CLIMATE FORWARD

Pool Cover Forecast Methodology v1.0
ERRATA AND CLARIFICATIONS

The Climate Action Reserve (Reserve) published its Climate Forward Pool Cover Forecast Methodology v1.0 in April 2021 (Pool Cover v1.0). While the Reserve intends for the methodology to be a complete, transparent document, it recognizes that correction of errors and clarifications will be necessary as the methodology is implemented and issues are identified. This document is an official record of all errata and clarifications applicable to Pool Cover v1.0.[1]

Per the Climate Forward Program Manual, both errata and clarifications are considered effective on the date they are first posted on the Climate Forward website. The effective date of each erratum or clarification is clearly designated below. All new and listed pool cover projects must incorporate and adhere to these errata and clarifications when they undergo confirmation. The Reserve will incorporate both errata and clarifications into future versions of the methodology.

All project proponents and confirmation bodies must refer to this document to ensure that the most current guidance is adhered to in project design and confirmation. Confirmation bodies shall refer to this document immediately prior to uploading any Confirmation Statement to assure all issues are properly addressed and incorporated into confirmation activities.

If you have any questions about the updates or clarifications in this document, please contact the Climate Action Reserve at info@climateforward.org or (213) 891-1444 x4.

[1] See the policy memo dated June 6, 2023 or the Climate Forward Program Manual for an explanation of the Reserve's policies on methodology errata and clarifications. For document management and program implementation purposes, both errata and clarifications are contained in this single document.

Errata and Clarifications (arranged by methodology section)

Section 5

1. Wind Shielding Factor (CLARIFICATION – November 18, 2024)

Section: Table 5.1. SCG Model Input Parameters

Context: The approved model for use under this methodology is the Southern California Gas Company's Pool Cover and Pool Heather Energy Savings Tool (SCG model) to calculate baseline energy use, project energy use, and energy savings. One key parameter for the model is wind shielding factor, which is a user entered parameter. The wind shielding factor, FW, is used to adjust the airport wind speed to the poolside wind speed for calculating heat loss and evaporation rate. The protocol does not provide guidance on how to calculate the wind shielding factor for a project, this clarification provides guidance for calculating this parameter.

Clarification: The wind speed at a pool significantly influences the evaporation rate, which in turn affects the energy required to maintain the pool's temperature. Higher wind speeds increase evaporation, leading to greater heat loss and higher energy consumption to reheat the pool. As described in the Southern California Gas Company's (SCG) Pool Cover and Pool Heater Energy Savings Tool[2], "most swimming pools are encircled with high hedges, fences, walls, and buildings to screen the occupants from the wind. Since most pools have good wind screens, the poolside wind speed is much lower than the wind speed measured at a nearby weather station." The data in the tool indicates that typical wind shielding factors for various pool types show a wide range of results from 0% to 80% though the data showed public pools typically have low wind shielding factors (e.g., < 20%), there is significant variability that depends on the immediate surroundings and the orientation of the pool to direct wind. Due to the variability, to be conservative project proponents should apply a default wind shielding factor of 20%.

The guidance in Table 5.1 SCG Model Input Parameters for the wind shielding factor parameter will now read as follows, with bold indicating new text:

The wind shielding factor, FW, is used to adjust the airport wind speed to the poolside wind speed for calculating heat loss and evaporation rate. The wind shielding factor accounts for fences, buildings, and hedges which screen the pool from the wind. A pool surrounded by a wide flat open area, especially in the direction of the prevailing wind, has a wind shielding factor of 0%. A pool that is totally protected from the wind **(indoors)** has a wind shielding factor of 100%. **All other pools should apply a conservative default wind shielding factor of 20%.** The wind shielding factor is assumed to be constant all year. The wind shielding factor is used to calculate the wind speed ratio, which is the ratio of the poolside wind speed to the wind speed measured at the local airport weather station.

[2] Knoke, S. (2012). Pool Cover and Pool Heater Energy Savings Tool. Southern California Gas Company, Customer Programs Department.

2. Modeling Baseline Emissions (CLARIFICATION – November 18, 2024)

Section: 5.2 Modeling Baseline Emissions

Context: The baseline scenario for pool cover projects is the continuous use of natural gas to heat the pool without a cover. The Pool Cover v1.0 methodology states: “the baseline scenario would be the continued operations of a pool without a cover, coupled with the use of a fossil fuel.” In practice, however, there are warm periods of time when pool heaters and pool covers are not necessary. Modeling baseline emissions based on this common practice should allow for these periods of time and not require a non-compliance factor deduction to be applied to the quantification of FMUs.

In addition, there was a typo in this section. Where the methodology referred to the SCF model it should have read “SCG model” in reference to the Southern California Gas Company’s model on pool energy use with heaters and covers.

Clarification: The first paragraph of the section will now read as follows. Bold text indicates changes:

For purposes of estimating project emission reductions, it is assumed that in the absence of the GHG mitigation project, the baseline scenario would be the continued operations of a pool without a cover, coupled with the use of a fossil fuel (e.g., natural gas) powered pool heater. As described in Section 2.1.1, eligible pools cannot currently use an existing cover and must be heated with fossil fuels. As described further below, each pool will be modeled separately to incorporate its assumed baseline factors, including hours of operation and type of cover to be installed. For each pool in the project, the value of model input parameters may differ across seasons. **In cases where the pool is not heated during warm summer months, it is acceptable to exclude this period of time. Additionally, since there are no energy savings to be gained when heaters are not used, pool covers are not required to be used during these times. The period of time when the heater and the pool cover are not in use are not considered Non-compliance days (refer to Table 6.1). To exclude this period of time from the baseline calculation the project proponent must have confirmable evidence that the pool heater was not in use.** In such cases each period for which such values are different will need to be modelled separately, and the resulting emission reductions summed for the entire crediting period. The SC**G** model estimates relevant factors for each month of the calendar year, and then sums them together for the year.

3. Equation 5.3 Project GHG Emissions (ERRATUM – November 18, 2024)

Section: 5.3 Modeling Project GHG Emissions

Context: There is an error in how the project emissions are calculated in Equation 5.3 Project GHG Emissions. The deterioration and non-compliance factors should be added (not subtracted) to “1” so that the emissions resulting from non-compliance and deterioration of the pool cover are accurately accounted for as an increase in project emissions.

Clarification: This equation shall now read as follows with bold text indicating the change in the formula. This was erroneously published to subtract instead of add.

$PE_{p,j,y} = PU_{p,j,y} \times (1 \mathbf{+} (DF_p + NCF_p)) \times EF_f \times L_p$