High-Performance Measure Details

Measure Name
Alternative Electric Humidification Systems

Use Category
Process Electrification – HVAC

Effective Date
May 25, 2026

End Date
Current

Version
2

Measure Code
LM405

Measure Stage
Early Adoption

Table of Contents

Technology Summary

Alternative Electric Humidification Systems add moisture to airstreams or occupied/process spaces using lower-energy electric or electrically enabled technologies where indoor humidity control is required for occupant comfort, health, material protection, process stability, or equipment reliability. Within CEDA, this High-Performance Measure focuses on alternative electric humidification approaches that reduce reliance on fossil-fuel steam generation and avoid conventional electric resistance steam humidification where lower-energy options can meet the project's humidity control needs. Applicable technologies may include adiabatic humidifiers, ultrasonic humidifiers, wetted media evaporative systems, air/water atomizing systems, high-pressure atomizing systems, and electrode steam systems, depending on the project application, air-handling configuration, water quality, control precision, and space humidity requirements.

This measure matters for California electrification and decarbonization because humidification loads can be energy-intensive, especially in buildings that historically rely on gas-fired steam boilers or electric resistance steam humidifiers. Lower-energy humidification technologies can support all-electric building design while reducing peak electrical demand, improving HVAC system integration, and maintaining required indoor environmental conditions. These systems are most relevant for nonresidential and high-rise multifamily applications with defined humidity

requirements, such as healthcare, laboratories, clean spaces, data centers, museums, libraries, manufacturing, education, and other facilities where humidity control is part of the building or process design basis.

Common real-world performance gaps this HPM is designed to address include selecting humidification equipment without confirming the required humidity setpoints and control tolerance; insufficient absorption distance in air handlers or ductwork; inadequate preheat or supply-air temperature control for adiabatic systems; poor coordination with economizer, ventilation, heating, and dehumidification sequences; lack of water treatment or reverse osmosis where required; compressed-air energy and maintenance impacts for air/water atomizing systems; and limited operator understanding of maintenance needs such as media replacement, nozzle cleaning, water quality management, or electrode cylinder replacement.

Relevant standards and references include ANSI/ASHRAE Standard 55, ANSI/ASHRAE Standard 62.1, ANSI/ASHRAE/ASHE Standard 170 where applicable, ANSI/ASHRAE/IES Standard 90.1, UL 998, ANSI/AHRI 610/611 where applicable, and ASHRAE Handbook—HVAC Systems and Equipment: Humidifiers.

Alignment with CEDA Program Goals

The CEDA program supports the implementation of energy efficiency measures that support Code Readiness' Long Term Tactical Plan (LTTP) to drive the goals of electrification, decarbonization, and load reduction.

Projects must meet the CEDA Inducement Requirements identified in the next section to receive an inducement on the equipment and will be evaluated for level of interest in metering to support Code Readiness Objectives.

This measure meets the CEDA program goals as follows:

- **Building partnerships with market stakeholders** by consulting on innovative technologies and best practices in energy efficiency which can lead to the development of more effective solutions and accelerate the adoption of new technologies. As teams adopt the measure, this increases the volume of engineers able to design the equipment, contractors capable of installing the equipment, and owners able to operate the equipment.
- **Increasing the supply of high-performance measures and all-electric buildings** by combining electrification with energy efficiency that can result in projects implementing measures to achieve greater energy savings, reduced emissions, and overall improved building performance. As more buildings specify and install alternative humidification systems, this helps to increase the overall supply of alternative humidification systems in the market for others to use, including beyond new construction.
- **Increasing the demand for high-performance measures and all-electric buildings** by pushing for electrification that drives the need for technological advancements, supporting economic growth opportunities through innovation, and raising awareness of the benefits of electrification to increase consumer adoption. As demand in the market increases for newer technologies, the long-term benefit is increased demand for manufacturers and suppliers to provide additional options available in the market.
- **Advancing new high-performance measure technology** by raising public awareness about new technologies and their benefits, helping build acceptance and demand through market support advocacy efforts that can influence stakeholder decisions that enables technological innovation.
- **Providing Codes & Standards with projects of interest** to collect metered data that will inform future California energy codes.

CEDA Inducement Requirements

The inducement requirements for this **Alternative Electric Humidification Systems** HPM are intended to address a market and implementation gap in projects with required humidification loads. Humidification is often treated as a secondary HVAC accessory, even though it can create significant energy use, electrical demand, water-treatment needs, and controls complexity. In practice, project teams may default to gas-fired steam or conventional electric resistance element steam humidification because these systems are familiar, easy to specify, and broadly applicable, even when lower-energy electric alternatives may be suitable for the application.

This HPM is structured to support intentional selection, design, and verification of alternative electric humidification systems that can meet required humidity control needs while reducing reliance on gas-based humidification and avoiding conventional electric resistance element steam humidification as the default solution. The measure is especially relevant for buildings and spaces where humidification is required for indoor environmental quality, process control, material preservation, healthcare, laboratory, clean space, data center, museum/archive, education, or similar applications.

Inducement eligibility is determined based on the project's compliance with the applicable **System Design Requirements** and **Supporting Documentation Requirements**. Inducement amounts may be evaluated using installed humidification capacity, qualifying system type, incremental measure cost, and CEDA-estimated energy, avoided gas or electric resistance energy, and carbon dioxide equivalent emissions impacts relative to the originally planned or standard-practice humidification approach. Final eligibility and inducement levels are verified through the CEDA review process based on submitted equipment documentation, design drawings, controls documentation, cost documentation, and applicable startup, commissioning, or monitoring documentation.

System Design Requirements

1. **Essential Level:** Alternative Electric Humidification System
   - 1.1. The project shall provide a permanently installed alternative electric humidification system serving required building, space, or process humidification loads.
   - 1.2. Qualifying humidification system types include one or more of the following:
     - 1.2.1. High-pressure atomizing humidification
     - 1.2.2. Air/water atomizing humidification
     - 1.2.3. Ultrasonic humidification
     - 1.2.4. Wetted media evaporative humidification
     - 1.2.5. Electrode humidification
   - 1.3. The qualifying humidification system shall be all-electric at the humidification equipment level and shall not use gas-fired, fossil-fuel-fired, or conventional electric resistance element steam humidification as the qualifying measure.
   - 1.4. The humidification system shall include the supporting components required for the selected technology, as applicable, such as water treatment, filtration, reverse osmosis or deionized water, compressed air, drainage, preheat, humidifier dispersion assemblies, duct high-limit protection, and wetting or condensation protection.
   - 1.5. The project shall include control sequences or control documentation identifying humidifier enable/disable logic, humidity setpoints, safeties and interlocks, high-limit control, and coordination with the served air-handling, ventilation, or space-conditioning system.

2. **Premium Level:** Alternative Electric Humidification System with Enhanced Controls and Monitoring Readiness
   - 2.1. Premium Level requires full compliance with the Essential Level requirements.
   - 2.2. The humidification system shall be connected to a BAS, BMS, EMS, equipment controller, or equivalent control platform capable of monitoring or trending key humidification operating parameters.

2.3. At a minimum, the project shall provide monitoring or trend-ready access to the following points, where applicable to the selected system type:
  2.3.1. Humidifier enable/status or runtime
  2.3.2. Humidifier alarm/fault status
  2.3.3. Humidity setpoint and measured space, return-air, or duct relative humidity
  2.3.4. Associated air-handler, ventilation-system, or served equipment operating status
  2.3.5. Supporting system status, such as water treatment, compressed air, or preheat operation, where applicable and available through the control system

2.4. The project shall provide startup, commissioning, or functional testing documentation confirming that the humidification system has been installed and operates in accordance with the approved design and control sequence.

Supporting Documentation Requirements

For all design levels, the project shall provide the following documentation, as applicable:

1. **Equipment Documentation**
   Product submittals or specifications identifying the humidification system type, manufacturer, model, capacity, electrical requirements, water-quality requirements, and required accessories.

2. **Design Drawings**
   Construction drawings or mechanical schedules showing the humidification equipment location, served systems or spaces, humidifier capacity, dispersion assemblies, water treatment, drainage, compressed air where applicable, and required installation clearances.

3. **Controls Documentation**
   Control drawings, sequences of operation, BAS points, or equivalent control documentation showing humidity setpoints, enable/disable logic, high-limit protection, safeties, preheat coordination where applicable, and integration with the air-handling, ventilation, or served space-conditioning system.

4. **Cost Documentation**
   Cost documentation sufficient to support CEDA review of incremental measure cost, such as vendor quotes, contractor estimates, equipment pricing, bid alternates, or other available cost information for the qualifying system and the originally planned or standard-practice humidification system.

5. **Startup / Commissioning Documentation**
   Startup, commissioning, or functional testing records confirming the system was installed and operates in accordance with the approved design and control sequence, including humidity control, safeties, water treatment, and applicable interlocks.

6. **Premium Level Monitoring Documentation**
   For Premium Level projects, provide a BAS/BMS/EMS point list, trend list, controls screenshot, equipment controller output, or equivalent documentation showing that the required Premium Level humidification operating points can be monitored or trended.

Incremental Measure Cost

The Incremental Measure Cost (IMC) presented below is intended for CEDA program planning and inducement calibration only. It represents a normalized incremental cost for implementing a qualifying Alternative Electric Humidification System relative to a conventional standard-practice humidification approach serving the same humidification load under typical California new construction conditions. The IMC is not intended to serve as a project-specific cost estimate, contractor bid comparison, or reconciliation tool for actual project pricing.

Actual project costs may vary based on humidification technology type, capacity, water quality, controls scope, installation location, air-handler configuration, preheat requirements, absorption distance, procurement timing, and other project-specific factors. Accordingly, the IMC is based on representative planning anchors, available market information, and program experience rather than project-specific installed-cost data.

Base Case

The Base Case represents a conventional humidification system that would otherwise be specified to serve the same building, space, or process humidification load. For normalized program calibration, the Base Case is anchored to a conventional electric resistance element steam humidifier with equivalent rated humidification capacity, including standard steam dispersion, basic controls, water and drain connections, and standard startup.

Where a project originally planned gas-fired steam humidification, the original design may be reviewed as the project-specific standard-practice reference case. However, the normalized IMC value is applied based on equivalent rated humidification capacity to maintain consistent program treatment across projects.

Measure Case

The Measure Case represents a qualifying **Alternative Electric Humidification System** meeting the applicable Essential or Premium Level requirements. Qualifying systems may include high-pressure atomizing, air/water atomizing, ultrasonic, wetted media evaporative, or electrode humidification. Qualifying system types are defined in the System Design Requirements and include high-pressure atomizing, air/water atomizing, ultrasonic, wetted media evaporative, and electrode humidification.

Incremental cost drivers may include technology-specific humidification equipment, water treatment or filtration, reverse osmosis or deionized water where required, compressed air where applicable, drainage, preheat coordination, dispersion assemblies, duct or space high-limit protection, safeties and interlocks, controls integration, startup, commissioning, and Premium Level monitoring readiness where applicable. These cost drivers are consistent with common system requirements: for example, ultrasonic systems may require high-purity water and can be installed in-room or in AHU/duct applications, while wetted media systems rely on heat already in the air for evaporation and are commonly applied in data centers, manufacturing, printing, and economizer-based applications.

Incremental Measure Cost Values and Normalization

The recommended normalized IMC unit is **dollars per pound per hour of rated humidification capacity ($/lb/hr)**. This unit scales directly with humidifier size and can be verified from equipment schedules, product submittals, and nameplate or model data. For projects with multiple qualifying humidifiers, the applicable capacity is the sum of the rated capacities of the qualifying systems.

Design Level	Normalized IMC Value	Primary Cost Drivers
Essential Level	**$145/lb/hr of rated humidification capacity**	Alternative electric humidifier implementation, water treatment, dispersion, safeties, controls coordination, startup/commissioning.
Premium Level	**$170/lb/hr of rated humidification capacity**	Essential Level scope plus monitoring-readiness, BAS/controller point access, trend setup, and monitoring verification.

The Essential Level IMC value represents the typical incremental implementation cost for a qualifying alternative electric humidification system relative to a conventional standard-practice humidification approach. The value is normalized by rated humidification capacity and accounts for common cost drivers such as water treatment, dispersion, safeties, controls coordination, and startup or commissioning. The Premium Level includes an additional monitoring-readiness allowance for controller integration, trend setup, and verification of key humidification operating points.

Sources

IMC values are informed by a combination of internal CEDA program guidance, early humidification cost references, publicly available manufacturer information, and program experience, and are intended to reflect typical market conditions in new construction rather than project-specific pricing, including:

- California Energy Commission — 2025 Building Energy Efficiency Standards, Title 24 Part 6: Code context for California new construction, HVAC, controls, and compliance documentation.
- California Energy Commission — 2025 Building Energy Efficiency Standards overview: Useful for high-level California code-cycle context and effective-date framing.
- ASHRAE Handbook — HVAC Systems and Equipment, Chapter 22: Humidifiers: Technical reference for humidifier system types, design considerations, and humidity-control applications.
- AHRI Standard 610/611 — Performance Rating of Central System Humidifiers: Rating reference for electrically operated central-system humidifiers, with scope focused on residential central air systems.
- UL 998 — Standard for Humidifiers: Safety/listing reference for humidifiers; UL lists the current edition as UL 998, Edition 6.
- ASHRAE Standard 55 — Thermal Environmental Conditions for Human Occupancy: Thermal comfort reference for occupied spaces; ASHRAE describes it as applicable to design, operation, and commissioning.
- ASHRAE Standard 62.1 — Ventilation and Acceptable Indoor Air Quality: Ventilation and IAQ reference for coordination with outdoor-air systems and occupied-space applications.
- ANSI/ASHRAE/ASHE Standard 170 — Ventilation of Health Care Facilities: Healthcare-specific ventilation and environmental-control reference for projects with clinical or healthcare humidification requirements.
- Condair — 2024 Commercial Product Catalog: Manufacturer reference covering multiple commercial humidification technologies, including electrode steam, resistive steam, gas steam, ultrasonic, high-pressure nozzles, compressed air/water spray, evaporative media, controls, connectivity, and water treatment.
- DriSteem — Adiatec Ultrasonic Humidifier: Manufacturer reference for ultrasonic humidification applications in rooms, AHUs, and duct systems.
- DriSteem — Adiatec Ultrasonic Humidifier Brochure: Manufacturer source documenting RO/DI water-treatment considerations and controls options for ultrasonic humidification.
- Condair HP — High-Pressure Humidification Brochure: Manufacturer source for high-pressure atomizing humidification, including nozzle manifolds, droplet separation, and duct/airstream application considerations.

Code Readiness Objectives

This measure supports CEDA's Code Readiness efforts by identifying real-world applications where alternative electric humidification systems can reduce reliance on gas-fired or conventional electric resistance element steam humidification while maintaining required humidity control. Humidification loads can be highly project-specific, and performance depends on equipment type, air-handler configuration, water quality, controls integration, preheat availability, absorption distance, and maintenance practices. Collecting design, cost, controls, and field-performance information from CEDA projects will help determine which alternative electric humidification approaches are practical, cost-effective, and suitable for broader market adoption or future code consideration.

Code Readiness data collected through this HPM can help clarify how alternative electric humidification systems perform across different building types, climate zones, and humidity-control applications. This information is especially important because each eligible technology has different benefits, constraints, and integration needs, including absorption distance, preheat, treated water, and compressed air requirements.

The objectives include the following:

- **Characterize eligible system configurations** by documenting which alternative electric humidification technologies are selected, where they are applied, their installed rated capacity, and the building or process applications they serve.
- **Evaluate real-world humidity-control performance** by assessing whether installed systems maintain required humidity setpoints and deadbands without uncontrolled wetting, condensation, nuisance alarms, or unnecessary simultaneous humidification and dehumidification.
- **Assess controls behavior and monitoring readiness** by reviewing whether humidifier enable/status, alarm/fault status, humidity setpoints, measured relative humidity, served equipment status, and applicable supporting system points are available through BAS/BMS/EMS, equipment controllers, or temporary data logging.
- **Quantify energy and demand impacts** where metering or trend data are available, including humidifier electrical load or runtime, supporting system energy impacts such as preheat, compressed air, or water-treatment operation, and avoided gas-fired or conventional electric resistance element steam humidification energy.
- **Evaluate climate-zone and outdoor-air sensitivity** by comparing operating hours, humidification load profiles, preheat needs, and system performance across California climate zones and seasonal outdoor-air conditions.
- **Identify key cost drivers and implementation barriers** by collecting project cost information for qualifying systems and reviewing the added cost or complexity associated with water treatment, dispersion assemblies, controls integration, preheat coordination, compressed air, startup, and commissioning.
- **Assess market and contractor readiness** by documenting whether design teams, installing contractors, controls contractors, and operators can successfully specify, install, commission, and maintain qualifying alternative electric humidification systems using standard project delivery workflows.
- **Inform future code and standards pathways** by identifying which system types, controls requirements, monitoring points, commissioning practices, and application thresholds may be appropriate for future Title 24, Part 6 consideration, compliance guidance, or supporting technical research.

Code Readiness Site Monitoring

If selected for Code Readiness monitoring, equipment energy consumption and mechanical system performance may be monitored on-site for a period of up to 24 months. To support performance evaluation and data collection, projects shall provide reasonable access for the installation and operation of metering, sensors, and communication equipment.

Projects equipped with a Building Automation System (BAS), Energy Management System (EMS), or equivalent platform should enable integration of advanced metering devices through the existing system to facilitate data collection and remote access. For projects without a BAS or EMS, the Code Readiness team may install temporary stand-alone data loggers, sensors, and communication equipment as needed to monitor system performance for the duration of the monitoring period.

Instrumentation may be installed or supplemented, where necessary, to measure key system and equipment parameters sufficient to evaluate system performance and operational characteristics. All monitoring equipment will be temporary and installed in a manner that minimizes disruption to normal building operations.

Data Benefits

Collected data will help support the following:

- Quantify the real-world energy and demand impacts of alternative electric humidification systems compared to gas-fired or conventional electric resistance element steam humidification.
- Identify which humidification technologies are most practical for different building types, applications, system sizes, and California climate zones.
- Improve understanding of how humidification loads vary by outdoor-air conditions, ventilation strategy, operating schedule, and required humidity setpoint.
- Evaluate whether installed systems maintain required humidity control without condensation, wetting, nuisance alarms, or unnecessary simultaneous humidification and dehumidification.
- Document key cost drivers, including water treatment, dispersion assemblies, compressed air, preheat coordination, controls integration, startup, and commissioning.
- Assess market readiness by identifying common design, installation, commissioning, maintenance, and operator-training challenges.
- Inform future Title 24, Part 6 code development by identifying feasible system requirements, controls strategies, commissioning practices, and monitoring points.
- Support future CEDA program updates by improving inducement calibration, documentation requirements, and measure eligibility criteria based on actual project experience.

Sample Data Points

A sample set of data points that would ideally be collected is provided below for reference. This list will be re-developed for each project based on the infrastructure and need of the monitoring effort:

Data Points to Meter	Unit	Additional Specifications
Humidifier Power	kW	Average and peak values
Humidifier Runtime / Status	On/Off or hrs	Runtime by operating period
Humidity Setpoint	%RH	Trend during occupied operation
Measured Relative Humidity	%RH	Space, return-air, or duct RH
Supply-Air Temperature	°F	Near humidifier section
Outdoor-Air Conditions	°F/%RH	Temperature and relative humidity
AHU / Ventilation System Status	On/Off	Served system operating status
Alarm / High-Limit Events	Count	Faults, high-limit, or wetting events

Code Reference

The following codes, standards, and technical references establish the regulatory and technical framework for this HPM. Current California Title 24 requirements do not appear to establish a dedicated prescriptive baseline for alternative electric humidification systems. This HPM builds on applicable mechanical, ventilation, controls, commissioning, and product safety requirements by supporting verified installation of qualifying alternative electric humidification systems.

Relevant references include Title 24, Part 6 mechanical system and controls requirements, Title 20 appliance certification requirements where applicable, and supporting industry standards for humidifier safety, performance rating, thermal comfort, ventilation, and healthcare applications.

CODE	APPLICABLE CODE REFERENCE	EFFECTIVE DATE	CODE REVIEW DATE
CA Building Energy Efficiency Standards – Title 24, Part 6	Applicable mechanical system, controls, ventilation, acceptance testing, commissioning, and covered-process requirements based on project scope. Common references may include §§110.0–110.1; §§120.1, 120.2, 120.5, 120.8; §§140.4, 140.9; §§160.2–160.3; §170.2, as applicable.	January 1, 2026	May 2026
California Title 20 Appliance Efficiency Regulations	Applicable appliance certification and efficiency requirements for covered humidifiers or supporting equipment, where applicable. Common references may include §§1601, 1606, and 1608.	Current	May 2026
Federal Appliance and Equipment Standards	No direct federal commercial humidifier efficiency baseline identified. Confirm applicability for regulated supporting components such as motors, pumps, fans, or packaged equipment.	Current	May 2026
AHRI Standard 610/611	Performance rating reference for central-system humidifiers. Applicability should be verified because the standard is limited to residential central-system humidifier applications.	Current Edition	May 2026
UL 998	Product safety/listing reference for humidifiers. Used to verify that installed humidification equipment is listed and suitable for the intended application.	Current Edition	May 2026
ASHRAE Standards 55, 62.1, and 90.1	Supporting references for thermal comfort, ventilation/IAQ, and energy-efficient HVAC system design. These standards inform design context but do not establish the HPM eligibility criteria.	Current Editions	May 2026

CODE	APPLICABLE CODE REFERENCE	EFFECTIVE DATE	CODE REVIEW DATE
ASHRAE/ASHE Standard 170	Healthcare-specific ventilation reference. Applicable only where humidification serves healthcare spaces or clinical environmental-control requirements.	Current Edition	May 2026
ASHRAE Handbook – HVAC Systems and Equipment	Humidifiers chapter; technical reference for humidifier selection, absorption distance, water quality, controls, installation, and application considerations.	Current Handbook Cycle	May 2026

Eligible Climate Zones and Building Types

Eligible Climate Zones

This high-performance measure applies statewide in **California Climate Zones 1–16**, as defined by Title 24. Applicants must identify the project's applicable climate zone in the submittal.

Eligible Building Types

This high-performance measure applies to projects with required building, space, or process humidification loads in the following building types:

- **High-Rise Multifamily:** Buildings with four (4) or more habitable stories above grade.
- **Nonresidential:** Commercial, public, agricultural, and industrial facilities, including offices, retail, lodging, education, healthcare, food service, warehouses, manufacturing, civic buildings, and similar facilities.

Eligible Project Scopes

This high-performance measure applies to the following project scopes, where eligible under current CEDA program rules:

- **New construction**, **additions**, and **major alterations** to systems served by the measure.

This high-performance measure does not apply to (not in scope):

- **Low-rise residential buildings**, including single-family buildings and multifamily buildings with three (3) or fewer habitable stories above grade.
- Projects without required building, space, or process humidification loads.

Measure Exclusions

The following systems, applications, and project conditions are not eligible under this High-Performance Measure:

- **Gas-fired or fossil-fuel-fired humidification systems**, including gas-fired steam humidifiers, steam-to-steam humidifiers served by fossil-fuel boilers, or central steam plants using fossil fuel as the humidification energy source.
- **Conventional electric resistance element steam humidification systems** used as the qualifying measure. This exclusion does not apply to eligible electrode humidification systems that meet the System Design Requirements.
- **Portable, plug-in, temporary, or non-permanently installed humidifiers**, including room humidifiers, consumer-grade humidifiers, or equipment not integrated into the building mechanical or process system.
- **Humidification systems not serving a required building, space, or process humidification load.** Projects must demonstrate that the humidification system is part of the building design, space-conditioning system, process requirement, or owner-required environmental control strategy.
- **Systems that cannot be verified** through submittals, design drawings, controls documentation, startup/commissioning records, or equivalent project documentation.
- **Systems without required supporting components for the selected technology**, where applicable, such as water treatment, filtration, reverse osmosis or deionized water, compressed air, drainage, preheat, high-limit protection, or wetting/condensation protection.
- Humidification systems installed solely for construction-phase conditioning, temporary storage, temporary process needs, or seasonal rental applications.

- **Systems that create or rely on uncontrolled simultaneous humidification and dehumidification** as a normal operating strategy.
- **Low-rise residential applications**, including single-family buildings and multifamily buildings with three (3) or fewer habitable stories above grade.
- **Like-for-like replacement of an existing alternative electric humidification system** unless the project demonstrates a qualifying upgrade in technology, controls integration, monitoring readiness, capacity, or system performance consistent with this HPM.
- **Projects claiming only general BAS, EMS, controls, or monitoring upgrades** without installing a qualifying alternative electric humidification system.
- **Projects claiming only water-treatment equipment, compressed-air equipment, preheat equipment, ductwork, dispersion assemblies, or monitoring infrastructure** without installing a qualifying alternative electric humidification system.

Anti-Double-Dip / Overlapping Scope

The same humidification equipment, controls integration, monitoring infrastructure, or supporting system components may not be used to claim overlapping inducements under another CEDA HPM for the same scope of work. Where a project includes multiple HPMs, each claimed measure must be separately identifiable and supported by distinct equipment, controls scope, monitoring scope, or performance objectives.

Potential overlap may include, but is not limited to, other HVAC controls, BAS/EMS integration, monitoring, ventilation/DOAS, heat pump, or process-load HPMs where the same equipment, control points, or monitoring infrastructure are used to satisfy more than one measure.

CEDA program administrators reserve the right to determine whether claimed measures constitute overlapping scope for the same equipment, controls integration, or monitoring infrastructure.

Reviewer Checklist

HPM Reviewer Checklist: LM405 – Alternative Electric Humidification Systems – V2

Checklist Description: This checklist captures the elements that must be present in the project design to be eligible for the high-performance measure inducement or consideration for additional site metering.

Project Name: _____ **Review Date:** _____

Assessment:

- ☐ Approved
- ☐ Not approved

Notes:

Reviewer: _____ **Signature:** _____

High-Performance Measure Requirements	Comments

System Design Requirements

Essential Level Requirements:

- ☐ Is a permanently installed alternative electric humidification system provided for required building, space, or process humidification loads? (§1.1)
- ☐ Is the system one of the eligible types: high-pressure atomizing, air/water atomizing, ultrasonic, wetted media evaporative, or electrode humidification? (§1.2)
- ☐ Is the qualifying system all-electric at the humidification equipment level? (§1.3)
- ☐ Is the qualifying system not gas-fired, fossil-fuel-fired, or conventional electric resistance element steam humidification? (§1.3)
- ☐ Are required supporting components included, as applicable, such as water treatment, RO/DI water, compressed air, drainage, preheat, dispersion assemblies, high-limit protection, and wetting/condensation protection? (§1.4)
- ☐ Are control sequences or control documentation provided for enable/disable logic, humidity setpoints, safeties, high-limit control, and HVAC/ventilation coordination? (§1.5)

Premium Level Requirements, If Claimed:

- ☐ Does the project meet all Essential Level requirements? (§2.1)
- ☐ Is the system connected to a BAS, BMS, EMS, equipment controller, or equivalent platform capable of monitoring or trending key operating parameters? (§2.2)
- ☐ Are the required Premium Level points monitorable or trend-ready: status/runtime, alarm/fault, humidity setpoint, measured RH, served equipment status, and applicable supporting system status? (§2.3)
- ☐ Were startup, commissioning, or functional testing records provided confirming installation and operation per approved design and control sequence? (§2.4)

Supporting Documentation Requirements

- ☐ Were equipment submittals or specifications provided? (*Supporting Documentation 1*)
- ☐ Were design drawings or mechanical schedules provided? (*Supporting Documentation 2*)
- ☐ Were control drawings, sequences, BAS points, or equivalent controls documentation provided? (*Supporting Documentation 3*)
- ☐ Was cost documentation provided to support CEDA review of incremental measure cost? (*Supporting Documentation 4*)
- ☐ Were startup, commissioning, or functional testing records provided? (*Supporting Documentation 5*)
- ☐ For Premium Level, was monitoring documentation provided, such as a point list, trend list, controls screenshot, or equipment controller output? (*Supporting Documentation 6*)

Version History Log

Version	Effective Date	End Date	Change Description
1	February 23, 2023	May 24, 2026	N/A
2	May 25, 2026	Current	Updated measure to current CEDA HPM format; clarified eligibility, exclusions, IMC, Code Readiness objectives, and reviewer checklist