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Director
Hydrogen/Syngas On-Sites

February 14, 2014

Mary Nichols
California Air Resources Board
1001 I Street
Post Office Box 2815
Sacramento, California 95812

Re: Cap and Trade Regulation Discussion Draft – January 31, 2014

Dear Ms. Nichols:

I am writing on behalf of Air Liquide Large Industries U.S. LP (“Air Liquide”) regarding the January 31, 2014 Discussion Draft of potential amendments to the California Cap-and-Trade Regulation. I am writing to provide comments concerning (i) the allocation of allowances to covered entities that supply electricity or thermal energy pursuant to “Legacy Contracts”; and (ii) the hydrogen production benchmark that CARB is currently developing with input from refiners and industrial gas suppliers.

1. Background

Air Liquide is the world’s leader in industrial and medical gases. Air Liquide and its affiliated companies operate twenty facilities and employ more than 500 people in California. Air Liquide’s California operations include two hydrogen production facilities that supply hydrogen and steam to refineries under long-term contracts. These hydrogen production facilities are located within the footprint of the refineries they serve and are among the six non-refinery-owned, third-party hydrogen production facilities that are subject to the Cap-and-Trade Regulation. In addition to these six third-party hydrogen production facilities, there are approximately twenty refinery-owned hydrogen production facilities in California. These facilities are units within refineries that are covered by the Cap-and-Trade Regulation.

2. Allowance Allocations to Legacy Contract Generators

Air Liquide strongly supports the provisions in the January 31 Discussion Draft that allocate allowances to covered entities that supply electricity and thermal energy (including steam generated in the production of hydrogen) to third parties under long-term, fixed-price “Legacy Contracts” executed before September 1, 2006. The Legacy Contract provisions of the Discussion Draft correctly recognize that some covered entities that supply electricity or steam under long-term contracts will not be able to pass through the cost of purchasing emissions

allowances to their customers. CARB recognizes that direct allocation of allowances to these entities is necessary to prevent the significant economic dislocation that would otherwise result.

We have attached to this letter proposed revisions that clarify certain sections of the Discussion Draft relating to Legacy Contract allowances. These technical revisions are very limited in scope, and include:

- Revisions to clarify the definition of Legacy Contract Qualified Thermal Output in Section 95802(a)(200).
- Corrections to cross-references in Sections 95870(e)(4) and 95894(a)(4).
- Revisions to Section 95870(g) to clarify CARB's intent to continue the direct allocation of allowances to Legacy Contract Generators through the expiration or amendment of a Legacy Contract.
- Revisions to Section 95894(c)(2) that correct errors in the formulas to calculate true-up allowances for Legacy Contract Generators.
- Capitalization of defined terms.

We previously proposed a revised definition of Legacy Contract Qualified Thermal Output ("LCQTO"), which is of key importance to Air Liquide, to remove references to cogeneration reporting requirements. We have not repeated that proposal in our comments; instead, we have attempted to work from CARB's revised text. The definition of LCQTO, as drafted by CARB, provides in part:

"Legacy Contract Qualified Thermal Output" means thermal energy that is sold to specific end-users, and reported pursuant to MRR section 95112(a)(5)(A).

Air Liquide previously commented that this definition should not refer to MRR section 95112, because that section defines the reporting obligations of cogeneration facilities. Some recipients of Legacy Contract allowances, such as Air Liquide, do not operate cogeneration facilities.

However, effective January 1, 2014, Section 95112 of the Mandatory Reporting Regulation, which states the reporting requirements for cogeneration facilities, has been amended to provide, in part, that:

[F]acility operators that are applying for the legacy contract transition assistance under the cap-and-trade regulation must always report the information in section 95112(a)(4)-(6), even if they do not provide or sell any generated energy outside of the facility boundary.

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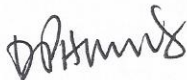
Because the MRR now requires it, Air Liquide will report the information required by subsections 95112(a)(4)-(6), despite the fact that Air Liquide does not operate a cogeneration facility and is not subject to the other reporting requirements in section 95112, or Subparts C and D of 40 C.F.R. Part 98, which Section 95112 incorporates by reference. It is therefore unnecessary for CARB to remove the references to Section 95112 from the definition of LCQTO. Instead, Air Liquide has proposed revisions to the definition of LCQTO in Section 95802(a)(200) to make clear that that term encompasses steam produced by Air Liquide's hydrogen production facility and sold to a legacy contract counterparty.

3. Hydrogen Production Benchmark

CARB states in the Discussion Draft that it is continuing to work on the development of a new benchmark for hydrogen production. As we explained in our October 14, 2013 letter to CARB, Air Liquide supports the development of a new, uniform benchmark that applies to both third-party and refinery-owned hydrogen facilities. Such a benchmark should be based on emissions and operating data from all covered hydrogen production facilities in the State, including refinery-owned facilities, and not on data from just the small subset of third-party hydrogen production facilities. We refer CARB to Air Liquide's October 14, 2013 letter for additional comments regarding the development of a new hydrogen production benchmark and look forward to further discussions with CARB staff regarding this issue.

Thank you for your consideration of these comments. We would be happy to discuss Air Liquide's proposed revisions to the Discussion Draft with your staff at their convenience.

Very truly yours,



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Enclosure

Section 95802(a)(200) (pages 33-34)

(200) “Legacy Contract Qualified Thermal Output” means thermal energy that is sold to specific end-users, and reported pursuant to MRR section 95112(a)(5)(A). Legacy Contract Qualified Thermal Output does not include thermal energy that is vented, radiated, wasted, or discharged **without beneficial use** before it is utilized at industrial processes or operations. Legacy Contract Qualified Thermal Output ~~can be~~ **either includes, but is not limited to:**

- (a) thermal energy used to produce cooling energy (e.g., chilled water) if the facility provides thermal energy to a particular end-user outside of the facility boundary that is reported pursuant to MRR 95112(a)(5)(C)(1)(c); or
- (b) thermal energy generated by equipment that is not an integral part of the cogeneration unit that is provided or sold to a Legacy Contract Counterparty and meets the eligibility requirements in section 95894; ~~or~~
- ~~(c)~~ **thermal energy generated by a hydrogen production facility that is sold to a Legacy Contract Counterparty and reported pursuant to MRR Section 95112(a)(5).**

Notes:

The addition of “without beneficial use” is necessary because refineries typically vent some steam to prevent explosions when venting hydrogen. This steam is discharged for a beneficial use and should not be treated as wasted thermal energy.

The addition of “includes, but is not limited to” or, alternatively, of subsection (c), is necessary because subcategories (a) and (b) do not comprise all of the possible categories of Legacy Contract Qualified Thermal Output. Steam produced by hydrogen plants is neither used to produce cooling energy (subsection (a)) nor is it associated with a cogeneration unit (subsection (b)).

Section 95870(e)(4) (page 136)

(4) Industrial entities who purchase electricity or ~~qualified thermal output~~ **Legacy Contract Qualified Thermal Output** pursuant to a ~~legacy contract~~ **Legacy Contract** and who receive allocation under this section shall have their allocation reduced as specified in section 95891 ~~(hf)~~.

Notes:

The cross-reference in this section refers to a non-existent subsection.

The terms “Legacy Contract” and “Legacy Contract Qualified Thermal Output” should be capitalized because they are defined terms in the Cap and Trade Regulation.

Section 95870(g) (page 138)

- (g) Allocation to Legacy Contract Generators. Allowances will be allocated to ~~legacy contract generators for budget years 2013 through 2017 for transition assistance.~~ Legacy Contract Generators pursuant to section 95894. The Executive ~~Office~~Officer will transfer allowance allocations into each eligible generator's ~~limited exemption holding account~~Annual Allocation Holding Account by October 24, 2014 for eligible Legacy Contract Emissions pursuant to the methodology set forth in section 95894, and by October 24th of each subsequent year.

Notes:

CARB has indicated that it intends to provide allowances for Legacy Contract Emissions for the life of the contract, which is consistent with Section 95894(c) (providing allocations for years "after 2015"). The reference to years 2013 through 2017 in this subsection is unnecessary and erroneous.

The term "limited exemption holding account" is undefined. As set forth in Section 95831(a)(6), allowances transferred to Legacy Contract Generators pursuant to Section 95870(g) should be transferred to the Annual Allocation Holding Account.

The term "Legacy Contract Generators" should be capitalized because it is a defined terms in the Cap-and-Trade Regulation.

Section 95890(e) (page 145)

- (e) Eligibility Requirements for Legacy Contract Generators. A Legacy Contract Generator that has demonstrated its eligibility to the satisfaction of the Executive Officer pursuant to section 95894 of this regulation shall be eligible for direct allocation of allowances if it has complied with the requirements of the MRR, section 95112(a)(4)-(6) and has obtained a positive or a qualified positive verification statement ~~for~~ pursuant to MRR.

Notes:

Section 95112 of the MRR sets forth reporting requirements for cogeneration facilities. The MRR requires non-cogeneration facilities that apply for allowances for Legacy Contract Emissions to comply with the reporting requirements in Section 95112(a)(4)-(6). The other provisions of Section 95112 do not apply to non-cogeneration facilities that receive Legacy Contract allowances (e.g., hydrogen production facilities). See MRR § 95112(a). Section 95890(e) should be revised to be consistent with the MRR.

Section 95894(a) (pages 191-193)

- (a) Demonstration of Eligibility. Opt-in ~~covered entities~~Covered Entities are not eligible for transition assistance due to ~~legacy contract emissions~~Legacy Contract Emissions. To be eligible to receive a direct allocation of allowances under this section, the primary or alternate account representative of a ~~legacy contract generator~~Legacy Contract Generator shall submit the following in writing via certified mail to the Executive Officer by June 30, 2014 or within 30 days of the effective date of this regulation for allocation in 2014, whichever is later, and by June 30th of each subsequent year when applicable:
- (1) A letter to ARB stating covered entity name, identification of ~~legacy contract counterparty~~Legacy Contract Counterparty, and statement requesting transition assistance for emissions reported and verified for the:
 - (A) Previous data year's ~~legacy contract emissions~~Legacy Contract Emissions, pursuant to section 95894(c) by September 2; and
 - (B) 2012 data year's ~~legacy contract emissions~~Legacy Contract Emissions, pursuant to section 95894(d).
 - (2) Copy of the following portions from the ~~legacy contract~~Legacy Contract for which it is seeking an allocation;
 - (A) Dates of effective commencement and cessation of terms of contract.
 - (B) Terms governing price per unit of product
 - (C) Signature page
 - (3) An attestation under penalty of perjury under the laws of the State of California that:
 - (A) Each ~~legacy contract~~Legacy Contract does not allow the covered entity to recover the cost of ~~legacy contract emissions~~Legacy Contract Emissions from the ~~legacy contract counterparty~~Legacy Contract Counterparty purchasing electricity and/or Legacy Contract Qualified Thermal Output from the unit or facility;
 - (B) The ~~legacy contract~~Legacy Contract was originally executed prior to September 1, 2006, remains in effect, and has not been amended since that date to change the terms governing the price or amount of electricity or Legacy Contract Qualified Thermal Output sold, the GHG costs, or the expiration date;
 - (C) The operator of the ~~legacy contract generator~~Legacy Contract Generator made a good faith effort, but was unable to renegotiate the ~~legacy contract~~Legacy Contract with the ~~counterparty~~Legacy Contract Counterparty to address recovery of the costs of compliance with this regulation.

- (4) Data requested pursuant to Section 95894(e) or 95894(de).
- (5) If, subsequent to the submittal of the foregoing information and supporting documentation, there is any material change in the information and statements provided to the Executive Officer, the party who submitted such information and statements shall submit a supplemental attestation and supporting materials addressing any such material change to the Executive Officer within 30 days after the change occurs.

Notes:

Section 95894(a)(3) should be revised to clarify that the provision applies to “Legacy Contract Qualified Thermal Output” supplied to a “Legacy Contract Counterparty.”

The terms “Legacy Contract,” “Legacy Contract Emissions,” “Legacy Contract Generator,” “Legacy Contract Counterparty,” and “Opt-in Covered Entities” should be capitalized throughout Section 95894(a) because they are defined terms in the Cap and Trade Regulation.

Section 95894(a)(4) should be revised to refer to the correct subsection. Subsections 95894(c) and (d) do not refer to data requests. The correct cross-reference is to subsection (e), which provides in part: “If necessary, the Executive Officer will solicit additional data to establish a representative allocation. The operator of the Legacy Contract Generator must provide the additional data upon request by the Executive Officer.”

Section 95894(c)(2) (pages 195-197)

- (2) For generators subject to 95894(c) but not covered in 95894(c)(1), the following equations apply :

$$\text{TrueUp}_{2015} = ((Q_{lc} * B_s + E_{lc} * B_e) * G_{a,2013C2013}) + ((Q_{lc} * B_s + E_{lc} * B_e) * G_{a,2014C2014}) + ((Q_{lc} * B_s + E_{lc} * B_e) * G_{a,2015C2015})$$

Where:

“TrueUp₂₀₁₅” is the amount of true-up allowances allocated from budget year 2015 and allowed to be used for budget years 2013 and 2014 and subsequent years pursuant to sections 95856(h)(1)(D) and 95856(h)(2)(D);

“Q_{lc}” is the Legacy Contract Qualified Thermal Output in MMBtu sold under a ~~legacy contract~~ Legacy Contract in data year 2013, as reported to MRR;

“E_{lc}” is the electricity, in MWh, sold under the ~~legacy contract~~ Legacy Contract in data year 2013;

“B_e” is the emissions efficiency benchmark per unit of electricity sold or provided to off-site end users, 0.431 California GHG Allowances/MWh;

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"B_s" is the emissions efficiency benchmark per unit of Legacy Contract Qualified Thermal Output, 0.06244 California GHG Allowances/MMBtu thermal; and

"c_t" is the cap adjustment factor for budget year "t" as specified in table 9-2.

For years after 2015, the following formula applies:

$$A_t = ((Q_{lc,t-2} * B_s + E_{lc,t-2} * B_e) * AF_{lcc,t} * C_t) + TrueUp_t$$

Where:

$$TrueUp_t = ((Q_{lc,t-2} * B_s + E_{lc,t-2} * B_e) * AF_{lcc,t-2} * C_{t-2}) - A_{t-2, no trueup}$$

"A_t" is the amount of California GHG allowances directly allocated to the Legacy Contract Generator ~~subject to afor~~ Legacy Contract Emissions from budget year "t". This value shall only be calculated if the entity meets the eligibility requirements, pursuant to section 94894(a) and 95894(b), and is covered under the Cap-and-Trade Program during the second compliance period.

And:

TrueUp_t is the amount of true-up allowances allocated to account for the emissions reported for data year "t".

"Q_{lc,t-2}" is the Legacy Contract Qualified Thermal Output in MMBtu sold under a ~~legacy contract~~ Legacy Contract in data year t-2, as reported under the MRR;

"E_{lc}" is the electricity, in MWh, sold under the ~~legacy contract~~ Legacy Contract;

"B_e" is the emissions efficiency benchmark per unit of electricity sold or provided to off-site end users, 0.431 California GHG Allowances/MWh;

"B_s" is the emissions efficiency benchmark per unit of Legacy Contract Qualified Thermal Output, 0.06244 California GHG Allowances/MMBtu thermal;

c_t is the cap decline factor for budget year "t" as specified in table 9-2;

c_{t,t-2} is the is the cap ~~decline~~ adjustment factor for the budget year two years prior to year "t" as specified in Table 9-2.;

"A_{t-2, no trueup}" is the amount of California GHG allowances ~~directly~~ previously allocated to the Legacy Contract Generator ~~subject to afor~~ Legacy Contract ~~from~~ Emissions in budget year "t-2" ~~not including~~;

"AF_{lcc,t}" is the true-up for that assistance factor associated with the Legacy Contract Counterparty or direct corporate associated entity of the Legacy Contract Counterparty for budget year "t";

"AF_{lcc,t-2}" is the assistance factor associated with the Legacy Contract Counterparty or direct corporate associated entity of the Legacy Contract Counterparty for budget year "t-2";

Notes:

The phrase “for Legacy Contract Emissions” should be added to the definition of “ A_t ” because some Legacy Contract Generators (including Air Liquide) will receive, in addition to allowances for Legacy Contract Emissions, industry assistance allowances for emissions that are not associated with the generation of steam or electricity.

The definition of “ $A_{t-2, no\ trueup}$ ” must be revised. As defined in CARB’s draft, it excludes allowances awarded in the 2015 true-up. This issue is best illustrated by reviewing the series of true-up allocations that will take place from 2015 to 2017:

- 1. In 2015, the Legacy Contract Generator will receive $TrueUp_{2015}$ that will provide an initial true-up, in the form of 2015 budget-year allowances, for budget years 2013, 2014 and 2015, based on 2013 emissions (because 2014 and 2015 emissions will not have been reported when 2015 allowances are allocated).*
- 2. In 2016, the Legacy Contract Generator will receive a second true-up for 2014 based on reported 2014 emissions.*
- 3. In 2017, the Legacy Contract Generator will receive a second true-up for 2015 based on reported 2015 emissions.*

Thus, $A_{t-2, no\ trueup}$ cannot be defined with reference to allowances “from budget year $t-2$ ” because the allowances allocated for a particular year are not “from” that budget year. For example, allowances provided for 2014 in the 2015 allocation will not be “from budget year 2014”; they will be from budget year 2015. Similarly, when the 2015 true-up is calculated in 2017, the allowances previously allocated “from budget year 2015” will include allowances allocated to true up allocations in years 2013 and 2014.

This definition must also be revised because the amount of allowances provided in previous years cannot be defined by excluding, at the end of the definition, “the true-up for that budget year.” For example, in 2016, when the second true-up for budget year 2014 is calculated, there will already have been one true-up for 2014. The same issue will also occur in 2017 when the second true-up for 2015 takes place.

The definitions of $A_{t_{cc}, t}$ and $A_{t_{cc}, t-2}$ have been added because they were omitted from this subsection.

The reference to the “cap decline factor” in Table 9-2 should be corrected to refer to the “cap adjustment factor.”

The term “Legacy Contract” should be capitalized because it is a defined term in the Cap and Trade Regulation.