

**MEMORANDUM OF UNDERSTANDING
BETWEEN THE CALIFORNIA PUBLIC UTILITIES COMMISSION AND THE
CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND
RECOVERY**

This Memorandum of Understanding (“MOU”) between the CALIFORNIA PUBLIC UTILITIES COMMISSION (“CPUC”) and the CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (“CalRecycle”) (collectively “Parties”) is entered into for the purpose of cooperatively developing consistent approaches to waste generated by photovoltaic (PV) panels, electric vehicle (EV) batteries, energy storage batteries, and related equipment, such as inverters.

OVERALL ROLES AND RESPONSIBILITIES

- The CPUC regulates energy utilities and passenger transportation companies, among other entities. The CPUC requires regulated entities to deliver services in a safe and reliable manner, while ensuring consumer protection and meeting California’s ambitious environmental goals. The CPUC administers many programs and mandates that promote the deployment of PV panels, EV batteries, energy storage batteries, and related equipment, including for energy storage, transportation electrification, the California Solar Initiative, and Net Energy Metering.
- CalRecycle administers and provides oversight for all of California’s state-managed waste handling and recycling programs working towards a society that uses less, recycles more, and takes resource conservation to higher levels. CalRecycle runs the Electronic Waste Recycling Program to offset the cost of compliantly handling some types of discarded electronic devices.

SHARED PRIORITIES

- The falling cost of PV panels, batteries, and related components in recent years has driven consumer adoption of solar energy, storage, and EVs. Although the useful life of these materials can be decades long, inevitably there will be a need to dispose of these materials and California does not currently have a robust reuse or recycling program in place for them. The CPUC and CalRecycle intend to develop consistent approaches to ensure appropriate collection, handling, and reuse or recycling of end-of-life PV panels, EV batteries, energy storage batteries, and related energy technology equipment (“end of life materials”). Specifically, the Parties will:
 - Explore how end of life materials can be recycled in a way which minimizes harm to the environment and public health.

- Explore whether financially sustainable mechanisms exist to incentivize and facilitate the reuse or recycling and proper management of these technologies when they reach the end of their useful life.
- Explore solutions to adequately address PV panels, vehicle and storage batteries, and associated components that are already installed and future technologies when they eventually reach the end of their useful life.
- Support and develop programs to divert energy technologies from waste streams to support safety objectives and resource management including reuse of materials.

Through their joint efforts, the parties seek to:

- Pursue open and cooperative coordination at all times.
- Establish regular efforts for information sharing on both the management and staff levels, including a process for regular information flow and opportunities for joint planning and goal setting.
- Increase knowledge of reuse and recycling opportunities and technologies to make California a global leader in handling end of life materials, including best practices like the repository of solar PV modules and inverters on the *Go Solar California* website facilitated by the California Energy Commission (CEC).
- Develop and maintain alignment on key policy issues related to reuse and recycling of PV panels, batteries used in energy storage and clean transportation, and related equipment.
- In conjunction with other relevant agencies, the agencies will explore developing an estimate of current end-of-life waste based on a 25-year outlook and develop a projection of end-of-life waste based on increased consumer adoption of PV panels, EV batteries, energy storage batteries, and related equipment.

The Parties are specifically agreeing to conduct the following immediate tasks:

- Convene an interagency staff-level working group by Q1 of 2019.
- Identify all relevant legislation and regulatory proceedings before the CPUC, CalRecycle, CEC, California Air Resources Board (CARB), and the Department of Toxic Substances Control (DTSC) that may affect the management of end of life materials.
- Convene a joint public workshop on the collection, handling, and reuse or recycling of end-of-life PV panels, EV batteries, energy storage batteries, and related energy technology equipment in Q1 of 2019 inviting experts, industry representatives, consumer representatives, environmental groups, community members, State agencies, federal agencies, and other stakeholders to discuss current policy, best management practices, concerns, and potential solutions.

- Use information gathered at the Q1 public workshop to support the publication of a joint white paper identifying and exploring the recycling and reuse of end-of-life materials, projected quantity of end-of-use materials, and proposed solutions by Q3 of 2019.
- Convene an “En Banc” meeting between the CPUC and CalRecycle, with relevant panelists, to present and receive public input on the white paper.
- Convene a principals steering committee consisting of the CPUC President and the CalRecycle Director to receive updates from the staff-level working group at milestones.
- Develop a plan for next-steps by end of 2019.

CPUC Responsibilities

In order to achieve optimal results for the shared priorities, the CPUC will perform the activities and functions summarized below.

1. In conjunction with CalRecycle, identify and explore programs and mandates administered by the CPUC that could be modified to include provisions for the collection and recycling of clean energy technologies. In conjunction with CalRecycle, develop best management practices for recycling and reuse that can be shared with consumers, developers, and other relevant entities.
2. Consider changes to CPUC programs and policies to address the collection, handling and re-use or recycling of end-of-life materials and other decommissioning strategies, requirements, and incentives.
3. Investigate potential methods for including decommissioning requirements for generation and energy storage infrastructure during the contracting process.
4. Consider use of a lifecycle approach and precautionary principle when considering widespread deployment of energy generation technologies.
5. Assist CalRecycle in additional areas of CPUC expertise.

CalRecycle Responsibilities

In order to achieve optimal results for the shared priorities, CalRecycle will perform the activities and functions summarized below.

1. Provide subject matter expertise related to the reuse and recycling for waste generated by PV panels, EV batteries, energy storage batteries, and related equipment.
2. In conjunction with other State agencies, identify costs and infrastructure needs to properly manage end of life materials from PV panels, EV batteries, and energy storage batteries.
3. Research appropriate incentives for recycling, collection, and proper management for end of life materials from PV panels, EV batteries, and energy storage batteries.

4. Inform recyclers and industry representatives and their agents of these opportunities as they are developed to increase recycling and reuse programs for PV panels, EV batteries, and energy storage batteries in this state.
5. Facilitate dialogue between industry, waste management, and local government.

PROTECTION OF CONFIDENTIAL INFORMATION

The Parties may need to share confidential or privileged information in furtherance of this MOU. All confidential or privileged information may be shared as described in this MOU and as allowed by law, without waiver of any privilege.

"Confidential Information" includes information obtained pursuant to California Public Utilities Code section 583, records exempt from public disclosure under the California Public Records Act (Government Code sections 6250, et seq.), or written or verbal information that is designated by the Parties to be exempt, prohibited, or privileged from disclosure by State or federal law. Confidential documents shared under this MOU should be labeled as confidential or include a similar written advisory to that effect. Documents marked confidential or privileged and provided under this MOU shall be maintained as confidential and shall not be released without an agreement in writing by the parties, unless required by law or by order of a court of competent jurisdiction.

The Parties shall take all necessary measures to protect Confidential Information and, consistent with the Public Records Act and any other laws requiring disclosure, treat the shared Confidential Information as confidential. The Parties shall impose all the requirements of this MOU on all of their respective officers, members, employees and agents with access to Confidential Information. Any Confidential Information obtained by the Parties shall only be used for purposes which are consistent with existing law.

All Confidential Information provided to the Parties pursuant to this MOU shall be subject to Government Code Section 6254.5, subdivision (e), which exempts from public disclosure under the California Public Records Act, confidential records that one State or local agency has provided to another State or local agency pursuant to an agreement that the latter will treat the disclosed records as confidential. The parties agree that, as provided in Government Code Section 6254.5(e), confidential records will only be shared with persons authorized in writing by the Executive Officer of the relevant agency (or by his or her authorized delegate), and that all information obtained by the parties pursuant to this agreement will be used only for purposes that are consistent with existing law.

The Parties will make all reasonable efforts to ensure that disclosure of confidential or privileged information will not occur. In the event an inadvertent disclosure of confidential or privileged information occurs, the party making such inadvertent disclosure will notify the other party in writing and will make every reasonable effort to promptly correct the inadvertent disclosure.

If either Party receives a request to release, disclose, or access any of the confidential and privileged information (for example, pursuant to a subpoena, discovery request, or the California Public Records Act), the party receiving the request shall promptly transmit a copy of the request

to the other party that originally generated the confidential or privileged document or communication.

SCOPE

This MOU is made for the sole benefit of the CPUC and CalRecycle, and no other person or entity shall have any rights or remedies under or by reason of this MOU. Nothing in this MOU may be the basis of any third-party challenges or appeals. Nothing in this MOU creates any rights, remedies, or causes of action in any person or entity not party to this MOU.

CalRecycle and the CPUC each retain all rights, responsibilities, and authorities provided for by law. Nothing in this MOU delegates any rights, responsibilities, or authorities provided by law to either Party. Nothing in this MOU delegates or otherwise prevents, compromises, or precludes each Party from exercising all rights, responsibilities, or authorities provided by law.

Both parties will meet and coordinate progress regarding the MOU on a biannual basis, or as mutually agreed upon by the parties.

APPROVAL

This MOU is effective upon completion of the signatures listed below. This MOU shall not be modified except by a written agreement signed by authorized representatives of the Parties. This MOU may be executed in counterparts.

This MOU shall continue unless or until either Party to the MOU determines that the MOU should be terminated. Unless otherwise provided for by the written agreement of both of the Parties, unilateral termination of the MOU shall be effected no sooner than 30 days from the date either party provides written notice of its intent to terminate the MOU. Termination of this MOU shall not affect the obligation of the parties to maintain the confidentiality of information pursuant to this MOU.

CALIFORNIA PUBLIC UTILITIES COMMISSION:



ALICE STEBBINS
Executive Director

January 8, 2019

CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY


SCOTT SMITHLINE
Director

January 2, 2019