriptor and payload types match.
F-05	Full-day report	Expected interval count and energy totals; UTC/DST convention verified.
F-06	Reconciliation	Portal and API show the same VEN, resources, events, and reports.

13. Verification — negative and operational tests

13.3 Negative tests

ID	Test	Expected result
N-01	Omit a required field.	400 Problem response identifies validation failure.
N-02	Use an unauthorized scope or another owner's object.	403; no information leakage.
N-03	Reference an absent program/event/resource.	404 or documented validation response.
N-04	Create a duplicate venName/resourceName.	409 or documented uniqueness response.
N-05	Mismatch descriptor payloadType and payload type.	Request rejected by client pre-validation or VTN schema validation.
N-06	Send malformed ISO timestamp/duration or wrong interval count.	400; no partial acceptance unless explicitly documented.
N-07	Expire token during operation.	Single controlled refresh; no retry loop or duplicate POST.
N-08	Present wrong/expired client certificate.	TLS connection fails before application data is exposed.

13.4 Operational readiness

- Load test within the VTN operator's approved limits; document pagination, rate limits, and maximum report sizes.
- Exercise certificate and client-secret rotation without reporting gaps.
- Restore from persisted VTN IDs and reconciliation state after process restart.
- Validate monitoring, alert routing, runbooks, retention, privacy handling, and escalation contacts.
- Perform a rollback rehearsal and confirm that it does not delete server objects or duplicate reports.

13.5 Sign-off

Gate	Owner	Result / evidence link
Schema and profile confirmed	VTN operator	______________________________
Security review complete	MCE security	______________________________
Functional/negative tests passed	Integration QA	______________________________
Operations readiness approved	Service owner	______________________________

14. Troubleshooting

Symptom	Likely cause	Action
TLS handshake fails	Expired certificate; wrong key; incomplete chain; hostname/clock mismatch.	Check dates, SAN, chain, clock, and certificate/key fingerprints. Do not disable verification.
Token request fails	Wrong endpoint, client credentials, scope, encoding, or mTLS identity.	Compare with current bundle; inspect sanitized OAuth error and certificate identity.
401 on API	Missing/expired token or audience mismatch.	Refresh once, verify authorization header and token audience.
403 on API	Scope, role, owner, or environment mismatch.	Stop retries; ask VTN operator to verify assignment.
404 for referenced ID	Stale ID, wrong environment, deleted object, or wrong route.	Resolve the object in the same environment; verify MCE vs standard route.
409 on create/update	Name conflict or concurrent state conflict.	Query by stable name/ID, reconcile, then update deliberately.
Report rejected	Missing programID/eventID; payload mismatch; invalid enum/unit/time/interval.	Run client schema and semantic checks; compare Problem detail.
Duplicate objects/reports	Blind POST retry or unstable name/key.	Reconcile after uncertain outcomes; persist VTN IDs; use stable business keys.
Daily total off	Unit conversion, sign convention, DST, missing/duplicate intervals.	Audit boundaries, count, quality flags, units, and aggregation.
Portal/API disagree	Cache delay, wrong tenant/environment, or stale mapping.	Check VTN-issued IDs and environment, then run reconciliation.

Escalation package

Provide timestamp with timezone, environment, endpoint and method, HTTP status, request/correlation ID, safe object IDs, sanitized Problem detail, certificate serial/expiry, and a minimal redacted payload. Never attach a private key, client secret, or bearer token.

Appendix A. Conformance crosswalk

Topic	OpenADR 3.0.1 position	MCE guide treatment	Status
Authoritative contract	OpenAPI YAML defines interface.	Precedence and schema verification added.	Aligned; deployment test required
Object model	program, event, report, subscription, ven, resource.	All core objects described; subscriptions conditional.	Aligned / confirm optional
Server fields	VTN assigns ID, timestamps, top-level objectType.	Client examples no longer depend on supplying them.	Aligned
Report relationships	programID and eventID are required.	Both IDs now present and discovery explained.	Corrected
Payload typing	Descriptor and interval payload type agree.	Corrected examples and validation rule added.	Corrected
Resource route	Nested beneath /vens/{venID}.	Standard route shown; top-level MCE route labeled extension.	Deviation documented / confirm
Private values	Private strings allowed by agreement.	MCE fields/types identified as non-portable.	Aligned with extension model
Security	TLS + OAuth bearer; TLS 1.2 minimum.	MCE mTLS requirement plus lifecycle/rotation guidance.	Stricter MCE profile
HTTP behavior	Method-specific success/error responses and Problem body.	Status matrix, parsing, retry, and idempotency added.	Aligned
Pagination	skip/limit and additive filters.	Operational paging behavior added.	Aligned
Intervals	ISO time/duration; arrays; descriptor consistency.	UTC, DST, data-quality, and interval checks added.	Aligned
Deployment certification	Requires implementation/testing beyond documentation.	Acceptance plan and sign-off gate added.	Open until evidence complete

Draft disposition
At the documentation level, this revision addresses the material inconsistencies identified in the prior manual. Production conformance remains conditional on validating the deployed MCE OpenAPI contract and passing every applicable Section 13 test.

Appendix B. Glossary and references

Glossary

Term	Meaning
DER	Distributed energy resource.
DERMS	Distributed energy resource management system.
MCE profile	Deployment-specific contract layered on OpenADR, including routes, fields, credentials, and enabled capabilities.
mTLS	Mutual TLS: both client and server present authenticated certificate identities.
OAuth 2.0	Authorization framework used here with the client-credentials grant and bearer access token.
Problem	Structured error response containing at least status-oriented diagnostic information.
VTN	Virtual Top Node: OpenADR server/service role.
VEN	Virtual End Node: OpenADR client/participant role and associated object.
UTC	Coordinated Universal Time; preferred time basis for interoperable intervals.

Reference documents

- OpenADR Alliance, *OpenADR 3.0 Definition v3.0.1*, updated 23 August 2024.
- OpenADR Alliance, *OpenADR 3.0 User Guide v3.0.1*, updated 23 August 2024; non-normative.
- MCE / Serious Controls, *MCE DERMS OpenADR 3 Integration Guide*, supplied filename v1.3; internal cover version 1.2, dated 22 July 2026.

Release artifacts to attach before approval

- Current MCE OpenAPI file and checksum.
- Environment-specific credential profile without secrets.
- Completed Section 13 evidence and approval record.
- Private MCE field/payload dictionary, including units, ranges, sign conventions, and examples.
- Support/escalation matrix and certificate/secret rotation runbook.

End of controlled draft
DRAFT v1.4 • 02 September 2026 • Do not remove the DRAFT marking until all confirmation items and release gates are complete.

MCE VPP
Original Equipment Manufacturer Integration Partner Qualification Requirements

1. Organizational and Market Presence

OEM respondents must demonstrate the following:

- Have active deployment of eligible DER equipment within MCE's service territory (Marin, Contra Costa, Solano, or Napa Counties), with:
  - At least one commercially deployed project (pilot-only deployments are insufficient unless paired with a clear commercial roadmap).
- Be the original manufacturer of the equipment or the owner of the firmware/software stack that enables load/schedule dispatch and transmittal of telemetry.
- Have experience:
  - A minimum of 2 years of commercial operations, and
  - Demonstrated capability to support equipment and integration over a minimum 5-year horizon.

2. OpenADR Capability (Core Requirement)

OEMs must meet **all** the following OpenADR-related minimums:

- Equipment or OEM-managed platform must be capable of receiving and acknowledging OpenADR signals
- OEM must support utility-initiated event-based control, including:
  - Event start/stop
  - Event duration
  - Load modification parameters (e.g., curtailment, shifting, charging/ discharging limits).
  - Returning customer to default dispatch instructions after event
- OEM must identify whether OpenADR is implemented via:
  - Native device-level Virtual End Node (VEN)
  - Gateway / controller-based VEN
  - Cloud-based VEN managed by the OEM or its agent.
- OEM must commit to completing MCE's standardized OpenADR testing and validation process prior to production enrollment as well as committing to active troubleshooting if the communication protocols disconnect

3. Dispatchability and Load Modification Capability

Eligible equipment must meet the following functional minimums:

- Demonstrated ability to modify load or dispatch DER output in response to external control signals (manual or informational signaling alone is insufficient).
- Clear documentation of:
  - Controllable parameters (e.g., kW reduction, kWh shift, charge/discharge limits, duty cycling).
  - Response time to dispatch signals.
  - Any operational constraints (customer overrides, safety limits, comfort bands, state-of-charge limits).
- Equipment must support repeatable dispatch that is suitable for recurring VPP Events over multi-year participation.

4. Telemetry and Data Availability (Minimum Data Floor)

OEMs must provide, at a minimum:

- Post-event performance data sufficient to support M&V and customer compensation, including:
  - Timestamped device status or
  - Load data during dispatched events.
- Data must be accessible via:
  - Secure cloud-based API;
  - OpenADR telemetry channels; or
  - Another standardized, documented data interface approved by MCE.
- OEM must be able to provide data at:
  - Hourly resolution at minimum
  - Sub-hourly (5–15 minute) resolution where available.
- OEM must commit to:
  - Data retention for at least 24 months, or
  - Ability to export historical data upon request.

5. Cybersecurity and Data Privacy

OEMs must meet baseline security and privacy requirements, including:

- Use of industry-standard encryption for data in transit (e.g., TLS).
- Secure authentication mechanisms for APIs, VENs, or cloud platforms.
- Ability to support customer consent and data authorization consistent with applicable CPUC privacy and data-security requirements, and any applicable CEC grant requirements.

- No known unresolved cybersecurity vulnerabilities that would materially impair safe grid operations.
- Prompt notification to MCE, and in no event later than forty-eight (48) hours after discovery, of any actual or suspected cybersecurity incident, security breach, unauthorized access, or compromise affecting Program operations, customer information, telemetry data, or interoperability.
- Ability and willingness to comply with the confidentiality, privacy, cybersecurity, insurance, and data-protection requirements contained in the *OEM Integration Partner MOU* (see Appendix C to RFQ 2026-05).

6. Exclusivity and Program Eligibility Compliance

OEMs must certify that:

- Equipment proposed under this request:
  - Is not currently enrolled in another utility-operated, third-party, or privately operated demand response or VPP program or
  - Can be removed from an existing program and made available for new aggregations.
- They do not require exclusivity that would prevent customer participation in MCE's VPP under the VPP Tariff and Agreement.
- They agree to comply with:
  - MCE's VPP Tariff requirements
  - Customer opt-in, opt-out, and override provisions.

7. Integration Readiness and Resource Commitment

OEMs must demonstrate readiness to engage in MCE's standardized integration process by providing:

- A designated technical point of contact responsible for OpenADR and eDERMS integration.
- Availability of:
  - Technical documentation
  - API or protocol specifications
  - Device capability matrices.
- Commitment to participate in:
  - Integration scoping
  - Testing and validation
  - Issue resolution during onboarding.
- Ability to complete initial integration and validation within a mutually agreed upon, short-term timeline (e.g., 3–6 months).

8. Long-Term Program Participation and Support

OEMs must affirm that:

- Equipment and platforms will remain supported for the duration of:
    - Customer VPP Agreement terms (5 years residential / 7 years commercial).
- OEM will provide reasonable notice of firmware changes, platform deprecations, or material capability changes affecting dispatch or telemetry.

9. Execution of OEM Integration Partner MOU

OEMs must:

- Review the OEM Integration Partner MOU (see Appendix C to RFQ 2026-05).
- Be willing to execute the OEM Integration Partner MOU as a condition of qualification and participation in the Program.
- Identify any requested exceptions, redlines, or material deviations as part of their response.
- Acknowledge that qualification under this solicitation does not become effective until the OEM Integration Partner MOU has been fully executed by both parties.

ATTACHMENT 1: RESPONDENT APPLICATION FORM (REQUIRED)

Please complete all sections. Incomplete submissions or those that are not submitted in a timely fashion may be disqualified.

SECTION A: Respondent information | Pass/Fail

1. Company Information

Please fill in.

Company Information	
Legal Company Name	
Primary Point of Contact: Name, Title	
Primary Point of Contact: Phone Number	
Primary Point of Contact: Email Address	
Company Address	
Company Website	
Company Phone Number	
Years in Commercial Operation	
Business Status (e.g., Corporation, Limited Partnership, Individual, etc.)	
Relevant Certifications or Professional Licenses	

2. OEM Status

Please indicate your role (check all that apply):

- ☐ Original Equipment Manufacturer (OEM)
- ☐ OEM with proprietary firmware/software stack that enables load/schedule dispatch and transmittal of telemetry
- ☐ Other

If "Other" is selected above, please describe:

3. Financial Solvency and Organizational Stability

Please attach documentation to demonstrate financial solvency and organizational stability.

Attachments: (required)

- Income Statement (required)
- Balance Sheet (required)

4. Insurance

Please check all that apply:

- ☐ We are currently insured at or above the required levels for this solicitation, as outlined in the RFQ (Commercial General Liability ($1,000,000 per occurrence, $2,000,000 aggregate for bodily injury and property damage), Motor Vehicle Liability Insurance ($1,000,000) (as applicable), Workers' Compensation and Employer's Liability Insurance (per statute), Cybersecurity Liability Insurance ($5,000,000)).
- ☐ We will provide proof of insurance at or above the required levels prior to contract execution.

5. Legal

Please check all that apply:

- ☐ We are comfortable executing the *OEM Integration Partner MOU* (see Appendix C to RFQ 2026-05) without modification, as outlined in the RFQ.
- ☐ We request modifications to the *OEM Integration Partner MOU* (see Appendix C to RFQ 2026-05), as indicated in the attached Redlined/Annotated Copies of those documents.

Attachment: (optional)

- Redlined *OEM Integration Partner MOU* (see Appendix C to RFQ 2026-05) and/or detail of changes requested (optional)

SECTION B: Eligible Equipment Description | 10 Points

1. Equipment Category

Please check all that apply.

- ☐ Smart Thermostat
- ☐ BEMS / Load Control System
- ☐ Energy Storage (Battery / Thermal / Other)
- ☐ EV Charger (EVSE)
- ☐ HVAC / Heat Pump / Water Heater
- ☐ Lighting Controls
- ☐ Pump / Motor / Fan Controls
- ☐ Other

If "Other" is selected above, please describe:

2. Primary Load Modification Function

Please check all that apply.

- ☐ Load management / reduction
- ☐ Load shifting / shimmying
- ☐ Charging / discharging
- ☐ Export capabilities
- ☐ Duty cycling
- ☐ Other

If "Other" is selected above, please describe:

SECTION C: Equipment Deployment & Market Presence | 20 Points

1. Eligible Equipment Deployment

Does the respondent have eligible equipment deployed in MCE's service area, which covers Marin, Contra Costa, Solano, and Napa Counties?

- ☐ Yes
- ☐ No

2. Prior Deployment Experience

Relevant Project or Program #1	
Project/Program Title	
Project/Program Description	
Professional Reference (Name, Title, Phone, Email Address)	
Project Location (State, County, City)	
Respondent Scope of Work	
Number/Type of Devices Integrated	

Scale of Deployment (e.g., total MW/MWh or number of enrolled devices/sites)	
Communication Protocols Used (e.g., OpenADR, IEEE 2030.5, proprietary APIs)	
Grid Services Enabled (e.g., DR, capacity, frequency regulation, voltage support)	
Project Completion Date and/or Commercial Online Date	
Relevant Project or Program #2	
Project/Program Title	
Project/Program Description	
Professional Reference (Name, Title, Phone, Email Address)	
Project Location (State, County, City)	
Respondent Scope of Work	
Number/Type of Devices Integrated	
Scale of Deployment (e.g., total MW/MWh or number of enrolled devices/sites)	
Communication Protocols Used (e.g., OpenADR, IEEE 2030.5, proprietary APIs)	
Grid Services Enabled (e.g., DR, capacity, frequency regulation, voltage support)	
Project Completion Date and/or Commercial Online Date	

3. Market Presence

Please list equipment currently deployed in Marin, Contra Costa, Solano, and/or Napa Counties. Add rows as needed.

Equipment Type	County	Customer Segment (Res/C&I/Ag)	Approx. # of Units	Nameplate Capacity (if applicable) kW

4. Commercial Deployment Confirmation

Is equipment commercially deployed (not pilot-only)?

- ☐ Yes
- ☐ No

Please provide example site(s) or anonymized reference(s): (required)

5. Long-Term Support Commitment

Is the respondent able to support equipment and integrations for at least 5 years?

- ☐ Yes
- ☐ No

Is the respondent able to troubleshoot if communication breaks or in the event of a security breach?

- ☐ Yes
- ☐ No

SECTION D: Case Studies & Product Specification Sheets | 20 Points

Please attach any relevant case studies, product specification sheets, and/or architectural diagrams that may help the reviews evaluate the respondent’s fit for the MCE VPP program.

Attachments: (required)

- Case Studies, Product Specification Sheets, and/or Architecture Diagrams (required)

SECTION E: OpenADR Capability | 25 Points

1. Supported OpenADR Version

Please select all OpenADR versions that the eligible equipment or OEM-managed platform is capable of receiving and acknowledging:

- ☐ OpenADR 2.0
- ☐ OpenADR 2.0b
- ☐ OpenADR 3.X
- ☐ None
- ☐ Other

If "Other" was selected above, please describe:

2. Utility-Initiated Event-Based Control

Please select all event-based controls supported by the eligible equipment or OEM-managed platform:

- ☐ Event start/stop
- ☐ Event Duration
- ☐ Load Modification Parameters (e.g., curtailment, shifting, charging/discharging limits)
- ☐ Able to return customer to default dispatch instructions after event
- ☐ Other

If "Other" was selected above, please describe:

3. Event Handling Capabilities

Please select all event handling capabilities supported by the eligible equipment or OEM-managed platform:

- ☐ Event receipt
- ☐ Event acknowledgment
- ☐ Automated execution
- ☐ Event opt-out / override handling
- ☐ Example of any existing customer portal for device control

4. OpenADR Implementation Model

Please identify whether OpenADR is implemented via:

- ☐ Native device-level VEN
- ☐ Gateway / controller VEN
- ☐ Cloud-based VEN (managed by the OEM or its agent)
- ☐ Unsure (guidance needed)

5. Testing Commitment

Does the respondent commit to completing MCE OpenADR testing and validation procedure prior to production enrollment?

- ☐ Yes
- ☐ No

6. Prior OpenADR Experience | Optional

Please list utilities or programs where OpenADR has been implemented: (optional)

7. OpenADR Documentation or Certification | Optional

If available, please attach OpenADR documentation or certification.

Attachment: (optional)

- OpenADR Documentation or Certification (optional)

SECTION F: Dispatchability & Load Modification | 15 Points

1. Dispatchability and Load Modification Capabilities

Can eligible equipment modify load and/or dispatch DER output in response to external control signals?

- ☐ Yes
- ☐ No

2. Response Time

Please indicate eligible equipment dispatch response time:

- ☐ ≤ 1 minute
- ☐ 1 – 5 minutes
- ☐ 5 – 15 minutes
- ☐ ≥ 15 minutes

3. Controllable Parameters

Please describe eligible equipment controllable parameters (e.g., kW limits, SOC bands, temperature setpoints):

4. Operational Constraints

Please describe operational constraints (e.g., customer override, safety limits, comfort constraints):

5. Repeatable Dispatch

Does eligible equipment support repeatable dispatch suitable for recurring VPP events over multi-year participation without degradation?

- ☐ Yes
- ☐ No

SECTION G: Telemetry & Data Availability | 10 Points

1. Telemetry and Data Availability

Please select all post-event performance data capable of being provided by the eligible equipment or OEM-managed platform:

- ☐ Timestamped device status
- ☐ Load data during dispatched events (kW / kWh)
- ☐ State of charge
- ☐ Event response confirmation
- ☐ Other

If “Other” was selected above, please describe:

2. Data Resolution

Please indicate the minimum interval data resolution for the eligible equipment or OEM-managed platform:

- ☐ Hourly
- ☐ 15-minute
- ☐ 5-minute
- ☐ Sub-5-minute

3. Sample Telemetry Data | Optional

If available, please attach sample telemetry data.

Attachment: (optional)

- Sample Telemetry Data (optional)

4. Data Access Method

Please indicate how data will be accessed:

- ☐ Secure Cloud API
- ☐ OpenADR Telemetry
- ☐ Other

If “Other” was selected above, please describe:

5. Data Retention

Please indicate the data retention period for the eligible equipment or OEM-managed platforms:

- ☐ ≥ 24 months
- ☐ < 24 months

If "<24 months" was selected above, please explain:

Is the respondent able to export historical data upon request?

- ☐ Yes
- ☐ No

SECTION H: Cybersecurity & Data Privacy | Pass/Fail

1. Security Controls

Please select all applicable security controls:

- ☐ TLS / encrypted data in transit
- ☐ Authenticated API access
- ☐ Role-based access controls
- ☐ Other

If "Other" was selected above, please describe:

2. Customer Data and Consent

Does the respondent's platform support customer authorization and consent management consistent with California privacy requirements?

- ☐ Yes
- ☐ No

3. Known Cybersecurity Risks

Does the respondent attest that there are no known, unresolved cybersecurity vulnerabilities associated with the equipment or OEM-managed platform that would materially impair safe grid operations?

☐ No known unresolved risks
☐ Risks exist

If "Risks exist" is selected above, please describe risk mitigation plans:

4. Responsiveness Affirmation

Does the respondent affirm that, in the event of a security breach, they will immediately communicate with MCE and cooperate with MCE in reasonable incident response?

☐ Yes
☐ No

SECTION I: Program Eligibility & Exclusivity | Pass/Fail

1. Existing DR or VPP Participation

Is equipment proposed under this request enrolled in another DR or VPP program?

☐ Yes
☐ No

If "yes" was selected above, please describe when or how the equipment will be removed from the existing program and made available for new aggregations, including any time limits on when devices may be disenrolled:

2. Exclusivity

Does the respondent require exclusivity that would prevent customer participation in MCE's VPP under the VPP Tariff and Agreement?

☐ Yes
☐ No

3. Tariff and Agreement Compliance

Does the respondent agree to comply with MCE's VPP Tariff and VPP Agreement requirements, including customer opt-in, opt-out, and override provisions?

- ☐ Yes
- ☐ No

SECTION J: Integration Readiness & Resource Commitment | Pass/Fail

1. Technical Point of Contact

Please provide a technical point of contact responsible for OpenADR and eDERMS integration:

Technical Point of Contact	
Name:	
Title:	
Email:	

2. Documentation Availability

Please select all applicable forms of documentation that can be made available to support MCE's standardized integration process:

- ☐ Technical documentation
- ☐ API or protocol specifications
- ☐ Device capability matrix
- ☐ OpenADR specifications
- ☐ Other

If "Other" was selected above, please describe:

3. Participation Commitment

Does the respondent commit to participating in **integration scoping** to help determine the appropriate integration approach, requirements, risks, timeline, and cost estimate?

- ☐ Yes
- ☐ No

Does the respondent commit to participating in **testing and validation?**

- ☐ Yes
- ☐ No

Does the respondent commit to participating in **issue resolution during onboarding?**

- ☐ Yes
- ☐ No

4. Estimated Integration Timeline

Please indicate the estimated timeline for initial integration and validation:

- ☐ ≤ 3 months
- ☐ 3 – 6 months
- ☐ ≥ 6 months

If "≥ 6 months" was selected above, please explain:

SECTION K: Long-Term Participation | Pass/Fail

1. Long-Term Participation

Does the respondent affirm that equipment and platforms will remain supported for the duration of customer VPP Agreement terms (5 years for residential installations, 7 years for commercial and industrial installations)?

- ☐ Yes
- ☐ No

2. Firmware and Platform Change Notification

Does the respondent affirm they will provide MCE reasonable notice of firmware changes, platform deprecations, or material capability changes affecting dispatch or telemetry?

- ☐ Yes
- ☐ No

SECTION L: Alternatives to Scope of Services | Optional

A full scope of services may be found in Appendix C. The respondent may attach an alternative scope of services that describes this alternative approach, associated benefits, and any material impacts on the scope, schedule, integration requirements, or responsibilities. MCE reserves the right to reject submissions where the alternative scope of services is not acceptable.

Does the respondent wish to submit an alternative scope of services?

- ☐ Yes
- ☐ No

Attachment: (optional)

- Alternative Scope of Services (optional)

SECTION M: ATTESTATION | Pass/Fail

By signing below, the respondent certifies that all information provided is accurate and complete to the best of their knowledge.

Authorized Signatory Name:

Title:

Signature:

Date: