



To: Firas Abu-Sneneh, James Duffy, and Sam Wade, California Air Resources Board
From: Peter Weisberg, The Climate Trust
Date: July 31st, 2017
Subject: Comments on the scope and design of the SB 1383 Pilot Financial Mechanism

The Climate Trust was founded in 1997 to manage payments from new power plants complying with the Oregon Carbon Dioxide Standard, acting as the only state-recognized non-profit responsible for stewarding funds under the oversight of the Oregon Energy Facility Siting Council. Since then, The Climate Trust has managed additional regulatory greenhouse gas mitigation programs in Washington and Montana and voluntary programs on behalf of the natural gas utility Northwest Natural. Over this 20-year period, The Climate Trust has committed more than \$34 million to greenhouse gas reduction projects through a variety of contract structures including upfront investments, forward contracts, offtake agreements, unit contingent payment obligations and put option agreements.

The Climate Trust was awarded a \$900,000 grant from the USDA NRCS Conservation Innovation Grant program to build the Environmental Price Assurance Facility, a platform to auction contracts that provide long-term price guarantees to projects that generate environmental credits. Under that grant, The Climate Trust will run at least one auction in the third quarter of 2018, following the World Bank's Pilot Auction Facility model, for carbon offset credits.

The Climate Trust strongly supports the work to launch the pilot financial mechanism and the opportunity to leverage public funding by mitigating risk to encourage private investment. These comments will discuss various considerations for structuring the cost of price guarantees under both the put option and Contracts for Difference model, emphasize the benefits of tradability under the put option model, support the proposal for a ten year contract period with a grace period for development, and recommend a non-profit be considered as the Administrator of the mechanism.

Considerations for structuring the “cost” of the price guarantee under both models

Under either the put option or Contracts for Difference model, it is key for the Producer to pay a cost for the price guarantee. Without a cost, uninformed developers or very early stage projects will be willing to acquire price assurance with little sense of the actual credit price needed to justify capital and operating costs. These uninformed projects could outcompete more mature projects, which understand the minimum prices needed for project viability, setting the strike prices too low to actually motivate the development of projects and resulting in public funding being idly held to guarantee prices for credits that will never be issued.

One key difference between the two models is how that cost is experienced by the Producer. Under the put option model, the Producer pays a premium; this premium gives the Producer a real financial incentive to deliver Low Carbon Fuel Standard credits. Under the Contracts for

Difference model, the Producer must pay the upside, if it occurs, to the Administrator; the requirement to pay upside creates an incentive to not accept very low guaranteed prices. The Climate Trust believes the structure of this cost to the Producer will be key to who is able to participate in the pilot financial mechanism. The Climate Trust therefore recommends the final report investigate several options to structure this cost under both models.

Recommendations for structuring the put option premium:

For the put option premium, there is a delicate balance to ensure the fee is significant enough that the winner is properly motivated to generate Low Carbon Fuel Standard Credits but not so large as to discourage new companies with limited access to capital from participating. Based on the World Bank's Pilot Auction Facility, The Climate Trust also recommends the put option model fix the premium upfront and reverse auction the strike price. Under the Pilot Auction Facility, the first (on July 15th, 2015) and third auctions (on January 10th, 2017) followed this fixed-premium model at \$0.30/credit. The second auction (on May 12th, 2016), fixed the strike price and forward auctioned the premium. This resulted in an almost five times higher premium price, which settled at \$1.41/credit. Forward auctioning the premium could result in much higher premium prices in California as well, favoring the largest entities with the easiest access to financing.

Given the relatively small size of dairy biogas developers and the uncertainty associated with project development at this early stage, the Air Resources Board should consider another potential change to the structure of the premium payment. To encourage participation from small and emerging Producers, the Administrator could charge a nominal fee to participate in the auction and then give winners a grace period until a larger premium is paid. This grace period would give new and emerging developers time to raise capital from private investors – now with the benefit of Low Carbon Fuel Standard price assurance (provided the premium is paid).

Recommendations for ensuring Producer's "skin in the game" under the Contracts for Difference Model:

Although the Contracts for Difference model does not propose charging a premium, it does cause Producers to pay the Administrator the upside if prices are high. This future "cost" of Contract for Difference is more abstract than the upfront premium paid in the put option model. If projects are not successfully developed, for example, no payments will be made to the Administrator even if prices are high. As such, The Climate Trust believes the Contracts for Difference concept is more susceptible to early stage or uninformed developers outcompeting more informed Producers and bidding the price guarantees too low to actually motivate the development of projects and methane reductions.

As such, the Air Resources Board should consider additional mechanisms to strengthen the Producer's incentive under the Contracts for Difference model to only bid for price guarantees for credits they strongly believe they can produce. One potential method is to require bidders to qualify themselves by demonstrating their pipeline of project opportunities is relatively advanced. To participate in the auction, Producers could be required to provide evidence such

as agreements with participant dairies, Engineering, Procurement and Construction contracts or interconnection studies with utilities. Another method would be to charge either a bidding fee or premium so Producers have an immediate financial incentive to produce Low Carbon Fuel Standard credits. The larger this upfront cost, the more upside Producers should be allowed to retain. This could be accomplished by charging a premium and then widening the spread between the floor and the ceiling in the “two strike prices” Contracts for Difference model.

Put option model allows price guarantee to be tradeable

Meeting the Short Lived Climate Pollutant reductions of SB1383 will require an enormous growth in the digester industry. While emerging, biogas developers are likely to pilot new technologies, project designs and business models. As the industry matures, not all models will prevail.

At this early stage, allowing the contract that provides price assurance to be tradeable is essential. A project developer holding a contract for price assurance may determine that a project is no longer feasible or that it is no longer eligible to produce Low Carbon Fuel Standard credits. At that time, the Administrator will continue to have an outstanding liability and therefore must hold funds to fully guarantee the price assurance. Because credits will not be generated, however, the public funding held as a guarantee fails to incentivize methane reductions.

With tradable contracts, however, the project that no longer anticipates generating Low Carbon Fuel Standard credits can sell its price assurance to a new project. This tradability is a key component of the World Bank’s Pilot Auction Facility. “The PAF’s put options are designed to be tradable, enabling holders to transfer ownership and maximize the likelihood that the PAF achieves emission reductions,” the World Bank writes.¹ Similarly, The Climate Trust recommends the contract between the Administrator and Producer in California allow for the Producer to sell its price assurance other investors and project developers.

The put option model is a guarantee structure that can be readily traded. The premium establishes the initial value of the price assurance, with unlimited upside potential remaining with the producer. The put option can then be bought and sold, similar to how it was at auction for the payment of the premium price. During this trading, the volume and strike price remain the same, so the Administrator continues to hold the same quantity of funding to guarantee it - regardless of who holds the put option and how valuable the market determines its premium to be.

The Contracts for Difference model, whose cost comes from the potential limit to upside in the future, is more difficult to trade. Unless significant changes to the current proposal are made (in

¹ World Bank Group. 2015. Lessons Learned: The First Auction of the Pilot Auction Facility. Washington, D.C.

which a premium is paid and the Producer retains upside potential), the Air Resources Board should consider the ready tradability of put options as one advantage of that model which ensures funding is only being held to guarantee projects that anticipate reducing methane emissions and generating Low Carbon Fuel Standard credits.

Ten year contract period with grace for development recommended

The Climate Trust believes a ten-year contract period, with a one to three-year grace period for development and construction, is an appropriate term for the price guarantees. Long-term uncertainty is the key barrier, and, as such, the contract period must be long-term. Matching this term to the crediting period is a logical way to provide this long-term assurance.

One key design criteria to consider during this contract period is how the price guarantees mature. The World Bank's Pilot Auction Facility again provides a model. In it, Producers receive put options for a specific volume over consecutive annual maturity dates. Bidders in the auction bid in units of 10,000 credits, with 2,000 credits that mature each year for five consecutive years. As put options mature, this frees up the Administrator's capital to the either re-allocate into new price guarantees or return for other useful purposes. Consecutive annual maturity ensures that the Administrator's capital is only guaranteeing Low Carbon Fuel Standard credits that are likely to be generated. As such, the Air Resources Board should consider a similar model of annual maturity of price guarantees over the ten-year crediting period, after a one to three-year development and construction period passes.

Managing both the Low Carbon Fuel Standard and the Pilot Financial Mechanism presents a potential conflict of interest for the Air Resources Board

Under either the Contracts for Difference or put option model, the Administrator can be seen to have a financial interest in the price for Low Carbon Fuel Standard credits. In any design, the Administrator will need to make payments to projects in the event that market prices fall below the guaranteed price. Under the Contracts for Difference model, as the June 26th, 2017 handout notes, "If the future value of the environmental credits is high, the program may, in fact, generate income for the Administrator."

While all markets are affected by policy, environmental markets are unique in that the market regulator has significant control over supply (by determining who is eligible to generate credits and under what carbon intensity) and demand (by determining the carbon intensity targets and the carbon intensity of deficit generators). In this way, the Air Resources Board has the potential to influence the price for Low Carbon Fuel Standard credits. If the Air Resource Board served as the Administrator of the pilot financial mechanism, this could be seen as a conflict of interest. Given the Air Resources Board's significant control over many different factors that determine the market price for Low Carbon Fuel Standard credits, Climate Trust recommends the Air Resources Board does not serve as the Administrator to avoid a perceived perverse incentive. Given the relative specialization required for understanding dairy digester project development, the Low Carbon Fuel Standard market and financial instruments for mitigating



risk, The Climate Trust recommends a third-party non-profit be considered to act as the Administrator.

Thank you for the opportunity to submit comments. The Climate Trust looks forward to working with the Air Resources Board to make the pilot financial mechanism a success.