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RE: Adipic Acid Production Protocol, Version 1.0 Public Comment from ClimeCo Corporation

Thank you for the opportunity to comment on the Adipic Acid Production Protocol (v1.0). ClimeCo is a leader of project development in North America and is the only project developer to create offset credits from nitric acid production, a closely related industrial offset project type. ClimeCo has been honored to serve as a work group participant during the protocol development process and is committed to continue to work with and provide feedback to the Climate Action Reserve during the public comment process.

Overall, ClimeCo is extremely pleased with the protocol and believes it will create an important mechanism to incentivize significant GHG reductions that would not have occurred otherwise. Adipic acid production is an extremely emissions intensive process. Despite never having the opportunity to participate in carbon markets, facilities in the United States have already shown leadership in reducing a portion of their emissions voluntarily. Creating a market for the incremental emission reductions above-and-beyond historical voluntary reductions will incentivize additional reductions and ensure facilities continue to voluntarily abate. This protocol is an impactful step towards significant greenhouse gas reductions in the United States.

Although we believe this is a strong, scientifically defensible protocol, there are a few components of the protocol that ClimeCo suggests that the Reserve alter:

Baseline Lookback Period

Currently, both the dynamic and static baseline approaches use a “baseline look-back period defined as *at least* the five most recent calendar years of operations ... starting in 2015”. We believe that the Reserve should limit the baseline look-back period to 5 calendar years and not extend beyond that length of time. Anchoring the look-back period to a single year rather than a set number of years does not align with programmatic precedent, which has largely been set at a 3-year look-back. Moreover, extending the

baseline indefinitely into the future is an oddity that can create inequality between projects – for example, if a project were to start in 2030, the lookback period would be 15 years which could include significant market changes. A 5-year lookback is a sensible compromise of including representative data that will appropriately determine the amount of historical voluntary abatement.

Treatment of Outliers in the Baseline Evaluation

Similarly, we believe the Reserve should consider changing how they address outliers in the baseline variability test (summarized in Table 5.2). The outlier elimination process is abnormal and out of line with standard statistical methods. In a typical outlier evaluation test, if the data are determined to be variable beyond 2 standard deviations (or whatever standardized method is chosen), the data should be reviewed for errors and anomalies, with the abnormal data removed as appropriate.

By replacing outliers with the highest historical abatement efficiency (AE), the Reserve will be making the final baseline *less* representative of overall operations. This strategy creates a disproportionate increase in the baseline level (and thus a lower credit yield) for a facility that has had variability in their historical AE. We do not believe it is the Reserve’s intention, as this test will specifically increase the baseline for a facility simply because it has variable abatement in the past. Variable abatement should not generally be considered problematic, as facilities were abating voluntarily and making abatement decisions based on several maintenance and operational factors. Ultimately, we do not believe this strategy is in line with the Reserve’s goal of creating a representative baseline.

Finally, we also disagree with the one-directional nature of outlier removal. If the spirit of the evaluation of variability is to create a representative baseline, only eliminating low-AE outliers and not high-AE outliers is inappropriate, abnormal, and biases the data. We believe this, as well as the aforementioned replacement technique, are not statistically sound and will result in a protocol with unequal treatment among facilities.

Despite some statistical issues, ClimeCo would like to commend the Reserve on several specific protocol design decisions that will allow developers to create high-quality, real, and additional CRTs:

Baseline Calculations

First, we are happy with the Reserve’s decision to use the average of the look-back period to set a baseline of historic voluntary abatement. We believe it is important that facilities are credited only for the incremental emission reductions above-and beyond their voluntary efforts; however, we also would like to acknowledge that historical abatement has been primarily voluntary and has never been incentivized by carbon markets. Setting a baseline using historical average abatement levels is fair, conservative, and in-line with how baselines are set in other Reserve-approved protocols. This feedback is notwithstanding of our feedback on the *length* of the lookback period, which we believe should be limited to 5 calendar years.

Leakage Protections

We are also pleased with the strong leakage protections that the Reserve has include in protocol development. As the Reserve is aware, leakage did occur in early Clean Development Mechanism projects from adipic acid production. While the financial incentives that led to such leakage are extremely unlikely to occur in the United States, we believe the Reserve has made the right choice in explicitly calling out the issue and adding protective measures against it.

Thank you again for this opportunity to comment on the Climate Action Reserve's Adipic Acid Production Protocol v1.0. The protocol will open the door to opportunities to significantly reduce greenhouse gas emissions and bring to market high-quality carbon offsets.