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*Comment Received From: QC Manufacturing, Inc  
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**CBECC - Default WHF in CZ4 Functionality**

*Additional submitted attachment is included below.*

May 10, 2024

California Energy Commission  
Docket Unit, MS-4  
1516 Ninth Street  
Sacramento, CA 95814-5512

**Docket (24-BSTD-03)**

Submitted by: Andy Llorca at QC Manufacturing, Inc.

Dear California Energy Commission Staff,

We are writing to provide industry feedback regarding the current treatment of Whole House Fans (WHFs) within CBECC-Res for projects in Climate Zone 4 (CZ4).

**Summary of Concern**

Under the current modeling framework, when a user selects a “Default Prescriptive” WHF in CZ4, the software inherits null (zero) values from the reference home, as WHFs are not included prescriptively in that climate zone. As a result, the modeled WHF produces **0 CFM and no associated compliance benefit**, particularly in the Peak Cooling calculation.

While this behavior may be technically consistent with the reference home definition, it creates a practical limitation and unintended consequence: users may believe they have included a WHF in their model, when in fact the measure contributes no performance value.

**Key Issues Identified**

- 1. Unintended Null Modeling Outcome**  
Selecting a default WHF in CZ4 results in a “null device,” yielding no airflow or compliance credit.
- 2. Barrier to Non-HERS Compliance Pathways**  
Currently, the only way to achieve Peak Cooling compliance benefits from a WHF in CZ4 is to model a *specified* system, which triggers mandatory ECC/HERS verification. This effectively removes a simplified or default compliance pathway.
- 3. Market Readiness and Practicality**  
Requiring verification for all WHF applications in CZ4 may not align with current market conditions, where testing infrastructure and familiarity are still developing. This may discourage the use of WHFs altogether.
- 4. User Confusion and Misinterpretation**  
Energy consultants may select a default WHF expecting modeled benefits, run compliance, and incorrectly conclude that WHFs provide no value—potentially eliminating a viable efficiency strategy.

#### 5. **Inconsistency Across Climate Zones**

In climate zones where WHFs are prescriptive (CZ8–14), default values are properly calculated and yield performance benefits. The current CZ4 behavior creates inconsistency in how identical measures are treated across climate zones.

#### **Industry Perspective**

From both a modeling and field application standpoint, WHFs remain a practical and effective strategy for addressing peak cooling performance in applicable climates, including CZ4 and others with similar load characteristics.

There is broad agreement among consultants, HERS raters, and manufacturers that the current implementation does not reflect real-world system performance or typical design assumptions.

#### **Recommended Approach**

We respectfully recommend that the Commission consider the following adjustments:

- When a “Default Prescriptive” WHF is selected by an energy consultant in CZ4 (and other non-prescriptive zones), the software should assign standardized default performance values (e.g., airflow based on floor area and a baseline efficacy), rather than inheriting null values from the reference home.

This approach would:

- Restore a functional default modeling pathway that does not require HERS verification
- Align software behavior with user expectations and standard design practices and improve CZ consistency

#### **Conclusion**

We appreciate the Commission’s ongoing efforts to refine compliance tools and ensure alignment with both policy intent and practical application. The issue described above represents an opportunity to improve clarity, consistency, and usability within CBECC-Res, while supporting effective energy design strategies.

We would welcome the opportunity to provide additional data, modeling examples, or field insights to assist in evaluating this recommendation.

Sincerely,

Andy Llorca

QC Manufacturing, Inc.