DOCKETED	
Docket Number:	17-BSTD-01
Project Title:	2019 Building Energy Efficiency Standards PreRulemaking
TN #:	221449-2
<b>Document Title:</b>	10-4-17 Nonresidential Appendicies Presentation
<b>Description:</b>	Presentation by Mark Alatorre made at the 10-4-17 Staff Workshop on the proposed 2019 Standards.
Filer:	Adrian Ownby
Organization:	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
Submission Date:	10/9/2017 1:47:10 PM
<b>Docketed Date:</b>	10/9/2017



# 2019 Building Energy Efficiency Standards Nonresidential Appendices

Mark Alatorre, P.E.

mark.alatorre@energy.ca.gov

Building Standards Development Efficiency

October 4<sup>th</sup>, 2017
Pre Rulemaking Workshop



# NA1.33 and 1.7.1 Third Party Quality Control Program (New)

Clarified and updated the specifications and procedures for the TPQCP including:

- TPQCP Responsibilities
- Data Collection
- HERS Provider Responsibilities
- HERS Rater Responsibilities
- Conflict of Interest
- Conditions of Approval
- Training TPQCP Contractors



### NA2.2 Mechanical Ventilation Systems (New)

- Included in the new proposed high-rise residential dwelling unit ventilation requirements is field verification of the minimum airflow rate
- The procedures in NA2.2 are identical to the procedures of found in the Residential Appendices
- NA2.2 also includes verification procedures for the Kitchen Range Hood



# NA2.3 Dwelling Unit Air Leakage (New)

- Included in the new proposed high-rise residential dwelling unit ventilation requirements is field verification of the dwelling unit envelope leakage
- The procedures in NA2.3 are identical to the procedures of found in the Residential Appendices
- Applicable when the dwelling unit ventilation system is a stand alone supply or exhaust system



### NA7.4.4 Clerestories for PAF

#### **Before Installations:**

- Verify the height of the clerestory's head height and glazing height match the plans
- Complete the form, Installation Certificate NRCI-ENV-01-E

#### After Installations:

- Verify that any clerestory shading is controlled separately from other fenestration shading control
- Complete the form, Installation Certificate NRCA-ENV-02-F



# NA7.4.5 Interior and Exterior Horizontal Slats for PAF

#### **Before Installation:**

- Verify the horizontal slats are installed at the height according to what is specified on the plan
- Verify the visible reflectance and the visible transmittance value matched to what is specified on the plan and the form, Compliance Certificate NRCC-ENV-01-E
- Complete the form, Installation Certificate NRCI-ENV-01-E

#### After Installation:

- Verify the installation certificate has been completed and signed.
- Complete the form, Installation Certificate NRCA-ENV-02-F



# NA7.4.5 Interior and Exterior Light Shelves for PAF

#### Before Installation:

- Verify the light shelves are installed at the height according as specified on the plan
- Verify the visible reflectance matched to what is specified on the plan and the form, Compliance Certificate NRCC-ENV-01-E
- Complete the form, Installation Certificate NRCI-ENV-01-E

#### After Installation:

- Verify the installation certificate has been completed and signe.
- Complete the form, Installation Certificate NRCA-ENV-02-.



# NA7.5.12 Fault Detection and Diagnostics for Air Handling Units (New)

- Included in the new proposal for FDD's is a new Acceptance Test
- Applicable for FDD systems controlled by a Direct Digital Control system
- The new Acceptance Test ensures the FDD system detects/reports the proper faults



# NA7.8 Outdoor Lighting Controls Acceptance Test

#### **Astronomical Time-Switch Control**

Construction Inspection:

- Verify the control is programmed with ON schedule and OFF schedule matches to the construction document
- If the schedule is unknown, verify the programmed schedule matches to the default schedule (OFF from midnight to 6am)

#### **Part-Night Outdoor Lighting Control**

Construction Inspection:

- Verify the control is programmed with ON schedule and OFF schedule matches to the construction document
- If the schedule is unknown, verify the programmed schedule matches to the default schedule (OFF from midnight to 6am)



# NA7.8 Outdoor Lighting Controls Acceptance Test

#### **Part-Night Outdoor Lighting Control**

Functional Testing for Part-Night Control used along with motion sensor control:

- Verify all controlled lighting is OFF during daytime simulation
- Simulate motion in area under the luminaire controlled by the motion sensor. Verify and document the results
- During simulation of **normally occupied schedule**, simulate no occupancy in area with lighting controlled by the motion sensor. Verify and document the results
- Repeat the above procedure during simulation of normally unoccupied schedule.

#### **Automatic Scheduling Controls**

Deleted from the Acceptance Test requirements.



# NA7.10.3.3 Adiabatic Condensers (New)

- Included in the new proposal for Adiabatic Condensers is a new Acceptance Test to verify compliance with new proposal
- The Functional Test is to be performed in "Dry Mode"
- Very similar to the air cooled condenser Acceptance Test



## NA7.16 Laboratory Ventilation System (New)

- Included in the new proposal for laboratory exhaust systems is a new Acceptance Test to verify compliance
- Acceptance Test is only applicable when the laboratory exhaust uses wind speed or contaminant sensor
- Different procedure depending on control type



#### KEY WEB-LINK

#### 2019 Title 24 Utility-Sponsored Stakeholder

http://title24stakeholders.com/

#### **Building Energy Efficiency Program**

http://www.energy.ca.gov/title24/

#### Comments to be submitted to

https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=17-BSTD-01

## Standards Contact Information – Energy Commission

#### Mazi Shirakh, PE

ZNE Technical Lead & Advisor to the 2019 Building Standard Staff.

Mazi.Shirakh@energy.ca.gov 916-654-3839

#### Payam Bozorgchami, PE

Project Manager, 2019 Building Standards
<a href="mailto:Payam.Bozorgchami@energy.ca.gov">Payam.Bozorgchami@energy.ca.gov</a>
916-654-4618

Larry Froess, PE CBECC Software Lead Larry.Froess@energy.ca.gov 916-654-4525

#### **Peter Strait**

Supervisor, Building Standards Development <a href="Peter.Strait@energy.ca.gov">Peter.Strait@energy.ca.gov</a> 916-654-2817

#### **Christopher Meyer**

Manager, Building Standards Office Christopher.Meyer@energy.ca.gov 916-654-4052

#### **Todd Ferris**

Supervisor, Software Tools Development <u>Todd.Ferris@energy.ca.gov</u> 916-654-4072





## **Building Standards Office Staff – Energy Commission**

#### Mark Alatorre, P.E.

Mechanical / HVAC (nonresidential)
<a href="mailto:Mark.Alatorre@energy.ca.gov">Mark.Alatorre@energy.ca.gov</a>
916-654-4642

#### Thao Chau

Lighting
<u>Thao.Chau@energy.ca.gov</u>
916-654-4168

#### Simon Lee, P.E.

Lighting
<u>Simon.Lee@energy.ca.gov</u>
916-654-4525

#### Jeff Miller, P.E.

Mechanical / HVAC (residential)

<u>Jeff.Miller@energy.ca.gov</u>

916-651-6182

#### Michael Shewmaker

Envelope
<u>Michael.Shewmaker@energy.ca.gov</u>
916-653-1584





### **Building Standards Office Staff – Energy Commission**

#### Gabriel Taylor, P.E.

Healthcare Facility Integration/ Demand Response <u>Gabriel.Taylor@energy.ca.gov</u>

916-654-4482

#### **Danny Tam**

Plumbing/Water Heating/ Solar PV <u>Danny.Tam@energy.ca.gov</u> 916-654-8435

#### **Ingrid Neumann**

Local Ordinances, Cal Green <a href="mailto:Ingrid.neumann@energy.ca.gov">Ingrid.neumann@energy.ca.gov</a> 916-651-1461

