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INITIAL STATEMENT OF REASONS

Proposed Amendments to Alternative and Renewable Fuel and Vehicle Technology Program Funding Regulations Title 20, California Code of Regulations, sections 3100-3108

California Energy Commission
Docket No. 15-OIR-02
June, 2015

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE – Gov. Code § 11346.2(b)(1)

The California Energy Commission (“Energy Commission”) proposes to confirm, and make additional changes to, emergency changes to California Code of Regulations, title 20, section 3103 (§ 3103). Following an Order Instituting Rulemaking, the Energy Commission adopted emergency changes to § 3103 which became effective on March 12, 2015. This rulemaking would confirm the changes made in the emergency procedure, and make additional changes.

Previous to the adoption of the changes made in the emergency regulation, the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) required funding recipients to discount credits received from reducing emissions of greenhouse gases, tailpipe pollutants and toxic air contaminants in proportion to ARFVTP grant funding received (the “discounting requirement”). The Energy Commission’s emergency action was spurred by comments from parties with ARFVTP-funded projects who stated that they would suffer significant economic harm as a result of the discounting requirement. Since the initiation of the ARFVTP program, several factors have changed, compelling the Energy Commission to revisit the 3103 regulation. Costs of biofuel and biomethane have increased, federal and state incentives vary from year to year creating investment uncertainty, and international and national fuel markets have changed. Alternative fuel technologies and markets have begun to evolve and come to fruition, but are not yet cost competitive with petroleum fuels. Removal of the discounting requirement eliminates unintended economic harm and allows recipients of ARFVTP funds to receive the full value of emission credits generated by eligible projects. This regulation would also clarify what projects are subject to the remaining funding restrictions.

Proposed § 3103(a)

The text in former subsection a) would be broken into additional subsections, such that each requirement is stated in a discrete subsection. This change was made in the emergency regulation; this rulemaking would confirm that change.

Purpose: The purpose of the creating of a new subsection (a) is to list the first requirement of former subsection (a) alone. The first sentence of former § 3103(a) is now the entirety of the new § 3103(a). No text is changed from the original regulation.

Problem: The former version of the regulation combined multiple requirements in a single section.

Rationale: The rationale for this change is to increase both clarity and efficacy of the regulation. This change was made in the emergency regulation effective March 12, 2015; this rulemaking would confirm that change.

Benefits: The use of subsections creates a simpler, more streamlined, reader-friendly format and enhances the clarity of the requirements.

Proposed § 3103(b).

There are two changes made in this subsection. First, the subsection is created, restructuring the language in former subsection a). This change was made in the emergency regulation; this rulemaking would confirm that change. The purpose of, problem behind, rationale for, and benefits of this change are as follows.

Purpose: The purpose of the creating of a new subsection (b) is to list the second requirement of former subsection (a) alone. The second sentence of former § 3103(a) is now the entirety of the new § 3103(b).

Problem: The former version of the regulation combined multiple requirements in a single section.

Rationale: The rationale for this change is to increase both clarity and efficacy of the regulation. This change was made in the emergency regulation effective March 12, 2015; this rulemaking would confirm that change.

Benefits: The use of subsections creates a simpler, more streamlined, reader-friendly format and enhances the clarity of the requirements.

Second, the words “proposing entity” would be replaced with the word “applicant.” The purpose of, problem behind, rationale for, and benefits of this change are as follows.

Purpose: The purpose of replacing the word “proposing entity” with the word “applicant” is to use language that is clearer than the former term “proposing entity,” and which is consistent with the statute which the regulation implements and makes specific.

Problem: The term “applicant” is used in Health & Safety Code section 44272.3(b)(5), but this regulation uses the term “proposing entity.” Also, internally within the Energy Commission, the word “applicant” is used to describe companies which submit bids to competitive solicitations, or to other funding mechanisms. The words “proposing entity” are not frequently used.

Rationale: The word “applicant” is a more accurate reflection of entities which participate in the ARFVTP. This change was made in the emergency regulation effective March 12, 2015; this rulemaking would confirm that change.

Benefits: This change would create harmony between internal practice and the language of the regulation, avoid disparate language in the statute and the regulation, and would increase certainty for entities whose projects are regulated.

Proposed § 3103(c)

There are three changes made in this subsection. First, the subsection is created, restructuring the language in former subsection a). This change was made in the emergency regulation; this rulemaking would confirm that change. The purpose of, problem behind, rationale for, and benefits of this change are as follows.

Purpose: The purpose of the creating subsection (c) is to list the third requirement of former subsection (a) alone. The third and fourth sentences of former § 3103(a) are now the entirety of the new § 3103(c).

Problem: The former version of the regulation combined multiple requirements in a single section.

Rationale: The rationale for this change is to increase both clarity and efficacy of the regulation. This change was made in the emergency regulation effective March 12, 2015; this rulemaking would confirm that change.

Benefits: The use of subsections creates a simpler, more streamlined, reader-friendly format and enhances the clarity of the requirements.

The second change made in this subsection is replacing the term “proposing entity” with the term “applicant.” The purpose of, problem behind, rationale for, and benefits of this change are identical to those discussed for the identical change in subsection (b), above. This change was made in the emergency regulation; this rulemaking would confirm that change.

The third change is that the last portion of the last sentence of this subsection (“...except to the extent allowed by subsection (b)”) is stricken. The purpose of, problem behind, rationale for, and benefits of this change are as follows.

Purpose: The purpose of this change is to remove obsolete language.

Problem: The removal of former subsection (b), the discounting provision, and the addition of subsection (e)(1)-(4), renders the stricken language surplusage.

Rationale: The reference in the stricken language to former subsection (b), a now deleted provision, is meaningless. For that reason, in the emergency regulation, the reference was changed to subsection (d). However, the Energy Commission subsequently recognized that the revised subsection (d) does not impose restrictions on credit sales, but rather creates exceptions to restrictions on receipt of ARFVTP funds. For this reason, the reference to subsection (d) is also meaningless, and as part of this proceeding, the last portion of the sentence is deleted entirely.

Benefits: This change creates increased certainty and clarity for entities with regulated projects because it eliminates references to inapplicable language.

Proposed § 3103(d)

Subsection d) is created via restructuring the language in former subsection a). This change was made in the emergency regulation; this rulemaking would confirm that change.

Purpose: The purpose of the creating subsection (d) is to list the last requirement of former subsection (a) alone. The last sentence of former § 3103(a) is now the entirety of the new § 3103(c). There are no changes to this language from that of the original regulation.

Problem: The former version of the regulation combined multiple requirements in a single section.

Rationale: The rationale for this change is to increase both clarity and efficacy of the regulation. This change was made in the emergency regulation effective March 12, 2015; this rulemaking would confirm that change.

Benefits: The use of subsections creates a simpler, more streamlined, reader-friendly format and enhances the clarity of the requirements.

Proposed § 3103(e)

There are three changes made in this subsection. First, the subsection is created. This is a change from the emergency regulation, which had the list of projects contained in new subsection (e) as part of subsection (d).

Purpose: The purpose of creating subsection (e) is to list the types of projects which are not subject to the restrictions of former subsections, apart from any unrelated requirements.

Problem: The former version of the regulation combined multiple requirements in a single section. In the emergency regulation, the definition of a legally enforceable requirement was combined with a list of exempt projects. These are two distinct issues, but were combined in the same subsection.

Rationale: The rationale for this change is to increase both clarity and efficacy of the regulation.

Benefits: The use of subsections creates a simpler, more streamlined, reader-friendly format and enhances the clarity of the requirements.

Second, as a result of the emergency rulemaking, this subsection created a list of project types which are not subject to the restrictions contained in subsections (a) – (c).

Purpose: The purpose of listing projects in the emergency regulation, was to create a carve-out which exempts specified projects from the requirements of subsections (a), (b), and (c).

Problem: Former subsection (b) allowed projects to receive funding despite the restrictions contained in former subsection (a) (current subsections (a) – (c)). With the elimination of the discounting requirement (discussed below), there was a potential for uncertainty that the types of projects previously funded by ARFVTP would be able to continue to receive funding.

Rationale: The addition of subsection (e) ensures that the types of projects which to date have been funded by the ARFVTP may continue to receive funding, without the burdensome discounting requirement. Specifically:

Subsection (e)(1) allows projects that voluntarily participate in the Low Carbon Fuel Standard (LCFS) by producing fuels which are compliant with the Air Resources Board's (ARB) LCFS to be eligible for ARFVTP funding. The restrictions in subsections (a) through (c) were originally intended, for policy reasons, to prevent entities required to participate in the LCFS from using state funds to comply with a state-mandated program. The proposed subsection (e)(1) allows projects that produce fuels voluntarily, (i.e., which "opt-in" to the LCFS without being required by law to do so) to receive ARFVTP funds, thereby eliminating the issue of using state funds to comply with state mandates. Examples of projects which may fall under this proposed subsection include, but are not limited to, projects which build hydrogen production and distribution facilities and equipment; projects which build or install electric vehicle charging infrastructure; projects which produce biomethane; and projects which produce or distribute natural gas for use as a transportation fuel.

Subsection (e)(2) ties eligibility for ARFVTP funding to meeting or exceeding ARB's carbon intensity (CI) requirements. The reason for this is that projects which exceed ARB's CI requirements may go above and beyond what is legally required. This section ensures state funds would not be used to comply with state mandates, which was the intent of the restriction contained in subsection (a) prior to the emergency rulemaking. In addition to the changes made in the emergency regulation, the word "bio" is now added so that only projects that produce biofuels meeting or falling below certain CI requirements are not subject to the restrictions of the former subsections. The reason for this change is that use of the word "fuel" would allow all fuels, even those which are not environmentally beneficial, to receive ARFVTP funding. The ARFVTP statutes specify that funding must be given to "alternative and renewable fuels" (Health & Safety Code § 44272(a)). Using the word "fuel" could open the door to fuel types, such as

gasoline and diesel, which would not help achieve program goals. Specifying that “biofuels” are not subject to the above restrictions ensures that the projects which the ARFVTP has funded in the past may continue to receive funding without allowing in fuel types which are statutorily prohibited.

Subsection (e)(3) is similar to (e)(1) and (e)(2) in that it allows funding for projects which generate emissions credits that are not required by law. However, subsection (e)(3) is not limited to the LCFS program. This subsection was added to capture, as a “catch-all,” opt-in projects which may be eligible for credits under any emission credit-generating program other than the LCFS. Since there are numerous such programs at the local, state, and federal level, this subsection gives the same treatment to these diverse emissions programs as subsection (e)(1) does to the LCFS.

Subsection (e)(4) is proposed to make the exemption authorized by subsections (e)(1) – (3) operative on projects which have been awarded ARFVTP funding in the past. Prior to adoption of emergency changes to the regulation, all agreements with ARFVTP recipients contained a term mandating compliance with the credit discounting provision and specifying a formula for discounting. Even though the terms and conditions acknowledge that the restriction may be eliminated if the regulations change, older agreements do not contain such language. This proposed subsection explicitly states that projects are not bound by a restriction that has been determined to be detrimental to the overall objectives of the program and the goals of the authorizing statute.

Benefits: Clarifying that the types of projects which have received ARFVTP funding in the past may continue to receive funding will increase certainty and profitability for stakeholders. Clarifying that the exemptions to funding restrictions apply to previously awarded projects will both increase certainty and profitability for stakeholders and streamline the Energy Commission’s administration of previously awarded grants.

The third change is that projects identified in (e)(1)-(4) are exempt only from subsections (a) *and* (c), and not subsection (b). This is a change from the emergency rule, which exempted the projects listed in (e)(1)-(4) from (a) *through* (c).

Purpose: The purpose of the addition of subsection (e) is to create an exemption for projects from the funding restrictions outlined in subsections (a) and (c). This change would prohibit use of the exemption authorized by (e)(1)-(4) for projects identified in subsection (b).

Problem: Former subsection (b), the discounting and associated requirements, allowed projects to receive funding despite the restrictions contained in former subsection (a) (current subsections (a) – (c)), while prohibiting using state funds to comply with a performance requirement. After adopting the emergency regulations, the Energy Commission realized that in eliminating the discounting requirement, it had inadvertently removed the restriction on funding for projects implemented to meet a performance requirement.

Rationale: This change is needed to maintain the prohibition on using ARFVTP funds for projects which would help an applicant meet a performance requirement (i.e., avoids payment to comply with the law).

Benefits: This change maximizes the leverage of state funds in providing seed money for alternative fuel projects, and effectuates Energy Commission policy to not pay for compliance with state mandates.

Proposed Elimination of Former § 3103(b)

Purpose: The purpose of eliminating this section is to remove credit discounting requirements and associated restrictions. This change removes the financial barriers to full implementation of the ARFVTP by eliminating restrictions on using credits generated by certain projects. Former subsection (b) was eliminated in the emergency rulemaking; this rulemaking would confirm that change.

Problem: The discounting requirement contained in former subsection (b) created additional barriers to the development and deployment of alternative fuels. Since adoption of 3103 in 2009, several factors have changed, including an increased cost of alternative fuel systems; variance of state and federal incentives and regulations from year to year; and volatility in international and national fuel markets. Significant stakeholder input (see stakeholder letters cited below, in docket) increased Energy Commission awareness about the impacts of the credit discounting requirement.

Former subsection (b) allowed projects that generate emissions credits to receive ARFVTP funding if 1) only a portion of the project was sought to be funded from ARFVTP; 2) the emissions credits generated by the project were discounted proportionally to the amount of funding received; and 3) the project met criteria specified for all ARFVTP projects in 20 C.C.R. §§ 3101 and 3101.5. Together, these three provisions in former subsection (b) were known as the “discounting requirement.”

The Energy Commission has funded roughly \$135 million to support California projects which produce low carbon fuels (biomethane, biodiesel, renewable diesel and low carbon intensity ethanol) that also generate credits which obligated parties under the LCFS may buy to achieve a required 10% reduction of carbon intensity of gasoline and diesel fuel by 2020. The discounting requirement was applicable to all of these projects.

Prior to the emergency rulemaking associated with § 3103, stakeholders, including biofuels producers, expressed concerns that the credit discounting requirement imposed significant barriers to commercial operation and deployment of alternative fuels. Specifically, on or about November 12, 2014, Crimson Renewable Energy, LP submitted a letter requesting that the Energy Commission revisit the discounting requirement. Crimson stated that without being able to use the value of all emission credits received, an alternative fuel production project would not work in California and that current market conditions make the economic value of LCFS credits

crucial to the survival of grantees such as Crimson. (TN #204437, Letter from Crimson Renewable Energy of November 12, 2014, p. 3.) As the Energy Commission reviewed Crimson's concerns, other stakeholders echoed those concerns. (See TN #204432, Letter from AEMETIS of February 11, 2015; TN #204435, Letter from Pacific Ethanol of March 18, 2015; TN #204436, Letter from Bioenergy Association of California of February 12, 2015; TN #204438, Letter from Community Fuels of February 11, 2015; TN #204439, Letter from Renewable Natural Gas of February 11, 2015; TN #204440, Letter from Waste Management of February 11, 2015; TN #204454, Letter from Air Resources Board of January 30, 2015.)

The Energy Commission had also previously sought comments regarding the discounting provision via a form distributed to ARFVTP recipients. This form was distributed after Energy Commission staff received verbal feedback from project developers who had concerns regarding the discounting provisions. Responses to the form were received from 24 ARFVTP recipients. (See Survey Responses in 15-OIR-02 Docket from Aemetis Advanced Fuels Keyes, TN# 204705-2; Agricultural Waste Solutions, TN# 204705-3; Air Liquide, TN# 204705-4; Air Products, TN# 204705-5; American Biodiesel, TN# 204705-6; Biodiesel Industries, TN# 204705-7; Blue Line Transfer, TN# 204705-8; Buster Biofuels, TN# 204705-9; Calgren Renewable Fuels, TN# 204705-10; City of Napa, TN# 204705-11; Colony Energy, TN# 204705-12; CR&R, TN# 204705-13; Environ, TN# 204705-14; ITM, TN# 204705-15; New Leaf Biofuel, TN# 204705-16; Pacific Ethanol, TN# 204705-17; Pearson Fuels, TN# 204705-18; Pixley Biogas, TN# 204705-19; Pearson Fuels (second response), TN# 204705-20; SacPort, TN# 204705-21; Solazyme, TN# 204705-22; Springboard Biodiesel, TN# 204705-23; Whole Energy Pacifica, TN# 204705-23; and Shawn Garvey, TN# 204707.)

Many entities who submitted responses to the Energy Commission's survey form, as well as those who submitted full comment letters, affirmed that former subsection (b)'s restriction on the use of credits by ARFVTP recipients conflicts with the intent of the ARFVTP (AB 118, Stats. 2007, Ch. 750; reauthorized by AB 8, Stats. 2013, Ch. 401); has had a chilling effect on biofuels producers' interest in applying for funding and entering into or increasing their presence in the biofuels market; and ultimately leads to a diminished capability to produce alternative low carbon fuels in California.

The Energy Commission also received comments from governmental entities affirming the need to eliminate the discounting requirement in order to support state renewable energy goals. (See Appendix D to Documentation to Support Revisions to Section 3103 Regulations, Air Resources Board letter of January 30, 2015; CalRecycle letter of March 9, 2015, 15-OIR-02 Docket TN# 203792; and City of Napa survey response 15-OIR-02 Docket TN# 204705-11.)

After reviewing stakeholder and government comments regarding impacts of compliance with the discounting requirement, the Energy Commission determined that the discounting requirement put nineteen ARFVTP project recipients at risk of immediate, adverse economic harm because the value of the credits are substantial sources of revenue which, if lost, affect business operations or possible decisions to close plants. (TN #203741, Notice of Emergency Rulemaking Action, Attachment B, Energy Commission Finding of Emergency, adopted

February 25, 2015, p. 1.) Revenue from credits is critical to the financial viability of ARFVTP recipients because the market for alternative and renewable fuels products is currently depressed and the sale of these products alone is insufficient to compensate for the cost of production. The Energy Commission determined that failure to eliminate the discounting requirements would also subject the state to the possibility of “sunk cost” investments in stranded assets, and result in fewer contributors to help achieve LCFS statutory goals. (*Id.*, p. 2.)

Energy Commission investment of over \$135 million in alternative and renewable fuel production capacity is subject to this requirement, affecting in-state low-carbon fuel production. (*Id.*, p. 2.) Requiring program participants to discount credits specifically handicaps California projects, placing them at an economic disadvantage compared to imports of biofuels or low carbon fuels from similar projects owned by competitors in other states and countries. (*Id.*)

Moreover, the at-risk projects are located in predominantly economically disadvantaged communities -- many in the San Joaquin Valley -- that would lose employment and tax revenue. (*Id.*, p. 1.)

Rationale: The elimination of the restrictions contained in former section (b) is necessary to achieve the statutory goals of the ARFVTP.

The dual goals of the ARFVTP and its implementing legislation are to reduce GHG emissions and to displace petroleum use in the transportation sector by supporting the development of alternative and renewable fuels, especially in-state. Other state programs also support these goals, such as the LCFS administered by ARB. The California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (Health & Safety Code sections 44270 et seq., the “Act”) introduced both the ARFVTP and complementary ARB programs. Together, these programs form a web of market interventions designed to reduce California’s GHG footprint and its use of petroleum fuels. It is imperative to remove the discounting provision because it is an obstacle to full implementation of the Act. Removal of the provision will ensure that emission reductions can be realized as soon as possible and the state can more quickly meet its goal of increasing production of low carbon, renewable fuels as part of the state’s strategy to reduce greenhouse gases.

Specifically, the Act directs the Energy Commission to implement the ARFVTP “to develop and deploy technology and alternative and renewable fuels in the marketplace, without adopting any one preferred fuel or technology.” (Health & Safety Code, § 44272(a).) The statute requires that priority for funding be given to, among others, those projects that are consistent with existing and future state climate change policy; that reduce criteria air pollutants and air toxics; that reduce or avoid multimedia environmental impacts; and that have the ability to decrease emissions of water pollutants. (Health & Safety Code § 44272(b).)

The Legislature established the ARFVTP to help reduce air and water pollution by encouraging the production of alternative and renewable fuels. (See, e.g., Health & Safety Code § 44272(c)(3)-(4).) The transportation sector is responsible for approximately 40 percent of

statewide greenhouse gas emissions and significant degradation of public health and environmental quality due to air pollution. (Stats. 2007, Ch. 750, § 1(b), p. 90.) The \$135 million spent so far by the Energy Commission to fund biofuel and biomethane projects is expected to displace 98 million diesel gallon equivalents annually by 2025. The entire ARFVTP is geared toward improving air quality and is expected to reduce anywhere from 100 to 178 tons of particulate matter (PM) 2.5 by 2025.

The changes to the regulation are in keeping with this authorizing legislation and are necessary to carry out its goals. Without the proposed changes, the statute's goal of developing and deploying alternative fuels may not be realized. In other words, the regulation prior to the emergency changes, combined with current market forces affecting the competitiveness of alternative fuels, would have caused potentially significant delay in reducing air impacts.

As discussed in further detail in the Energy Commission staff's report *Documentation to Support Revisions to Section 3103 Regulations* (TN #204434, Documentation to Support Revisions to Section 3103 Regulations), alternative and renewable fuel developers have determined that credit use restriction renders their projects not financially profitable given current market conditions. The consequences of continued implementation of the existing regulation would be catastrophic to program participants, many of whom are just now completing construction of substantial expansions in biofuel production capacity. In a survey of potential impacts, respondents have said they will not be able to complete their planned build-out if the credit discounting requirement is enforced. (See Survey Responses in 15-OIR-02 Docket, TN## 204705-1 – 204705-24; 204707.)

Benefits: Elimination of the discounting requirement increases alternative and renewable fuel project profitability, expands ARFVTP's applicant pool, and furthers statutory goals, including increased production of alternative fuels.

This lack of profitability as a result of restrictions in the regulation would have inhibited developers' plans to begin or expand production of alternative or renewable fuels. (TN #203741, Notice of Emergency Rulemaking Action, Attachment B, Energy Commission Finding of Emergency, adopted February 25, 2015, p. 4.) The changes to the regulation would remove the discounting requirement of former subsection (b), as well as certain other restrictions discussed above in the new subsections (a) through (c), from entities that voluntarily participate in credit markets, thus removing an impediment to the profitability of these enterprises and allowing such projects to proceed, in keeping with the intent of the statute. Elimination of the restriction is necessary to ensure that projects that are on the cusp of coming online or of expanding production in fact do so, instead of being shuttered because the current market combined with the regulatory restriction makes it uneconomical to produce needed alternative and renewable fuels, per the intent of the statute.

In addition, the Energy Commission is continuously publishing funding opportunities for competitive bid under the ARFVTP. These opportunities solicit proposals to receive funding under the program and identify specific details regarding such funding, including any restrictions.

The mere presence of the restriction discourages some entities from ever applying for funding; elimination of the restriction is expected to broaden the pool of applicants to ARFVTP funding opportunities published by the Energy Commission. An expanded applicant pool will enhance the Energy Commission's ability to meet statutory goals.

As part of the Economic Impact Assessment prepared for these revised regulations, the Energy Commission evaluated economic impacts of the changes adopted in the emergency rulemaking, as well as those currently under consideration. The assessment is focused on statewide impacts and not just impacts to individual ARFVTP participants. Due to the relatively small size of the ARFVTP, the changes will have an insignificant statewide effect. Nonetheless, information provided by stakeholders indicates that projects to help the State meet its alternative fuels goals are hindered by the requirements contained in former subsection (b). Eliminating those requirements will create a greater likelihood that ARFVTP-funded projects will be successful.

DOCUMENTS AND REPORTS RELIED UPON – Gov. Code § 11346.2(b)(3)

The Energy Commission has relied upon the following technical, theoretical, and empirical studies, reports, or similar documents in drafting the proposed regulations:

Energy Commission staff's report *Documentation to Support Revisions to Section 3103 Regulations*, Docket OIR-02-015 TN# 204434.

Pre-NOPA Survey Responses. Docket 15-OIR-02, TN## 204705-1 – 204705-24; 204707.

Calculations Supporting Economic Impact Assessment. Docket 15-OIR-02, TN# 204714.

Pre-NOPA Comment Letters: TN# 204437, Letter from Crimson Renewable Energy of November 12, 2014; TN# 204432, Letter from AEMETIS of February 11, 2015; TN# 204435, Letter from Pacific Ethanol of March 18, 2015; TN# 204436, Letter from Bioenergy Association of California of February 12, 2015; TN# 204438, Letter from Community Fuels of February 11, 2015; TN# 204439, Letter from Renewable Natural Gas of February 11, 2015; TN# 204440, Letter from Waste Management of February 11, 2015; T #204454, Letter from Air Resources Board of January 30, 2015; CalRecycle letter of March 9, 2015, 15-OIR-02 Docket TN# 203792.

Business meeting transcript of adoption of Emergency Regulation, TN# 204450-2.

Transcript of informal workshop of April 10, 2015, TN# 204639.

Presentation from April 10, 2015 informal workshop, TN# 204443-2.

Memo to Add Attached Order Instituting Rulemaking From 12-OIR-03 Proceeding to Docket No. 15-OIR-02, and Attached Memo. February 4, 2015. Docket OIR-02-015 TN# 203606, available at <http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR->

[02/TN203606_20150205T141313_Memo_To_Add_Attached_Order_Instituting_Rulemaking_From_12OIR3_P.pdf](#).

[Proposed] Resolution Adopting Emergency Regulations and Finding of Emergency. February 19, 2015. Docket OIR-02-015 TN# 203710, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203710_20150219T133715_%5BProposed%5D_Resolution_Adopting_Emergency_Regulations_and_Finding.pdf.

Notice of Consideration of Emergency Regulations. February 19, 2015. Docket OIR-02-015 TN# 203711, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203711_20150219T141905_Note_of_Consideration_of_Emergency_Regulations.pdf.

Notice of Emergency Rulemaking Action. February 25, 2015. Docket OIR-02-015 TN# 203741, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203741_20150225T162811_Note_of_Emergency_Rulemaking_Action.pdf.

Corrected Order Instituting Rulemaking. Docket OIR-02-015 TN# 203742, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203742_20150226T140136_Corrected_Order_Instituting_Rulemaking.pdf.

Resolution Adopting Emergency Regulations and Finding of Emergency. Energy Commission Order No. 15-0225-7. February 15, 2015. Docket OIR-02-015 TN# 203763, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203763_20150303T140357_Resolution_Adopting_Emergency_Regulations_and_Finding_of_Emergency.pdf.

Notice of Approval of Emergency Regulatory Action. March 12, 2015. Docket OIR-02-015 TN# 203871, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN203871_20150313T105331_Note_of_Approval_of_Emergency_Regulatory_Action.pdf.

Notice of Staff Workshop. April 2, 2015. Docket OIR-02-015 TN# 204052, available at http://docketpublic.energy.ca.gov/PublicDocuments/15-OIR-02/TN204052_20150402T163957_Note_of_Staff_Workshop_Confirmation_of_Emergency_Regulation.pdf.

Monthly LCFS Credit Transfer Activity Reports (2014-2015), California Air Resources Board, available at: <http://www.arb.ca.gov/fuels/lcfs/lrtmonthlycreditreports.htm>, and at Docket 15-OIR-02, TN ## 204701-1 – 204703-16.

Status Review of California's Low Carbon Fuel Standard, April 2015 Issue, Sonia Yeh, Julie Witcover, and James Bushnell. Available at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.its.ucdavis.edu%2Fwp-content%2Fthemes%2Fucdavis%2Fpubs%2Fdownload_pdf.php%3Fid%3D2491&ei=O0dVVYOZGO3fsA

[SK-IDADQ&usg=AFQjCNEUcgxNPwaL6paXD43HvgvRwnU4g&bvm=bv.93564037.d.cWc](http://www.energy.ca.gov/2014_energypolicy/), and at Docket 15-OIR-02, TN# 204706.

2014 Integrated Energy Policy Report Update, California Energy Commission. Available at: http://www.energy.ca.gov/2014_energypolicy/, and at Docket 15-OIR-02, TN# 204710.

Workshop on Low Carbon Fuel Standard: Proposed Compliance Curves and Cost Compliance Provision, California Air Resources Board staff presentation, October 27, 2014. Docket 15-OIR-02, TN# 204712.

Workshop on Low Carbon Fuel Standard Re-Adoption: Natural Gas Carbon Intensity and other CA-GREET Model Adjustments, California Air Resources Board staff presentation, April 3, 2015. Docket 15-OIR-02, TN# 204711.

SPECIFIC TECHNOLOGIES OR EQUIPMENT – Gov. Code § 11346.2(b)(1)

The proposed regulation does not mandate the use of specific technologies or equipment, nor does it prescribe specific actions or procedures. Rather, it specifies eligibility for ARFVTP program funding. Therefore, a performance standard was not considered.

CONSIDERATION OF REASONABLE ALTERNATIVES, INCLUDING THOSE THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS – Gov. Code § 11346.2(b)(4)

In workshops with stakeholders to finalize the language prior to development of this ISOR, no alternatives were developed or presented to the Energy Commission that are less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing statute or other law being implemented or made specific by the proposed regulation, nor that would lessen any adverse impact on small business. In fact, comments received in informal pre-rulemaking activities have indicated that the proposed change is favored by small businesses. (See survey responses in Docket 15-OIR-02 from CR&R, TN# 204705-13; Pixley Biogas, TN# 204705-19; Buster Biofuels, TN# 204705-9; Blue Line Transfer, TN# 204705-8; Springboard Biodiesel, TN# 204705-23; Pearson Fuels, TN## TN# 204705-18 and 204705-20; Biodiesel Industries, TN# 204705-7; New Leaf Biofuel, TN# 204705-16; Environ, TN# 204705-14; Shawn Garvey, TN# 204707; Whole Energy Pacifica, TN# 204705-23; Agricultural Waste Solutions, TN# 204705-3. See also letters from ARVFTP participants in Docket 15-OIR-02: TN# 204432, Letter from AEMETIS of February 11, 2015; TN# 204435, Letter from Pacific Ethanol of March 18, 2015; TN# 204436, Letter from Bioenergy Association of California of February 12, 2015; TN# 204438, Letter from Community Fuels of February 11, 2015; TN# 204439, Letter from Renewable Natural Gas of February 11, 2015; TN# 204454, Letter from Air Resources Board of January 30, 2015.)

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS – Gov. Code § 11346.2(b)(6)

The proposed modifications to the regulations neither duplicate nor conflict with any federal regulation or statute. The proposed modifications to the regulations do not implement a federally mandated regulation or statute. The Energy Commission is unaware of any comparable federal regulation or statute which sets targets for or implements programs to achieve California's GHG reduction goals.

ECONOMIC IMPACT ASSESSMENT – Gov. Code § 11346.3(b)

The proposed changes will lead to a revenue increase for ARFVTP grant recipients that choose to generate and sell Low Carbon Fuel Standard (LCFS) credits during the term of their grant agreement. To date discounted LCFS credits have not been sold into the market by grant recipients. Future sales might exert a downward pressure on the market price of LCFS credits, if sold in high volume and at a significant price discount.

The Energy Commission estimates that without the changes to Section 3103, the maximum annual volume of discounted LCFS credits that could enter the market in the future is 292,220 metric tons. This volume of discounted LCFS credits is approximately the same as the monthly traded volume in December 2014. The Energy Commission finds the potential sale of this volume of discounted credits is likely to have a small impact on the market price of LCFS credits. An April 3, 2015 presentation by the California Air Resources Board suggests that banked LCFS credits could reach 14 million metric tons by 2018. The ARFVTP grant recipient volume subject to discounting and the amount of the discount are relatively small in comparison to the full LCFS market.

The economic impact of the proposed regulatory changes will be a transfer from prospective purchasers of discounted LCFS credits to prospective ARFVTP grant recipients that no longer must discount LCFS credits they choose to sell into the market. Because no discounted LCFS credits have been transacted to date, the parties to such transfers in the future remains uncertain.

Energy Commission staff reviewed past and current grant recipients to obtain a high annual volume estimate of potential LCFS credit generation subject to a discounting requirement. Several assumptions were required to reach this estimate:

- Future grant recipients will be similar to past and current grant recipients, which include developers, operators and owners of fueling infrastructure, and biofuel and biomethane producers.
- Annual funding amount, project types, and grant terms will be similar in the future. Historically total funding allocations for biofuel and biomethane production combined average \$20 million per year and fueling infrastructure allocations average \$20 million for hydrogen, \$10 million for electric chargers and \$2 million for natural gas fueling.
- LCFS credit “discount factor” does not change over time (percent of grant to project cost). The ARFVTP funding shares range from 25 percent to 50 percent of total project costs,

which are defined as discrete phases of project development, expansion or feedstock acquisition.

- Volumes of production and carbon intensities will not vary significantly in the future.
- Bioenergy production ramps to capacity over final six months of the ARFVTP grant term. Construction time accounts for up to 2½ years of a grant term. Fuel production related to the ARFVTP occurs in the last six months of grant terms, but fuel production continues after the grant end date. Fueling infrastructure can have shorter construction time and greater amounts of time in fuel sales during ARFVTP grant timeframes.
- Grant recipients will maximize LCFS credit generation and sell all credits into the market.

Using the assumptions listed above in combination with estimates of maximum annual LCFS credit generation by project type yields, figures for expected volumes of LCFS credits subject to discounting terms of existing and future grant agreements. The table below provides information by project type on factors used to determine potential credit generation.

ARFVT Project Type	LCFS Eligible Annual Volume	Average Carbon Intensity (gCO₂e/MJ)	Annual LCFS Credits (metric tons)
CNG/RNG Refueling	57,120,000 DGE	75.0	212,999
Hydrogen Refueling	3,993,100 kg	35.62 (w/ 2.3 EER)	30,604
Bio/Renewable Diesel Production	2,320,833 gal	16.64	26,867
E85 Refueling	24,480,000 GGE	97.0	7,048
Biomethane Production	351,336 DGE	-13.99	5,514
EV Recharging	23,402,200 kWh	35.21 (w/ 3.0 EER)	5,415
Ethanol Production	1,438,889 gal	66.93	3,773
Total Annual LCFS Credits			292,220

An estimate of annual economic impact to ARFVTP grant recipients requires application of discount factors to eligible volumes of LCFS credits. The discount factor for each grant recipient is determined by the percentage of ARFVTP grant to total project cost. Based upon funded projects to date, the discount factors typically range from a high of 50% to a low of 25%.

In addition to the discount factor to be applied, an estimate of the market price of LCFS credits is needed. While LCFS credit prices have reached over \$80 per metric ton, prices over the last eight months have been stable between \$22 and \$26 per ton. The table below shows annual economic impact to ARFVTP grant recipients of avoided discounting of potential LCFS credit sales. Values shown in the table assume an LCFS market price of \$50 per metric ton.

ARFVT Project Type	Annual LCFS Credit Value (\$50/ton)	Average Discount Factor	Impact to Grant Recipients
CNG/RNG Refueling	\$10,649,950	36%	\$3,833,982
Hydrogen Refueling	\$1,530,200	50%	\$765,100
Bio/Renewable Diesel Production	1,343,350	36%	\$483,606
E85 Refueling	\$352,400	50%	\$176,200
Biomethane Production	\$275,700	36%	\$99,252
EV Recharging	\$270,750	25%	\$67,687
Ethanol Production	\$188,650	28%	\$52,822
Total Annual Impact:			\$5,478,649

The Energy Commission estimates ARFVTP grant recipients could receive up to \$5,478,649 in additional annual LCFS credit value with implementation of proposed regulatory changes. If all grant recipients pursued maximum LCFS credit generation and sold 100% of eligible credits, then LCFS obligated parties could lose the ability to purchase discounted credits of that same amount. As a result, the total maximum impact in any single year is $\$5,478,649 \times 2 = \$10,957,298$.

- Creation and Elimination of Jobs within California – Government Code § 11346.3(b)(A)

Implementation of the proposed changes is expected to create between 96 and 160 new jobs in California. The Energy Commission’s 2014 Integrated Energy Policy Report estimated the total number of direct jobs created through construction and operation of ARFVTP-funded projects is almost 6,400; this includes about 3,200 long-term jobs and nearly 3,200 short-term jobs. (See Energy Commission Docket 15-OIR-02 TN# 204710, California Energy Commission 2014 Integrated Energy Policy Report Update.) The “credit discounting” requirement could affect each company differently depending on the value of the credits over time, the percent of ARFVTP funding received compared to total project costs, the total revenue produced by each project, the

amount of time credit discounting is applied, and job intensity of each project. (See Calculations Supporting Economic Impact Assessment, Docket 15-OIR-02 TN# 204714.) Energy Commission staff used these factors to estimate new jobs associated with eliminating the credit discounting requirement and determined that a small percent of the total jobs would be impacted.

Additionally, the proposed regulation changes involve a transfer of LCFS credit value from one entity producing transportation energy to another entity producing transportation energy. All impacted entities have economic activities within California. The potential magnitude of annual transfer of LCFS credit value is relatively small compared to scale of economic activities of affected parties. For some ARFVTP grant recipients the increased revenue may be needed to make financing and/or operation of the project viable, in which case the proposed changes would lead to a small increase in job creation.

- Creation of New Businesses or the Elimination of Existing Businesses within California – Government Code § 11346.3(b)(B)

The proposed regulations are expected to create approximately 0 to 15 new businesses within California. The proposed regulations are not expected to eliminate any businesses within California. The proposed regulation change improves the likelihood of success of ARFVTP projects, which thereby could lead to new business creation within the California alternative fuels and vehicle technology and infrastructure sectors of the economy. The Energy Commission staff conclude that success of projects co-funded by 145 recipients to date and recipients of new future awards can be expected to stimulate the development and introduction of up to 15 new supply chain businesses that manufacture component parts and equipment, start-up companies that provide engineering and technical services and financing, accounting and investment companies.

- Expansion of Businesses Currently Doing Business in California – Government Code § 11356.3(b)(C)

The proposed regulations could expand existing businesses within California because the proposed changes improve the likelihood of financial success of ARFVTP projects. The Energy Commission staff conducted a sampling of a total of 145 funding recipients in September 2014 and 45 companies provided comments noting some level of adverse impact resulting from the credit discounting requirement. Most noted that credit discounting requirement would inhibit expansion of expected fuel production capacity or jeopardize fuel sales business growth. Staff concluded that elimination of the credit discounting requirement would allow business expansion to occur as expected in the course of successful development and operation of each project. An additional 100 other funding recipients either did not respond to the survey or were not included in the sample, but could be impacted in a similar manner.

- Benefits to Health and Welfare of California Residents, Worker Safety, and the State's Environment – Government Code § 11346.3(b)(D)

The proposed changes will improve the health and welfare of residents and the environment because the changes will give ARFVTP grant recipients an increased likelihood of success in producing alternative and renewable fuel products. Co-benefits of products made by grant recipients include improvements to air quality and reduction in greenhouse gas emissions. Reductions of these air pollutants improve health and welfare of residents and contribute to avoided adverse impacts of climate change and climate variability.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT AFFECTING BUSINESS

The Energy Commission finds that the proposed modifications to the regulation will have no significant statewide adverse economic, fiscal, or environmental impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. This initial determination also applies to small businesses, which, as defined in Government Code section 11342.610, are limited to business activities that are “independently owned and operated” and “not dominant in its field of operation.”(Govt. Code, § 11342.610, subd. (a)(1) and (2).)

The Energy Commission is unaware of any legitimate cause and effect relationship between the proposed modifications to the regulations and a significant adverse economic impact directly affecting businesses. On the contrary, input from small businesses has been that the proposed modifications would benefit them. (See survey responses in Docket 15-OIR-02 from CR&R, TN# 204705-13; Pixley Biogas, TN# 204705-19; Buster Biofuels, TN# 204705-9; Blue Line Transfer, TN# 204705-8; Springboard Biodiesel, TN# 204705-23; Pearson Fuels, TN## TN# 204705-18 and 204705-20; Biodiesel Industries, TN# 204705-7; New Leaf Biofuel, TN# 204705-16; Environ, TN# 204705-14; Shawn Garvey, TN# 204707; Whole Energy Pacifica, TN# 204705-23; Agricultural Waste Solutions, TN# 204705-3. See also letters from ARVFTP participants in Docket 15-OIR-02: TN# 204432, Letter from AEMETIS of February 11, 2015; TN# 204435, Letter from Pacific Ethanol of March 18, 2015; TN# 204436, Letter from Bioenergy Association of California of February 12, 2015; TN# 204438, Letter from Community Fuels of February 11, 2015; TN# 204439, Letter from Renewable Natural Gas of February 11, 2015; TN# 204454, Letter from Air Resources Board of January 30, 2015.)

Additionally, the proposed modifications to the regulations will not require businesses, including small businesses, to submit any new information or reports. In fact, the proposed modifications eliminate the administratively burdensome credit discounting requirement.

For a discussion of the economic impacts of the proposed modifications to the regulations, refer to the Energy Commission’s Economic Impact Assessment in the Initial Statement of Reasons, and Calculations Supporting Economic Impact Assessment, Docket 15-OIR-02 TN# 204714.

FISCAL IMPACT ON STATE GOVERNMENT

The changes proposed to this regulation will obviate the need for Energy Commission staff to monitor and enforce compliance with the discounting requirement. While monitoring and enforcement could have been time and resources intensive, these actions had not yet been undertaken by staff at the time of the emergency change to § 3103, because compliance with the LCFS and other emissions credit programs was not yet required. Therefore, implementation of the proposed changes will result in no change in administrative burden, including no change in staff time and resources. The proposed changes affect only the Alternative and Renewable Fuels and Vehicle Technology Program, and therefore staff is unaware of any other state agency that would incur costs compliance with the proposed changes.