

Our correspondence with the NYC Department of Buildings

Local Law 97: low carbon gas, the CCD1 coefficient request for the CCNY Carbon Bridge, the technical appeal, and Good Faith Effort plans. Published October 13, 2026 by Standard Carbon at cowgas.com.

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Every page is text-searchable. Documents are reproduced as sent and received.

To protect third parties, we've blacked out building addresses, BBL, BIN and ticket numbers for client properties, along with personal email addresses and phone numbers. Nothing else has been changed.

From

Nathan Winkler <[REDACTED]>

To

"Jean Kim (Buildings)" <[REDACTED]>

Cc

"Emily Hoffman (Buildings)" <[REDACTED]>, "Drewpattie Kallu (Buildings)" <[REDACTED]>, "BEAM_LL97 (DOB)" <[REDACTED]>, "[REDACTED]" <[REDACTED]>, "[REDACTED]" <[REDACTED]>, "[REDACTED]" <[REDACTED]>, Omar Khalidi <[REDACTED]>, Rafik Ammar | eNG-coalition <[REDACTED]>, Sam Lehr <[REDACTED]>, Donald Chahbazpour <[REDACTED]>, "Marco J. Castaldi" <[REDACTED]>, "Abbott Price (Buildings)" <[REDACTED]>, "Lee Ping Kwan (Buildings)" <[REDACTED]>, [REDACTED] Randall Tesser <[REDACTED]>, Natan Shahar - Standard Carbon <[REDACTED]>, "Andrew E. Lauter" <[REDACTED]>

Date

Tue, 08 Sep 2026 09:22:09 +0000

Subject

Re: biomethane / e-methane & Required Revisions to LL97 Good Faith Effort Decarbonization Plans

Attachments

d072da5064_20260817162640474 appeal filed.pdf
681f9d8393_20260314174547055.pdf
Ltr.20260819.pdf
Ltr.20260424.pdf
RE_Re[10]_[EXTERNAL] Fw[2]_ Pre-Determination Request Submitted 152 CONVENT AVENUE_MANHATTAN_PDA00012258 PDA00014175.pdf

Dear Jean,

Thank you for continuing to review these Good Faith Effort submissions. To ensure that we are working from the same record, we will attach the relevant CCD1 materials, technical appeal, and our complete prior correspondence with DOB.

The principal issue is that the listed GFEs do not all propose the same decarbonization pathway. Based on the controlling BBLs and the underlying reports, the submissions fall into three groups:

1. 25 reports involving off-site procurement and scheduled pipeline delivery of low-carbon gas, with no on-site e-methane production.
2. 14 reports involving on-site e-methane production, with no off-site fuel procurement.
3. 11 reports evaluating three alternatives: VRF electrification, on-site e-methane production, and off-site low-carbon gas delivery.

1. Off-site low-carbon gas delivery, with no on-site production

The following 25 GFEs call for procurement of qualifying biomethane or equivalent low-carbon gas from an off-site producer:

- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]

- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]

The reports for [REDACTED] and [REDACTED] also evaluate VRF measures, but neither proposes on-site e-methane production. They therefore remain in this category.

These projects have no dependency on new or innovative on-site production technology from Standard Carbon or any other company. The properties have committed to procure qualifying biomethane or an equivalent low-carbon fuel and have funded the applicable initial deposits. The fuel may come from any qualifying producer capable of satisfying the specified carbon-intensity, documentation, and delivery requirements.

As we understand DOB's correspondence, DOB has not stated an objection to the use of biomethane or an equivalent fuel that is already produced and used commercially. The remaining question appears to concern how delivery through the interconnected gas pipeline and storage network must be demonstrated.

Technical Appeal PDA00015616-A2 addresses that issue. The contemplated transaction is not a book-and-claim arrangement. The reports require:

- Contracted quantities of qualifying fuel to be physically produced and injected into the gas pipeline system.
- Commercial scheduling and nomination of those quantities through the applicable pipeline and storage network.
- Payment of the applicable transportation, storage, balancing, and delivery charges from production through delivery.
- Documentation of production, injection, nominations, transportation, mass balance, and end use.
- Prevention of duplicate environmental claims for the same quantity of fuel.

This is intended to document an actual scheduled gas-delivery transaction through an interconnected pipeline network, not the purchase of a detached environmental attribute. If DOB believes additional evidence or contractual controls are necessary, we would appreciate the opportunity to identify them directly. Otherwise, we understand that this issue will remain before the arbiter reviewing the pending technical appeal.

2. On-site e-methane production, with no off-site procurement

The following 14 GFEs prescribe on-site e-methane production:

- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]
- [REDACTED] | BBL [REDACTED] | [REDACTED]

E-methane production is a [global, multi-billion dollar industry](#). Standard Carbon is not presented as the exclusive provider or technical basis for the pathway. The Standard Carbon installation at the City College of New York is an exemplary local project that gives DOB an accessible basis for evaluating the technology and its carbon-accounting methodology.

Treatment of a pending CCD1 under the BEAM Filing Guide

DOB's February 10, 2025 BEAM filing guide expressly addresses fuels for which the law does not already provide an emissions coefficient. Page 4 states that:

- A CCD1 may be submitted for a fuel whose coefficient is not listed in the law.
- If the CCD1 has been submitted but remains pending, the applicant uploads the submitted CCD1 as supporting documentation in BEAM.
- Approval of the LL97 compliance report remains contingent on DOB's review of the CCD1.
- If DOB rejects the CCD1, the compliance report must be revised.
- Use of a non-standard fuel does not, by itself, prevent a filing from being treated as a simple report.

Accordingly, the BEAM process appears to contemplate an annual LL97 compliance filing that uses a proposed coefficient while the corresponding CCD1 remains pending, subject to DOB's final determination and any necessary revision.

The GFE provisions of [1 RCNY §103-14](#) are inherently forward-looking. They require a decarbonization plan to identify future energy-conservation measures, implementation schedules, capital plans, and corresponding estimated emissions reductions. They similarly contemplate estimated reductions for qualifying work already underway.

Reading these provisions together, our understanding is that an on-site e-methane measure may be included in a GFE plan using:

- A clearly identified proposed carbon-intensity coefficient.
- Transparent life-cycle assessment boundaries and assumptions.
- Estimated emissions reductions.
- An implementation and capital schedule.
- Sensitivity analysis where appropriate.
- An express condition that final compliance treatment remains subject to CCD1 approval.

This approach would not limit DOB's authority to approve the proposed coefficient, assign a different coefficient, request further evidence, or reject the CCD1. It would simply allow the technology and its estimated reductions to be evaluated in the forward-looking planning document for which those estimates are required.

We would appreciate clarification of the distinction DOB sees between permitting a pending CCD1 with a proposed coefficient to accompany an actual annual BEAM compliance report and permitting the same proposed coefficient, on a conditional and estimated basis, in a GFE decarbonization plan. If DOB requires particular limiting language, supporting evidence, or a different treatment of the projected reductions, we would welcome that guidance.

Technical and regulatory maturity of e-methane

E-methane is not an untested concept. The e-NG Coalition's [global project map](#) identifies more than 90 facilities worldwide at stages ranging from pre-feasibility through operation. The coalition includes companies across the energy, engineering, gas, infrastructure, and technology sectors.

The European Union has also adopted formal rules governing renewable fuels of non-biological origin, including requirements for renewable electricity sourcing and life-cycle greenhouse-gas calculations. Those rules are embodied in Delegated

Regulations 2023/1184 and 2023/1185 and are summarized by the [European Commission](#).

These developments do not determine the coefficient DOB should assign to a particular New York City installation. They do, however, support treating e-methane as a technically and regulatorily mature decarbonization pathway that can credibly appear in a GFE plan, subject to project-specific assumptions and DOB's final CCD1 review.

The existing CCNY installation as a present basis for CCD1 evaluation

The City College installation is an installed and operating pilot-scale integrated system at an LL97-covered property. It combines combustion exhaust, carbon capture, electrolysis, and methanation. Although it is not represented as a commercial-scale installation, it provides a local, inspectable system through which the relevant methodology and inputs can be evaluated today.

The CCNY project can provide a basis for reviewing:

- The defined process and life-cycle assessment boundaries.
- Metered electricity consumption.
- Electricity-source assumptions.
- Captured carbon-dioxide source and quantity.
- Electrolyzer and hydrogen-production performance.
- Methane output, composition, and energy content.
- Auxiliary electrical and thermal loads.
- Heat-recovery assumptions.
- Operating hours and production rates.
- The resulting site-specific carbon-intensity calculation.

This appears consistent with DOB's prior indication that an installed project could return with actual operating information. The CCNY deployment therefore provides an opportunity to assess the technology, the life-cycle methodology, and a coefficient for that configuration now, without requiring DOB to rely exclusively on projections for a future installation.

We recognize that subsequent buildings may have different electricity sources, operating profiles, equipment configurations, or heat-recovery arrangements. Those differences can be addressed through site-specific CCD1 inputs or conditions. The point is not that the CCNY coefficient must automatically control every later project, but that the existing installation provides a concrete basis for evaluating the methodology and establishing what project-specific information DOB requires.

Request for a technical meeting at CCNY

We respectfully request an in-person meeting at City College with:

- The appropriate DOB and NYC Accelerator representatives.
- Standard Carbon's technical team.
- Professor Marco Castaldi, Chair of Chemical Engineering at CCNY.

- Sam Lehr, Standard Carbon's regulatory consultant from the e-NG Coalition.

A meeting at CCNY would allow the parties to inspect the installed system and work through four defined issues:

1. The distinction between scheduled pipeline delivery and book-and-claim accounting.
2. The documentation required to establish pipeline nominations, transportation, mass balance, and end use.
3. The treatment of a proposed coefficient under a pending CCD1 in an annual BEAM filing versus a forward-looking GFE plan.
4. The use of CCNY operating data as a present basis for evaluating the e-methane methodology and defining the information required for subsequent site-specific CCD1 submissions.

We believe these are focused technical and interpretive questions that may be resolved efficiently through direct discussion. Professor Castaldi and Sam Lehr have each offered to participate so DOB can examine the engineering, carbon-accounting, and regulatory issues with the relevant subject-matter experts.

If a direct meeting or call is not possible, we understand that the remaining questions concerning off-site delivery will have to be resolved through the pending technical appeal, and that any unresolved GFE issues may ultimately be addressed in the resulting OATH hearings. Our preference is to clarify the record collaboratively before those processes become necessary.

Please let us know whether DOB would be available to meet at CCNY and, if so, which dates would be convenient. We are also happy to provide any additional documents in advance so the meeting can remain focused and productive.

Respectfully,

Nathan Winkler, PE
VP Engineering
Redocs
[REDACTED]
www.Redocs.com
A ReHub Company

----- Forwarded Message -----

From "Jean Kim (Buildings)" <[REDACTED]>
To "[REDACTED]" <[REDACTED]>; "[REDACTED]" <[REDACTED]>; "[REDACTED]" <[REDACTED]>; "[REDACTED]" <[REDACTED]>; "[REDACTED]" <[REDACTED]>
Cc "Emily Hoffman (Buildings)" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "BEAM_LL97 (DOB)" <[REDACTED]>
Date 13/08/2026 18:40:32
Subject Required Revisions to LL97 Good Faith Effort Decarbonization Plans

Dear Mark, Dave & Nathan,

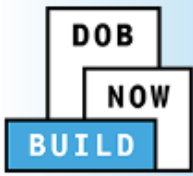
We are flagging these decarbonization plans as insufficient because On-Site Low Carbon Natural Gas (LCNG) Generation is not an approved decarbonization measure and cannot be included as part of a retrofit option. As previously requested, please remove this technology from all decarbonization plans listed below and revise the plans accordingly.

Any plans that have not been updated **by the end of next week (August 21, 2026)** will be denied.

NYC Department of Buildings

280 Broadway, 3rd floor, New York, NY 10007

[REDACTED]



Request Highlights

Location:	152 CONVENT AVENUE MANHATTAN
BIN:	1084081
Request Number:	PDA00014175
Request Status:	Pre-Filing
Determination Class:	CCD1
Determination Type:	Pre-Determination
Review Type:	Pre-Determination

Payment Summary

Request Fee:	\$1,000.00
Amount Paid:	\$1,000.00
Amount Due:	\$0.00

General Information

Request Information

Request Number:
PDA00014175

Determination Type:
Pre-Determination

Request Status:
Pre-Filing

Review Type:
Pre-Determination

Building Identification Number:
1084081

Location Information

House Number:
152

Street Name:
CONVENT AVENUE

Borough:
MANHATTAN

Block:
1957

Lot:
200

BIN:
1084081

Zip Code:
10031

Community Board:
109

Stakeholders

Applicant Information

Email:
[REDACTED]

License Type:
Professional Engineer

License Number:
095210

First Name:
Nathan

Middle Initial:

Last Name:
Winkler

Business Name:
LIVOLT LLC

Business Telephone:
[REDACTED]

Business Address:
[REDACTED]

City:
NEW YORK

State:
NY

Zip Code:
10004

Mobile Telephone:
[REDACTED]

Alternate Contact Information

Email:

Relationship to the Property:
Other

Describe Other:
Professor CCNY

First Name:

Middle Initial:

Last Name:

Business Name:

Business Telephone:

Business Address:

City:

State:

Zip Code:

Mobile Telephone:

License/Registration #:

Determination Details

Is this request associated with an existing project under the Major Projects Development Program (MPP)? No

Do you plan/intend to file your construction at the HUB? Yes

Determination Class:

Construction Code Determination: Yes Zoning Determination: No

Determination Sub Class (Select One):

Interpretation or Clarification: Yes

Variation of Construction Code or Rules per 28-103.3: No

Variation of Multiple Dwelling Law (MDL) 277.16 for Article 7B Buildings: No

Description of Request

The applicant requests a predetermination confirming that the Department will accept a carbon emissions coefficient for electric natural gas (eNG) calculated under a transparent, reproducible protocol grounded in widely used European best-practice conventions for eNG as developed by the Electric Natural Gas Coalition (Brussels, Belgium). This protocol ties eNG carbon intensity to the electricity attributes used to produce it, incorporating transportation/handling losses without double counting and is harmonized with the recognized GHG accounting frameworks (ISO/EN-style life-cycle and chain-of-custody principles). The requested confirmation is limited to methodology acceptance for Local Law 97 reporting and does not seek approval of any specific design, project scope, or numeric result. In plain terms, for each reporting period the applicant would:- Attribute electricity-related emissions to metered plant consumption using time-correlated grid or certificate attributes from the serving balancing area;- Account for CO2 sourcing, handling, and measured losses prior to conversion;- Include transport/transfer energy (e.g. compression) relevant to the delivery pathway; and- Report a single combustion-stage coefficient (tCO2e/kBtu, LHV) derived from the above, suitable for entry in LL97 compliance filings Attachments (Itemized):responses_to_PDA00012258; e-NG Dynamic LCA Model - Rev1 - CCNY; ISCC-EU-Mass-Balance-Guidance-Document_Version-1.0; biofuels_info_guide; article_320_guide; 1_RCNV_103-14; ll97of2019; eNG PID

Request Details

Is this Pre-Determination associated with any previously filed job?	No
Is Fee Exempt per 28-112.1?	No
Request for 1-3 family dwelling?	No
For Housing Preservation and Development Affordable Housing?	No

Request Description

Enter a Short Description of Request

LL97 eNG CI Score

Construction Code Year	Code Section	MDL Section (Multiple Dwelling Law):
2022	28-320	
Rule Number:	TPPN (Technical Policy and Procedure Notices), Memo:	BBs (Building Bulletins):
RCNY 103-14		
Zoning Resolution Section:		

Zoning Information

Zoning District(s)	Zoning Overlay(s)	Special District(s)
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Documents

Document Name	Document Type	Document Status	Created On
eNG PID	Plans/Sketch	Pending	03/14/2026
responses_to_PDA00012258	Preliminary Determination Document	Pending	03/14/2026

Applicant of Record's Attestation



I hereby state the information on this form is correct and complete to the best of my knowledge. I understand falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. I also understand it is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name:

Nathan Winkler
(Electronically Signed)

Date:

03/14/2026

Subject: RE: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted
152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

From: "Emily Hoffman (Buildings)" <[REDACTED]>

Sent: 09/04/2026 14:37:59

To: "Natan Shahar" <[REDACTED]>

CC: "Rafik Ammar | eNG-coalition" <[REDACTED]>;
"Donald Chahbazpour" <[REDACTED]>;
"mcastaldi" <[REDACTED]>; "Michael Bobker"
<[REDACTED]>; "Drew Standard Carbon"
<[REDACTED]>; "Drewpattie Kallu (Buildings)"
<[REDACTED]>; "Abbott Price (Buildings)"
<[REDACTED]>; "Lee Ping Kwan (Buildings)"
<[REDACTED]>; "Jean Kim (Buildings)"
<[REDACTED]>; "Sam Lehr" <[REDACTED]>

Please also confirm the next steps:

Next steps:

- As stated in our 3/13/2026 email, "this unapproved technology is listed in dozens of LL97 Decarbonization Plans as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting."

All submitted Decarbonization Plans proposing to use the StandardRNG technology as a means of reducing reported emissions must be revised and resubmitted within 60 days of this notice. Failure to do so will result in the rejection of the application for penalty mitigation, and may subject the building to applicable enforcement actions.

- It appears that on your website, there are representations indicating that the product for which you have sought approval - StandardRNG - can contribute to LL97 compliance (for example the official website, <https://ll97solution.nyc/>).

Such claims are not consistent with current law or guidance. Note that similar representations have already been referred for enforcement, and the company responsible was directed to cease and desist from making unsupported compliance claims. DOB strongly recommends removing any such public claims. As stated above, StandardRNG is not an approved compliance pathway under current rules, and applications premised on its use will not be accepted.

From: Natan Shahar <[REDACTED]>

Sent: Wednesday, April 8, 2026 6:05 PM

To: Emily Hoffman (Buildings) <emhoff@nyc.gov>

Cc: Rafik Ammar | eNG-coalition <[REDACTED]> Donald Chahbazpour <[REDACTED]>

<[REDACTED]> mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>

Subject: RE: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Good evening Emily,

Thank you so much for the fast response. We will submit the methodology for fully deployed installations at the appropriate time per your instructions.

Sincerely,

Natan Shahar
Founder & Chief Strategy Officer
[REDACTED]
+972-50-648-8324

www.standardcarbon.com

On Apr 9, 2026 00:27, "Emily Hoffman (Buildings)" <[REDACTED]> wrote:

Hi Natan,

Thank you for your response.

Currently the DOB cannot approve a methodology separate from installed cases. The methodology can be submitted for those building who chose to install, but we are not able to provide preemptive approvals.

While other jurisdictions may have approved this technology as a method for greenhouse gas production, the [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) standard does not align with this technology at this time.

Thank you,

Emily

Emily Hoffman, PE, CEM | Director, Office of Building Energy & Emissions Performance

NYC Department of Buildings | Bureau of Sustainability

280 Broadway – 3rd Floor | New York, NY 10007

[emhoff](#) [REDACTED]

From: Natan Shahar <[REDACTED]>
Sent: Monday, April 6, 2026 6:33 PM
To: Emily Hoffman (Buildings) <emhoff@eng-coalition.org>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
[\[REDACTED\]@eng-coalition.org](mailto:[REDACTED]@eng-coalition.org)>
Subject: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Good evening Emily,

I'd be very grateful if you'd consider my notes in ***italics in-line below***:

1. Relies on modeled projections rather than actual data, particularly when the model structurally excludes or arbitrarily minimizes various production factors that might result in an e-NG fuel coefficient that is higher than the coefficient for conventional natural gas; ***-the CCD1 request was for review of a procedure for processing actual data only. No suggestion that modeled projections should be the basis of the fuel coefficient was submitted.***
2. Does not demonstrably meet the requirement in [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) that a proposed fuel coefficient "serves the public interest of reducing GHG emissions"; and - ***electric natural gas synthesis is approved to reduce GHG emissions in dozens of jurisdictions and applications identical to NYC LL97 most prominently in the EU RFNBO as well as in the recent NYSEDA PON 6031***
3. Includes carbon capture as an emissions reduction/avoidance mechanism in any way, since, as noted in the [1 RCNY 103-14 FAQ](#), "LL97 does not currently allow for the use of CCS as a compliance pathway for LL97, absent further government action." - ***electric natural gas synthesis does not entail the use of Carbon Capture & Storage (CCS).***

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Natan Shahr" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazzpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 07/04/2026 1:10:35

Subject RE: Re[8]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan,

Thank you for your submission and supporting documentation. After careful review, the Department of Buildings denies all components of the proposed application. The Department is unable to approve a proposed fuel coefficient methodology that:

1. Relies on modeled projections rather than actual data, particularly when the model structurally excludes or arbitrarily minimizes various production factors that might result in an e-NG fuel coefficient that is higher than the coefficient for conventional natural gas;
2. Does not demonstrably meet the requirement in [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) that a proposed fuel coefficient "serves the public interest of reducing GHG emissions"; and

3. Includes carbon capture as an emissions reduction/avoidance mechanism in any way, since, as noted in the [1 RCNY 103-14 FAQ](#), “LL97 does not currently allow for the use of CCS as a compliance pathway for LL97, absent further government action.”

Next steps:

- As stated in our 3/13/2026 email, “this unapproved technology is listed in dozens of LL97 Decarbonization Plans as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting.”

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- It appears that on your website, there are representations indicating that the product for which you have sought approval - StandardRNG - can contribute to LL97 compliance (for example the official website, <https://ll97solution.nyc/>).

Such claims are not consistent with current law or guidance. Note that similar representations have already been referred for enforcement, and the company responsible was directed to cease and desist from making unsupported compliance claims. DOB strongly recommends removing any such public claims. As stated above, StandardRNG is not an approved compliance pathway under current rules, and applications premised on its use will not be accepted.

Emily

From: Natan Shahrar <[REDACTED]>
Sent: Wednesday, March 25, 2026 1:23 PM
To: Emily Hoffman (Buildings) <emhoff@buildings.nyc.gov>; Lee Ping Kwan (Buildings) <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour <[REDACTED]>; mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
Subject: Re[8]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you for the detailed response—we appreciate the time and rigor your team has applied to this review. We have provided itemized responses to each of your comments below.

Before addressing the specific points, we would like to offer a broader clarification on the intent of our submission.

We have formally filed a pre-determination request for the purpose of approving a *methodology* for calculating the carbon intensity (CI) of eNG—not a fixed coefficient. This distinction is critical. Every LL97 filing that utilizes eNG will inherently require a *project-specific CI calculation*, as the production characteristics of eNG vary meaningfully across projects.

For example, eNG production pathways differ significantly across global deployments—from the Live Oak project in Nebraska (co-developed by TotalEnergies and Osaka Gas for the Japanese market) to the CCNY deployment by Standard Carbon (with Phase 1 operational and Phase 2—full steam plant decarbonization—in FEED). In each case, the technology stack, operating profile, energy inputs, and system integration differ.

Despite this variability, there is a clear regulatory need for a *shared technical framework* to enable consistent planning and compliance across overlapping policy regimes. In NYC, this includes LL97 as well as federal incentives such as IRS 45Z and 45Q; in other jurisdictions, such as the Live Oak example, there are parallel but distinct regulatory structures in both the U.S. and Japan.

To address this, we submitted the Excel tool developed by the eNG Coalition. This tool establishes a unified, life-cycle-based framework that is aligned with established methodologies (e.g., US EPA, GREET, LCFS) and is more consistent and comprehensive than developing a bespoke tool for each project.

Importantly, LL97 explicitly provides for this approach. For fuels not listed, the rules require submission of a CCD1 with a proposed methodology based on accepted industry principles. In addition, LL97's treatment of alternative fuels already relies on lifecycle accounting consistent with EPA standards, capturing emissions across production, transport, and use rather than solely at combustion.

Accordingly, our request is not to approve a fixed CI for eNG, but rather to approve the *methodology (the tool)* as the basis for calculating CI on a property-by-property (BIN-by-BIN) basis for each LL97 filing, incorporating full lifecycle considerations.

We also note that the specific inputs included in the submitted spreadsheet were for illustrative purposes only and not intended to represent a finalized or approved CI.

Finally, in parallel, we would greatly appreciate the opportunity to host DOB at the CCNY operating facility to observe eNG production in real time and review the system variables, metering, and operational controls directly.

Please see responses to your specific comments below:

1. Verification vs. modeled projections

—Agreed 100%. We fully align that CI must be based on verifiable, measured data and not modeled projections.

—Our position is that this data should be included in *each individual LL97 filing*, using actual operating data (e.g., interval meter data) on an 8,760 basis.

—The mass balance framework you outlined (CO₂, H₂O, H₂, CH₄ flows and storage, as well as tank capacities, electrolyzer capacity, and efficiency) is fully consistent with how the tool is structured and how filings would be supported.

—The purpose of the tool is to *organize and standardize the calculation*, while the inputs are populated with measured data for each project year.

2. Waste heat vs. continuous carbon capture

—In the case of Standard Carbon's Carbon Bridge technology, thermal energy storage is integrated into the system to decouple heat generation from methanation timing.

—This allows waste heat from methanation (which occurs during low-CI hours) to be stored and utilized to support continuous carbon capture operations.

—That said, we agree that this parameter should ultimately be *metered and reflected explicitly in the calculation framework* (per item 1), rather than assumed.

3. Carbon intensity methodology and "Avoided Emissions"

—The treatment in the tool reflects standard lifecycle carbon intensity methodologies for fuels, specifically those established under US EPA frameworks and implemented through GREET and similar models.

—These methodologies calculate fuel carbon intensity on a full lifecycle basis, incorporating emissions across feedstock sourcing, processing, energy inputs, transportation, and combustion.

—As reflected in the LL97 Biofuels Info Guide, the Department already applies this same lifecycle approach, where net emissions are determined based on full fuel pathway analysis rather than solely point-of-combustion emissions.

—Accordingly, the “Avoided Emissions” field in the tool is intended to represent lifecycle adjustments within a standardized CI calculation framework (consistent with GREET-style accounting), not a separate compliance mechanism.

4. Grid coefficient (0.034 kgCO₂e/kWh)

—This value is not a fixed assumption but is calculated dynamically in cell G1 of the “LL97 TOU” tab.

—It reflects a weighted average of the carbon intensity of electricity during the actual operating hours of the electrolyzer, based on hourly 2024 data and the system’s dispatch profile.

—Critically, this value will vary year-to-year and project-to-project based on:

- Actual operating hours (verified data)
- Actual grid carbon intensity for that year

—In a formal LL97 filing, this would be recalculated using *measured operational data*, not assumed values.

5. Variables currently set to zero

—Agreed. These values (e.g., CO₂ transmission losses, compression emissions, methane leakage, shipping distance, etc.) are all measurable and should be populated with real data in an actual filing.

—They were set to zero in the submitted version strictly for illustrative purposes to demonstrate the structure and functionality of the tool.

—In practice, these parameters would be included and verified as part of the project-specific CI calculation.

We appreciate the clarity of your feedback and believe there is strong alignment on the core principles—particularly the need for verifiable, measurement-based inputs.

Our request is simply that the Department recognize and approve a consistent, lifecycle-based methodology (via the submitted tool), which can then be applied

on a case-by-case basis using real operational data for each LL97 filing.

We would welcome the opportunity to discuss this further and to host your team at CCNY.

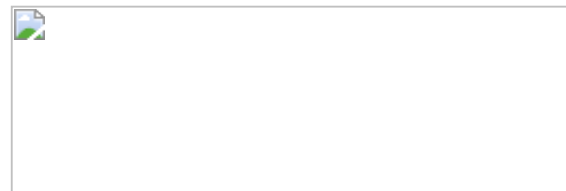
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 25/03/2026 15:19:03

Subject Re: Re[6]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan,

Thank you for your responses. What we are looking for is a spreadsheet that addresses our concerns all at once. At this time, we cannot approve this technology for an adjusted fuel coefficient for the following reasons:

1. You wrote on 3/19 that "Verification [of the hours that the electrolyzer was run] would be based on measured operating data" rather than a model. As we have previously emphasized, we cannot approve a proposed fuel coefficient that is based on modeled projections.

The coefficient must be based on verifiable data, which in this case could be a mass balance spreadsheet that accurately reflects electricity used on an 8,760 basis for:

1.
 - a. CO2 input, storage
1.
 - b. H2O input
1.
 - c. H2 output, storage
1.
 - d. CH4 output, storage

The following data points would need to be verified as well:

2.
 - a. CO2 tank storage capacity (to determine how often the electrolysis and methanation would need to happen)
2.
 - b. H2 storage tank capacity

2.

c. CH4 storage tank capacity

2.

d. Measured electrolyzer capacity

2.

e. Measured electrolyzer efficiency

2. The overall process relies on harnessing the waste heat of methanation for “100% of the process heat” for carbon capture. How does this happen if the carbon capture is continuous while the methanation only happens during times of low grid CI?

3. You acknowledge in your 3/14 email that “The LL97 framework explicitly prohibits carbon capture as a compliance mechanism,” yet the spreadsheet says “yes” to “Avoided Emissions Considered?” and sets the Avoided Emissions [feedstock] credit to 100%. This should be adjusted to reflect the ongoing combustion required in the non-closed-loop scenario.

4. You are still using the artificially low 0.034 kgCO₂e/kWh grid coefficient throughout the spreadsheet, even though your 3/19 email states otherwise.

5. Many variables in the spreadsheet are set to zero: CO₂ transmission losses, CO₂ compression emissions (which you write is dependent on waste heat recovery), Methanation heat integration, CH₄ leakage, Shipping distance of e-NG. When the measured data is provided, it is expected that many of these variables will become nonzero.

Regards,

Emily

From: Natan Shahar <[REDACTED]>

Sent: Thursday, March 19, 2026 11:53 AM

To: Emily Hoffman (Buildings) <[emhoff](#)>; Lee Ping Kwan (Buildings)

<[REDACTED]>

Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour

<[REDACTED]>; mcastaldi <[REDACTED]>; Michael Bobker

<[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings)

<[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings)

<[REDACTED]>; Sam Lehr [REDACTED]
Subject: Re[6]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT
 AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you for your review — we have updated the attached spreadsheet to address these points.

Carbon capture vs. TOU electricity use

You are correct that CO₂ capture operates continuously. The revised model now reflects that:

- CO₂ capture runs year-round in tandem with boiler operation (~38,783 tCO₂e annually).
- The electricity associated with CO₂ compression and storage has been added and is modeled using the **annual average TOU carbon intensity**, rather than the low-carbon subset of hours.

CO₂ handling when electrolysis is not operating

During periods when the electrolyzer and methanation system are not running:

- Captured CO₂ is **compressed and stored on-site as a liquid**.
- This storage step is now included in the model (previously shown as zero compression).

Sufficiency of ~548 operating hours

Based on the 2024 TOU carbon intensity data for NYISO Zone J:

- ~500+ hours is sufficient to convert the full annual volume of captured CO₂ into eNG within the modeled system.
- The system is designed such that hydrogen production during those hours can process the annual CO₂ supply.

We also note that 2024 conditions reflect a relatively fossil-heavy generation mix in Zone J. As additional resources such as Empire Wind and the Champlain Hudson Power Express (Québec hydro) come online, the number of hours with lower grid carbon intensity is expected to increase materially, which would expand the available operating window.

Electrolyzer operating hours verification (Item B)

Our understanding is that verification would be based on **measured operating data rather than a fixed coefficient**:

- The filing RDP would provide supporting documentation (e.g., interval meter data) demonstrating hourly electrolyzer operation.
- This data would feed into an approved calculation framework (e.g., the submitted LCA tool or similar).

At CCNY, all relevant systems are metered at both the system and utility level with **5-minute resolution**, which enables this type of documentation.

GREET modeling (Item C)

We have attached:

- A GREET-based calculation submitted in the context of CARB LCFS, and
- Supporting correspondence from the third-party consultant (Adelante Consulting).

As noted in the attached email, the analysis applies GREET emission factors and standard assumptions for CO₂ capture, hydrogen production, and methane synthesis.

We will defer to Sam Lehr and the eNG Coalition for any additional detail regarding GREET methodology and regulatory context.

Please let us know if you would like us to walk through the updated model together.

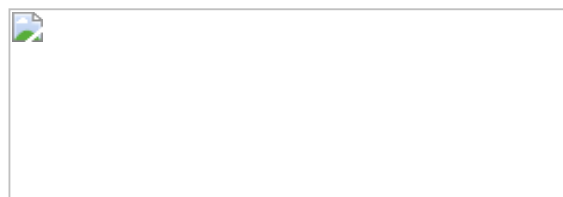
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahr"
<[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald
Chahbazpour" <[REDACTED]>; "mcastaldi"
<[REDACTED]>; "Michael Bobker" <[REDACTED]>;
"Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu
(Buildings)" <[REDACTED]>; "Abbott Price (Buildings)"
<[REDACTED]>; "Jean Kim (Buildings)"
<[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 18/03/2026 23:01:21

Subject Re: Re[4]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan, thank you for the clarifications. It appears that the spreadsheet still needs some revision:

A. You write that the electrolysis and methanation processes are only run "during hours when grid carbon intensity is sufficiently low".

1.

- The "Carbon Capture" tab seems to say that you are capturing all of the carbon produced by the boiler, or **38,783 tCO₂e** annually. This implies that the carbon capture process is run continuously. Therefore, the spreadsheet needs to be modified to show that the carbon capture is using electricity year-round and cannot use the lower TOU coefficient.

1.

- The "TOU" tab says that the coefficient is derived by only using electricity for the 548 hours of the year when grid intensity is lower than your chosen threshold. If electrolysis and methanation are only being run during these 548 hours, is that enough to convert all the captured CO2 into e-NG?

1.

- For the other 94% of the time, what is occurring with all of the captured carbon? The spreadsheet says there is zero compression.

B. Can you provide records verifying that the electrolyzer was only run during those 548 hours in 2024? A proposed fuel coefficient is only approvable if it is based on quantifiable data.

C. Please send examples of GREET modeling for e-NG, as Sam offered.

Regards,

Emily

From: Natan Shahar <[REDACTED]>
Sent: Tuesday, March 17, 2026 10:11 AM
To: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]; Lee Ping Kwan (Buildings) <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
Subject: Re[4]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you again for your continued review and for the opportunity to clarify the below items. Please see our responses inline:

1. Grid Electricity Coefficient (0.3699 vs. 0.034 kgCO₂e/kWh)

The value of 0.034 kgCO₂e/kWh in the revised spreadsheet reflects the use of **time-of-use (TOU) marginal carbon intensities**, rather than the static MOCEJ annual average (0.3699 kgCO₂e/kWh).

In the updated submission, we added a dedicated **“LL97 TOU” tab**, which incorporates hourly electricity carbon intensities for 2024 derived from the DOB LL97 tool. This allows us to model electricity consumption based on *when* it occurs, rather than assuming uniform grid conditions.

Operationally, the electrolyzer (hydrogen generation) is **not run continuously**. Instead, it is dispatched only during hours when grid carbon intensity is sufficiently low to ensure that the resulting eNG has a materially lower carbon intensity than fossil natural gas. As such, the effective electricity CI reflected in the model represents a **weighted average of low-carbon operating hours**, not the full-year average.

This approach is forward-looking but grounded in expected grid evolution. In particular:

- The interconnection of **Empire Wind** and
- The **Champlain Hudson Power Express (Québec hydro)**

will significantly increase the availability of low-carbon electricity in NYC, especially during off-peak periods. Our operating strategy is explicitly designed to align with these periods of abundant low-carbon supply.

2. Status of Prior LCA Files

The previously submitted files:

- “Dynamic LCA Model - LCA of GHG Emissions of e-NG - Rev1”
- “Transform CO₂ into Natural Gas White Paper”

are **superseded by the updated Excel model and accompanying materials** in the revised submission.

While these earlier documents remain directionally consistent and are not contradicted, the new Excel file:

- Reflects a **fully updated, NYC-specific scenario**, and

- Consolidates the relevant assumptions into a single, reviewable framework.

Importantly, the model itself is not bespoke—it is the **standard eNG Coalition LCA tool**, which has been reviewed and accepted by multiple regulatory bodies, including:

- The European Commission (under RED II / RFNBO frameworks)
- The U.S. EPA
- California Air Resources Board (LCFS context)
- Québec (Énergir)
- Other OECD-aligned jurisdictions

For any detailed questions regarding the origin, validation, or regulatory acceptance of the tool, we have included **Sam Lehr and Rafik Ammar (eNG Coalition)** on this thread, who can provide direct context on its development and approvals.

3. Applicability of Biofuels Info Guide

We understand the concern regarding applicability. Our reference to the Biofuels Info Guide is not intended to suggest equivalency of specific coefficients, but rather alignment in **methodological framework**.

The core carbon accounting methodologies used by the EPA for biofuels—particularly lifecycle carbon intensity accounting—are the same foundational approaches underpinning:

- The **45Z Clean Fuels Production Credit**
- **California LCFS (CARB)**
- **EU RED III / RFNBO rules**
- The **REET model**

All of these frameworks explicitly account for **electrofuels (including eNG)** using the same lifecycle principles applied to biofuels.

Accordingly, the Biofuels Info Guide is relevant insofar as it reflects how LL97 already interprets **alternative fuels through a lifecycle CI lens**, rather than strictly point-of-combustion emissions.

4. Reduction of Combustion-Based Emissions

The Standard Carbon product reduces combustion-based emissions through several distinct but related mechanisms:

Closed-loop (on-site recycling) applications (primarily oil-fired buildings):

- Greater than **99% reduction in combustion emissions**
- All primary energy input is shifted from fossil fuel combustion to **off-peak electricity**
- CO₂ emitted from combustion is captured and reused, creating a near-complete carbon loop

Pipeline-delivered eNG (CCNY production → other buildings):

- Approximately **50% reduction in combustion emissions**
- The same carbon atom is used twice:
 -
 - First: CH₄ → CO₂ (combustion at CCNY)
 - Second: CO₂ → CH₄ → CO₂ (combustion at downstream building)

Biogenic CO₂ feedstock scenario:

- If the CO₂ used for methanation originates from biological sources (e.g., anaerobic digestion),
- The system can achieve **~100% reduction in combustion-based emissions**, as it effectively displaces fossil carbon with biogenic carbon.

Fundamental system advantage (key point):

eNG uniquely enables **temporal decoupling of energy production and consumption**:

- Methane can be stored in the gas network for extended periods (months if needed)
- CO₂ can also be stored prior to conversion

This allows electrolysis and methanation to operate **exclusively during periods of near-100% clean grid electricity**, thereby:

- Avoiding reliance on peaker plants or fossil generation
- Enabling building energy demand to be met with fuel produced only from **clean electricity inputs**

In this way, combustion at the building level is no longer tied to real-time grid emissions and can be effectively decarbonized through upstream fuel production timing.

We appreciate the depth of your review and are happy to provide any additional supporting detail or walk through the model together if helpful.

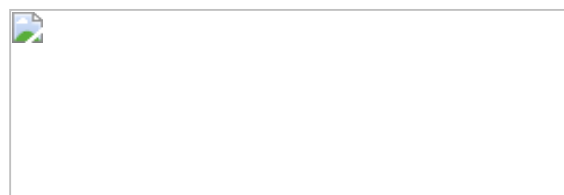
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 17/03/2026 15:20:10

Subject Re: Re[2]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted
152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Marco, Natan,

Could you provide responses to the below so we can continue our review of the submission:

1. The suggestion was to use the MOCEJ grid electricity coefficient listed [here](#), which is **0.3699 kgCO₂e/kWh**. Instead, your revised spreadsheet uses **0.034 kgCO₂e/kWh**, which is off by a factor of 10 and then some - please clarify.
2. The files "Dynamic LCA Model - LCA of GHG Emissions of e-NG - Rev1" and "Transform CO₂ into Natural Gas White EH" were not included in the revised submission - are they still to be reviewed as part of the package?
3. The *Biofuels Info Guide* might not be an applicable comparison, since the coefficients and CI methodologies for biofuels are based on a significant amount of EPA research over time. Is there a similar document for e-NG that can be referenced?
4. One goal of LL97 is to reduce combustion-based emissions. Please clarify how the Standard Carbon product achieves this goal?

Regards,

Emily

Emily Hoffman, PE, CEM | Director, Office of Building Energy & Emissions Performance

NYC Department of Buildings | Bureau of Sustainability

280 Broadway – 3rd Floor | New York, NY 10007

[emhoff](#) [REDACTED]

From: Natan Shahrar <[REDACTED]>

Sent: Saturday, March 14, 2026 6:15 PM

To: Emily Hoffman (Buildings) <[emhoff](#) [REDACTED]>; Lee Ping Kwan (Buildings)

<[REDACTED]>

Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour

[REDACTED] mcastaldi <[REDACTED]>; Michael Bobker

<[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu

(Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim

(Buildings) <[REDACTED]>; Sam Lehr [REDACTED]

Subject: Re[2]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT

AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily and Lee,

Thank you very much for your thoughtful review of our original CCD1 submission and for the time and care your team has devoted to evaluating this request. We genuinely appreciate the energy and attention you have given to this filing.

We have superseded the prior submission with a new CCD1 filing (PDA00014175) that includes the full requisite fee. DOB NOW does not allow us to upload excel files to the CCD1 and hence I have attached all of the relevant documentation to this email. We apologize for the confusion regarding the fee exemption. We had been under the impression that, because the applicant site (CCNY) is a nonprofit public institution, the filing would be fee-exempt. We appreciate your clarification and will correct that immediately.

Below you will find your questions immediately followed by our responses. If our responses are still unclear, perhaps we can have a phone call to talk through those items.

1. The online CCD1 is missing several items and will need to be superseded with a new submission:

1. It is not fee-exempt; see Determinations Frequently Asked Questions - Buildings

Response: we will include the fee

2. Most of the attachments that were emailed separately on 11/4/2025 were not included in the online CCD1;

Response: included in new submission

3. Request needs to be clarified (see #2 below), ideally in the form of a cover letter.

Response: We hope this document meets the requirements of a cover letter. However, we are open to formatting and resubmitting as directed if needed.

2. The request for an eNG fuel coefficient is not supported by the calculations indicating that the fuel is shipped to Europe, where an NYC DOB-approved fuel coefficient may not be recognized or useful. Since the goal of Local Law 97 is to reduce emissions within NYC, would it be possible to reframe the request as a deduction from the annual emissions of the building where the equipment is located?

Response: We can reframe the request as a deduction from annual emissions of the buildings where the equipment is located if that is the only option. However, we have assembled more information to further support our original request for an eNG fuel coefficient.

Carbon Accounting Methodology – LL97 Biofuels Lifecycle Approach

In the attached Excel model, the carbon accounting methodology follows the lifecycle “net emissions” approach articulated in DOB’s LL97 Biofuels guidance.

Specifically, the methodology applies a lifecycle framework to quantify net avoided emissions, consistent with the principle that fuel carbon intensity may reflect upstream lifecycle impacts rather than solely stack emissions. In this context:

- The CO₂ captured from the CCNY central steam plant represents combustion-derived CO₂ that would otherwise have been released to the atmosphere.
- That CO₂ is captured, purified (>99% vol, as documented in the validated engineering report), and used as feedstock for eNG production.
- Upon combustion of the resulting eNG, the CO₂ released is the same carbon atom previously captured and prevented from atmospheric release.

Accordingly, under a lifecycle net-emissions framework, the previously avoided release of CO₂ is counted against the CO₂ emitted at the point of eNG combustion.

We think this is consistent with LL97’s structure, which assigns emissions factors to fuels (Administrative Code §28-320.3(1)) and defines building emissions as:

“the sum of the products of the amount of energy consumed by the building multiplied by the applicable greenhouse gas emissions coefficient for each energy source.” Under this framework, the coefficient applied to a fuel may reflect lifecycle characteristics, not merely combustion chemistry. The Excel model therefore incorporates a lifecycle net-emissions calculation consistent with the Biofuels guidance approach, rather than a simple stack-emissions-only treatment.

3. If the request is to remain as a fuel coefficient, then the end use should be in NYC. Furthermore the ask may want to be for a Time of Use methodology, i.e. 8,760 hourly emissions coefficients, since the supporting documents state that the eNG product relies on "arbitrage" to modulate its output based on "[wholesale renewable] electricity...prices [versus] the market value of the gas that can be produced...cheap electricity in, valuable methane out" – please confirm.

Response: The updated attached example use the TOU power CI for the analysis as suggested. We are applying solely for recognition of an alternative fuel coefficient for eNG delivered via pipeline and combusted at NYC properties. The closed-loop scenario is not the subject of this CCD1.

Scope of CCD1 Request – Alternative Fuel Coefficient Only. We would also like to clearly and respectfully distinguish between two entirely separate regulatory scenarios.

The present CCD1 application is strictly for an alternative fuel coefficient applicable to eNG delivered via the gas pipeline and combusted at a property. We are not seeking approval under this CCD1 for a scenario in which a Carbon Bridge unit is installed at a building and carbon is recycled in a closed loop entirely on-site (i.e., CO₂ stored on-site, converted to CNG/eNG on-site, combusted, and then recaptured on-site).

We view that closed-loop configuration — which we are pursuing separately for oil-fired buildings — as follows:

- LL97 regulates energy entering the property. The statute calculates building emissions based on "energy consumed by the building" multiplied by an emissions coefficient. The law looks to electricity, steam, and fuel entering the building.
- Reporting is based on ENERGY STAR Portfolio Manager (ESPM). LL97 reporting is grounded in ESPM energy consumption data.

What DOB sees for compliance purposes is:

- o Electricity entering the meter,
- o Steam entering the meter (if applicable),
- o Fuel delivered to the property.
- In a closed-loop on-site recycling scenario:
 - o Oil deliveries would go to zero.
 - o Electricity consumption would increase.
 - o ESPM would reflect a fully electrified building.
 - o No fuel would enter the property.

In such a configuration, the Carbon Bridge unit operates entirely behind the customer's energy meters. The net observable effect under ESPM is that the building becomes electrically heated. The fact that electricity is used to produce eNG on-site, which is then combusted and recaptured in a closed loop, does not alter the fact that no regulated fuel is crossing the property line.

It is precisely for this reason that the LL97 framework explicitly prohibits carbon capture as a compliance mechanism. The law states that building emissions are calculated based on energy consumption multiplied by emissions factors, and it does not provide for subtraction of captured stack emissions. In other words, compliance is based on energy inputs, not post-combustion capture adjustments.

Similarly, the rules explicitly allow on-site renewable generation to offset consumption. LL97 provides that on-site renewable electricity may be deducted from reported consumption, because the law evaluates net energy usage as reported in ESPM. The framework does not discriminate between forms of on-site energy production; it focuses on net metered energy.

Even in a scenario where eNG is injected into the gas grid and later repurchased for combustion at the same property, the ESPM reporting would show gas export equal to gas import, resulting in a net-zero fuel input from the grid. Electricity consumption would increase correspondingly. From a compliance perspective, this would function analogously to on-site solar generation exported to and later imported from the grid: the accounting reflects net energy flows.

There is alignment with LL97's Structure. LL97 is fundamentally a Scope 1 emissions law structured around energy inputs to buildings. Recognizing a lifecycle-based coefficient for a pipeline-delivered gaseous fuel is fully consistent with:

"emissions = energy consumed × greenhouse gas emissions coefficient."

The requested CCD1 determination would simply establish the appropriate emissions coefficient for a qualifying alternative gaseous fuel.

We deeply appreciate the care with which your office approaches these questions and are committed to providing any additional documentation or clarification necessary to ensure full alignment with LL97 and its implementing rules.

4. The submitted P&IDs do not appear to align with the diagram on page 22 of the "Transform CO2 into Natural Gas" PDF. Please clarify how the two are related.

Response: The P&IDs are more detailed schematics of the page 22 diagram. We consider the P&IDs for engineering purposes and the page 22 diagram to provide overall concept. Note the page 22 diagram does NOT include the waste heat recovery from the Sabatier reactor for driving the carbon capture process that is present in the P&IDs and the CCNY deployment. Below is a correspondence figure.



5. Suggest that the LCA spreadsheet be revised per the following:

1. Only "Combustion" should be listed as an end use. Any cells related to the other three end uses (Shipping Fuel, Power Production, Industrial Heating) can be disabled and hidden.

Response: Amended in attached excel

2. "Grid Carbon Intensity - Export Destination" can be disabled and hidden, as both production and consumption should be assumed to take place within NYC.

Response: Amended in attached excel The Grid Carbon Intensity for NYC can use the MOCEJ number, as shown in the CHP section of the Article 320 Info Guide.

Response: Amended in attached excel

3. Power supply at all stages can be set to 0% renewables to allow for a worst-case scenario.

Response: Amended in attached excel

4. How do "Upstream Natural Gas Emissions" factor into the requested coefficient?

Response: This reflects the scope 2 GHG emissions of gas transmission that are also built into LL97 existing CI for regular fossil natural gas

5. How is leakage addressed in the parts of the process other than "CO2 Capture" and "CO2 Transmission"? Also, the leakage rates listed in those sections are quite low (0.2%, 0.3%) compared to industry averages – please verify how these numbers were arrived at.

Response: Those leakage rates were derived from prototype testing.

6. P. 10 of the "Transform CO2 into Natural Gas" PDF describes the Sabatier methanation process at 95% efficient. This is beyond typical efficiencies for this process - can the number be verified?

Response: Yes, we have a prototype operating at CCNY where tests and analyses can be witnessed.

7. It is not clear how "Green Ammonia" and "Blue Ammonia" factor into the LCA.

Response: They don't... the LCA tool was developed for multiple alternative fuels. We have done our best to hide non-relevant sections in the new example; though utilizing an existing industry standard tool remains a better pathway for CI determination than developing a new calculator for solely LL97

8. More specifically, the carbon intensity of the MEA manufacture and transport process should be explicitly addressed in the LCA, including any make-up MEA that has to be fed into the system.

Response: industry standard MEA CI in CCU applications is 0.34 gCO₂e/MJ eNG including manufacture and transport and is added to the attached example

6. Note that a DOB OTCR1 or OTCR2 filing may be needed if the equipment is to be installed in situations other than a test lab.

Response: We completely understand and are ready to file when appropriate.

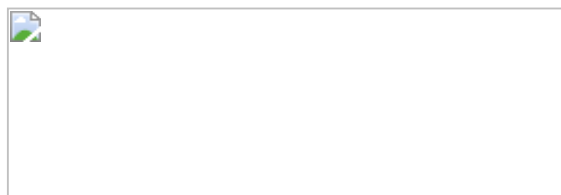
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>;

"Donald Chahbazpour" <[REDACTED]>;

"mcastaldi" <[REDACTED]>; "Michael Bobker"

<[REDACTED]>; "Matthew Landin" <[REDACTED]>; "Drew

Standard Carbon" <[REDACTED]>; "Drewpattie Kallu

(Buildings)" <[REDACTED]>; "Abbott Price (Buildings)"

<[REDACTED]>; "Jean Kim (Buildings)"

<[REDACTED]>

Date 13/03/2026 20:42:10

Subject Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258

Hi Natan,

Following up on Ping's email, we will be denying the current CCD1 application, as there are several outstanding questions that have not been addressed. If you prefer, you may choose to withdraw the application instead of having DOB issue a denial. Please let us know by today, as we plan to take action on Monday, March 16, 2026.

To move forward with consideration of this technology, you will need to submit a new CCD1 that addresses all of the questions outlined below and ensure that the applicable filing fee is paid.

Separately, we are aware that this unapproved technology is listed in dozens of LL97 Decarbonization Plans, as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting.

Let us know if you have any questions.

Regards,

Emily

From: Lee Ping Kwan (Buildings) <[REDACTED]>
Sent: Friday, March 13, 2026 2:12 PM
To: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]; Natan Shahar <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] Marco Castaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Matthew Landin <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Hi Natan,

Any updates? It looks like the original CCD1 has not yet been withdrawn/deleted by the applicant - can you please do so, as there is no way for us to do on our end other than stamping it as a denial.

From: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]
Sent: Thursday, February 26, 2026 1:17 PM
To: Natan Shahar <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] Marco Castaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Matthew Landin <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

++

From: Emily Hoffman (Buildings) <[emhoff](#)>
Sent: Thursday, February 26, 2026 1:17 PM
To: Natan Shahar <>
Cc: Rafik Ammar | eNG-coalition; Donald Chahbazpour
 <>; Marco Castaldi <>; Michael Bobker <>; Matthew Landin <>; Drew Standard Carbon <>; Drewpattie Kallu (Buildings) <>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Thank you, Natan for submitting your CCD1 and bringing this technology to our attention.

We've reviewed the materials and would like to request some clarification:

1. The online CCD1 is missing several items and will need to be superseded with a new submission:
 1. It is not fee-exempt; see [Determinations Frequently Asked Questions - Buildings](#)
 2. Most of the attachments that were emailed separately on 11/4/2025 were not included in the online CCD1;
 3. Request needs to be clarified (see #2 below), ideally in the form of a cover letter.
2. The request for an eNG fuel coefficient is not supported by the calculations indicating that the fuel is shipped to Europe, where an NYC DOB-approved fuel coefficient may not be recognized or useful. Since the goal of Local Law 97 is to reduce emissions within NYC, would it be possible to reframe the request as a deduction from the annual emissions of the building where the equipment is located?

3. If the request is to remain as a fuel coefficient, then the end use should be in NYC. Furthermore the ask may want to be for a Time of Use methodology, i.e. 8,760 hourly emissions coefficients, since the supporting documents state that the eNG product relies on "arbitrage" to modulate its output based on "[wholesale renewable] electricity...prices [versus] the market value of the gas that can be produced...cheap electricity in, valuable methane out" – please confirm.

4. The submitted P&IDs do not appear to align with the diagram on page 22 of the "Transform CO2 into Natural Gas" PDF. Please clarify how the two are related.

5. Suggest that the LCA spreadsheet be revised per the following:

1. Only "Combustion" should be listed as an end use. Any cells related to the other three end uses (Shipping Fuel, Power Production, Industrial Heating) can be disabled and hidden.
2. "Grid Carbon Intensity - Export Destination" can be disabled and hidden, as both production and consumption should be assumed to take place within NYC.
3. The Grid Carbon Intensity for NYC can use the MOCEJ number, as shown in [the CHP section](#) of the *Article 320 Info Guide*.
4. Power supply at all stages can be set to 0% renewables to allow for a worst-case scenario.
5. How do "Upstream Natural Gas Emissions" factor into the requested coefficient?
6. How is leakage addressed in the parts of the process other than "CO2 Capture" and "CO2 Transmission"? Also, the

leakage rates listed in those sections are quite low (0.2%, 0.3%) compared to industry averages – please verify how these numbers were arrived at.

7. P. 10 of the “Transform CO2 into Natural Gas” PDF describes the Sabatier methanation process at 95% efficient. This is beyond typical efficiencies for this process - can the number be verified?

8. It is not clear how “Green Ammonia” and “Blue Ammonia” factor into the LCA.

9. More specifically, the carbon intensity of the MEA manufacture and transport process should be explicitly addressed in the LCA, including any make-up MEA that has to be fed into the system.

6. Note that a DOB [OTCR1](#) or [OTCR2](#) filing may be needed if the equipment is to be installed in situations other than a test lab.

Please let us know if you have further questions on what information we are looking for.

Regards,

Emily

From: Natan Shahr <[REDACTED]>
Sent: Tuesday, November 4, 2025 5:28 PM
To: Emily Hoffman (Buildings) <[emhoff](#)>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]> Donald Chahbazpour <[REDACTED]> Marco Castaldi <[REDACTED]> Michael Bobker <[REDACTED]> Matthew Landin <[REDACTED]> Drew Standard Carbon <[REDACTED]> Drewpattie Kallu (Buildings) <[REDACTED]>
Subject: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Some people who received this message don't often get email from [REDACTED]. [Learn why this is important](#)

CAUTION! EXTERNAL SENDER. Never click on links or open attachments if sender is unknown, and never provide user ID or password. If **suspicious**, report this email by hitting the **Phish Alert Button**. If the button is unavailable or you are on a mobile device, forward as an attachment to [REDACTED]

Good evening Emily,

Thank you again for your time at the Urban Green Council fall reception, it was great to see you again after all these years!

Per our discussion and later correspondence on linkedin, I'd love to host you at CCNY to see our eNG production deployment. As requested, please see attached the following:

1. our formal CCD1 Pre-Determination Request for a CI assignment for eNG with respect to LL97
2. the PIDs for the eNG production deployment at CCNY
3. the eNG Coalition LCA modeling tool and related PDF documentation
4. the ISCC Mass Balance Guidance on transporting low carbon natural gas via pipeline with physical delivery as opposed to Book & Claim credit attribution
5. Standard Carbon's latest White Paper explaining our technology and business

I've copied relevant stakeholders to this email:

- [Rafik Ammar - eNG Coalition](#)
- [Donald Chahbazpour - National Grid](#)
- [Professor Marco Castaldi - CUNY Earth Engineering Center](#)
- [Michael Bobker - CUNY Building Performance Lab](#)
- [Matt Landin - NYC Economic Development Corporation](#)

I look forward to our discussion.

Sincerely,

Natan Shahar

Founder & Chief Strategy Officer

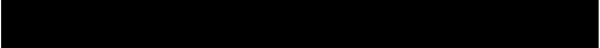


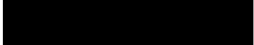
+972-50-648-8324



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----- Forwarded Message -----

From "DOBNOW donotreply" < >

To "Nathan Winkler" < >

Date 02/11/2025 15:02:19

Subject Pre-Determination Request Submitted 152 CONVENT
AVENUE/MANHATTAN/PDA00012258

This email references the Pre-Determination request for 152 CONVENT
AVENUE/MANHATTAN/PDA00012258/eNG carbon intensity protocol.

The Pre-Determination request has been submitted in [DOB NOW: Build](#).
You will receive another email notification with the status of the review.

This is an automated message. Please do not reply. If you have any questions, submit an inquiry at www.nyc.gov/dobnowhelp.

DOB NOW Support

NYC Department of Buildings



TESSER | **RYAN**
TESSER, RYAN & ROCHMAN LLP

Gregory J. Ryan *
Alexandra Lyras ‡
George Kontogiannis †
Randall Tesser *
—
Jackson Kerr •
Richard Grayson • ℄
Lewis F. Tesser • ℰ
Irwin Rochman, *Dec'd.*

April 24, 2026

Via E-mail: [REDACTED]

New York City Department of Buildings
Attn: Mona Sehgal, Esq., General Counsel

• *Admitted in NY*
* *Admitted in NY, NJ*
† *Admitted in NY, CT*
‡ *Admitted in NY, CT, DC*
℄ *Of Counsel*
ℰ *Counsel Emeritus*

Re: DOB Determination of Greenhouse Gas Energy Consumption Coefficient

Dear Ms. Sehgal,

I represent Nathan Winkler, P.E.

I am writing regarding my client's request to the DOB for the determination of the coefficient for determining the amount of greenhouse gas emissions attributable to a novel alternative fuel. As of this date, the DOB has refused to provide a determination. A copy of my client's correspondence with the DOB is attached.

I am writing to you as the attorney for the DOB consistent with my duties under Rule 4.2 of the New York Rules of Professional Conduct, however, if there is another individual or office that this request would be more appropriately handled by, I would appreciate if this inquiry would be forwarded to such party.

This seems to be a fairly rare and esoteric situation, so there may be nuances to the process that I am missing. I would appreciate if the DOB could provide its position on this issue.

Under §28-320.3.1.1(7) of the New York City Admin. Code (part of LL97), the commissioner is obligated to determine a coefficient for the amount of greenhouse gas emissions attributable to energy sources that do not already have a coefficient assigned ("The amount of greenhouse gas emissions attributable to other energy sources, including but not limited to energy resources, *shall be determined by the commissioner* and promulgated into rules of the department [emphasis added]." *Id.*).

A procedure for this determination was promulgated at 1 RCNY §103-14(d)(3)(i)(c), which states, "[f]or any fuel type that is combusted or consumed on site, not listed in this subparagraph or section 28-320.3.1.1 of the Administrative Code and not prohibited by applicable rule or law, the owner must propose a carbon coefficient, in tCO₂e per kBtu, that serves the public interest of reducing GHG emissions, to be used for calculating greenhouse gas emissions for such fuel type. . . Such proposed carbon coefficient is subject to approval by the Department, which may alternatively assign a different coefficient for such fuel type."



My client (on behalf of a property owner) submitted a proposed carbon coefficient; however, the DOB has refused to issue an emissions calculation. While the DOB is under no obligation to approve the carbon coefficient proposed by my client, the DOB cannot refuse to issue an emissions calculation entirely.

Is there a procedure that should be followed for the issuance of an efficiency calculation pursuant to §28-320.3.1.1(7) where the proposed carbon coefficient is not approved?

Sincerely,

/s/ Randall Tesser
Randall Tesser

Subject: RE: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted
152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

From: "Emily Hoffman (Buildings)" <[REDACTED]>

Sent: 09/04/2026 14:37:59

To: "Natan Shahar" <[REDACTED]>

CC: "Rafik Ammar | eNG-coalition" <[REDACTED]>;
"Donald Chahbazpour" <[REDACTED]>;
"mcastaldi" <[REDACTED]>; "Michael Bobker"
<[REDACTED]>; "Drew Standard Carbon"
<[REDACTED]>; "Drewpattie Kallu (Buildings)"
<[REDACTED]>; "Abbott Price (Buildings)"
<[REDACTED]>; "Lee Ping Kwan (Buildings)"
<[REDACTED]>; "Jean Kim (Buildings)"
<[REDACTED]>; "Sam Lehr" <[REDACTED]>

Please also confirm the next steps:

Next steps:

- As stated in our 3/13/2026 email, "this unapproved technology is listed in dozens of LL97 Decarbonization Plans as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting."

All submitted Decarbonization Plans proposing to use the StandardRNG technology as a means of reducing reported emissions must be revised and resubmitted within 60 days of this notice. Failure to do so will result in the rejection of the application for penalty mitigation, and may subject the building to applicable enforcement actions.

- It appears that on your website, there are representations indicating that the product for which you have sought approval - StandardRNG - can contribute to LL97 compliance (for example the official website, <https://ll97solution.nyc/>).

Such claims are not consistent with current law or guidance. Note that similar representations have already been referred for enforcement, and the company responsible was directed to cease and desist from making unsupported compliance claims. DOB strongly recommends removing any such public claims. As stated above, StandardRNG is not an approved compliance pathway under current rules, and applications premised on its use will not be accepted.

From: Natan Shahar <[REDACTED]>

Sent: Wednesday, April 8, 2026 6:05 PM

To: Emily Hoffman (Buildings) <emhoff@nyc.gov>

Cc: Rafik Ammar | eNG-coalition <[REDACTED]> Donald Chahbazpour <[REDACTED]>

<[REDACTED]> mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>

Subject: RE: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Good evening Emily,

Thank you so much for the fast response. We will submit the methodology for fully deployed installations at the appropriate time per your instructions.

Sincerely,

Natan Shahar
Founder & Chief Strategy Officer
[REDACTED]
+972-50-648-8324

www.standardcarbon.com

On Apr 9, 2026 00:27, "Emily Hoffman (Buildings)" <[REDACTED]> wrote:

Hi Natan,

Thank you for your response.

Currently the DOB cannot approve a methodology separate from installed cases. The methodology can be submitted for those building who chose to install, but we are not able to provide preemptive approvals.

While other jurisdictions may have approved this technology as a method for greenhouse gas production, the [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) standard does not align with this technology at this time.

Thank you,

Emily

Emily Hoffman, PE, CEM | Director, Office of Building Energy & Emissions Performance

NYC Department of Buildings | Bureau of Sustainability

280 Broadway – 3rd Floor | New York, NY 10007

[emhoff](#) [REDACTED]

From: Natan Shahar <[REDACTED]>
Sent: Monday, April 6, 2026 6:33 PM
To: Emily Hoffman (Buildings) <emhoff@eng-coalition.org>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
[\[REDACTED\]@eng-coalition.org](mailto:[REDACTED]@eng-coalition.org)>
Subject: Re[10]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Good evening Emily,

I'd be very grateful if you'd consider my notes in ***italics in-line below:***

1. Relies on modeled projections rather than actual data, particularly when the model structurally excludes or arbitrarily minimizes various production factors that might result in an e-NG fuel coefficient that is higher than the coefficient for conventional natural gas; ***-the CCD1 request was for review of a procedure for processing actual data only. No suggestion that modeled projections should be the basis of the fuel coefficient was submitted.***
2. Does not demonstrably meet the requirement in [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) that a proposed fuel coefficient "serves the public interest of reducing GHG emissions"; and - ***electric natural gas synthesis is approved to reduce GHG emissions in dozens of jurisdictions and applications identical to NYC LL97 most prominently in the EU RFNBO as well as in the recent NYSEDA PON 6031***
3. Includes carbon capture as an emissions reduction/avoidance mechanism in any way, since, as noted in the [1 RCNY 103-14 FAQ](#), "LL97 does not currently allow for the use of CCS as a compliance pathway for LL97, absent further government action." - ***electric natural gas synthesis does not entail the use of Carbon Capture & Storage (CCS).***

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Natan Shahr" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 07/04/2026 1:10:35

Subject RE: Re[8]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan,

Thank you for your submission and supporting documentation. After careful review, the Department of Buildings denies all components of the proposed application. The Department is unable to approve a proposed fuel coefficient methodology that:

1. Relies on modeled projections rather than actual data, particularly when the model structurally excludes or arbitrarily minimizes various production factors that might result in an e-NG fuel coefficient that is higher than the coefficient for conventional natural gas;
2. Does not demonstrably meet the requirement in [1 RCNY §103-14\(d\)\(3\)\(i\)\(c\)](#) that a proposed fuel coefficient "serves the public interest of reducing GHG emissions"; and

3. Includes carbon capture as an emissions reduction/avoidance mechanism in any way, since, as noted in the [1 RCNY 103-14 FAQ](#), “LL97 does not currently allow for the use of CCS as a compliance pathway for LL97, absent further government action.”

Next steps:

- As stated in our 3/13/2026 email, “this unapproved technology is listed in dozens of LL97 Decarbonization Plans as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting.”

All submitted Decarbonization Plans proposing to use the StandardRNG technology as a means of reducing reported emissions must be revised and resubmitted within 60 days of this notice. Failure to do so will result in the rejection of the application for penalty mitigation, and may subject the building to applicable enforcement actions.

- It appears that on your website, there are representations indicating that the product for which you have sought approval - StandardRNG - can contribute to LL97 compliance (for example the official website, <https://ll97solution.nyc/>).

Such claims are not consistent with current law or guidance. Note that similar representations have already been referred for enforcement, and the company responsible was directed to cease and desist from making unsupported compliance claims. DOB strongly recommends removing any such public claims. As stated above, StandardRNG is not an approved compliance pathway under current rules, and applications premised on its use will not be accepted.

Emily

From: Natan Shahar <[REDACTED]>
Sent: Wednesday, March 25, 2026 1:23 PM
To: Emily Hoffman (Buildings) <emhoff@nyc.gov>; Lee Ping Kwan (Buildings) <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour <[REDACTED]>; mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
Subject: Re[8]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you for the detailed response—we appreciate the time and rigor your team has applied to this review. We have provided itemized responses to each of your comments below.

Before addressing the specific points, we would like to offer a broader clarification on the intent of our submission.

We have formally filed a pre-determination request for the purpose of approving a *methodology* for calculating the carbon intensity (CI) of eNG—not a fixed coefficient. This distinction is critical. Every LL97 filing that utilizes eNG will inherently require a *project-specific CI calculation*, as the production characteristics of eNG vary meaningfully across projects.

For example, eNG production pathways differ significantly across global deployments—from the Live Oak project in Nebraska (co-developed by TotalEnergies and Osaka Gas for the Japanese market) to the CCNY deployment by Standard Carbon (with Phase 1 operational and Phase 2—full steam plant decarbonization—in FEED). In each case, the technology stack, operating profile, energy inputs, and system integration differ.

Despite this variability, there is a clear regulatory need for a *shared technical framework* to enable consistent planning and compliance across overlapping policy regimes. In NYC, this includes LL97 as well as federal incentives such as IRS 45Z and 45Q; in other jurisdictions, such as the Live Oak example, there are parallel but distinct regulatory structures in both the U.S. and Japan.

To address this, we submitted the Excel tool developed by the eNG Coalition. This tool establishes a unified, life-cycle-based framework that is aligned with established methodologies (e.g., US EPA, GREET, LCFS) and is more consistent and comprehensive than developing a bespoke tool for each project.

Importantly, LL97 explicitly provides for this approach. For fuels not listed, the rules require submission of a CCD1 with a proposed methodology based on accepted industry principles. In addition, LL97's treatment of alternative fuels already relies on lifecycle accounting consistent with EPA standards, capturing emissions across production, transport, and use rather than solely at combustion.

Accordingly, our request is not to approve a fixed CI for eNG, but rather to approve the *methodology (the tool)* as the basis for calculating CI on a property-by-property (BIN-by-BIN) basis for each LL97 filing, incorporating full lifecycle considerations.

We also note that the specific inputs included in the submitted spreadsheet were for illustrative purposes only and not intended to represent a finalized or approved CI.

Finally, in parallel, we would greatly appreciate the opportunity to host DOB at the CCNY operating facility to observe eNG production in real time and review the system variables, metering, and operational controls directly.

Please see responses to your specific comments below:

1. Verification vs. modeled projections

—Agreed 100%. We fully align that CI must be based on verifiable, measured data and not modeled projections.

—Our position is that this data should be included in *each individual LL97 filing*, using actual operating data (e.g., interval meter data) on an 8,760 basis.

—The mass balance framework you outlined (CO₂, H₂O, H₂, CH₄ flows and storage, as well as tank capacities, electrolyzer capacity, and efficiency) is fully consistent with how the tool is structured and how filings would be supported.

—The purpose of the tool is to *organize and standardize the calculation*, while the inputs are populated with measured data for each project year.

2. Waste heat vs. continuous carbon capture

—In the case of Standard Carbon's Carbon Bridge technology, thermal energy storage is integrated into the system to decouple heat generation from methanation timing.

—This allows waste heat from methanation (which occurs during low-CI hours) to be stored and utilized to support continuous carbon capture operations.

—That said, we agree that this parameter should ultimately be *metered and reflected explicitly in the calculation framework* (per item 1), rather than assumed.

3. Carbon intensity methodology and "Avoided Emissions"

—The treatment in the tool reflects standard lifecycle carbon intensity methodologies for fuels, specifically those established under US EPA frameworks and implemented through GREET and similar models.

—These methodologies calculate fuel carbon intensity on a full lifecycle basis, incorporating emissions across feedstock sourcing, processing, energy inputs, transportation, and combustion.

—As reflected in the LL97 Biofuels Info Guide, the Department already applies this same lifecycle approach, where net emissions are determined based on full fuel pathway analysis rather than solely point-of-combustion emissions.

—Accordingly, the “Avoided Emissions” field in the tool is intended to represent lifecycle adjustments within a standardized CI calculation framework (consistent with GREET-style accounting), not a separate compliance mechanism.

4. Grid coefficient (0.034 kgCO₂e/kWh)

—This value is not a fixed assumption but is calculated dynamically in cell G1 of the “LL97 TOU” tab.

—It reflects a weighted average of the carbon intensity of electricity during the actual operating hours of the electrolyzer, based on hourly 2024 data and the system’s dispatch profile.

—Critically, this value will vary year-to-year and project-to-project based on:

- Actual operating hours (verified data)
- Actual grid carbon intensity for that year

—In a formal LL97 filing, this would be recalculated using *measured operational data*, not assumed values.

5. Variables currently set to zero

—Agreed. These values (e.g., CO₂ transmission losses, compression emissions, methane leakage, shipping distance, etc.) are all measurable and should be populated with real data in an actual filing.

—They were set to zero in the submitted version strictly for illustrative purposes to demonstrate the structure and functionality of the tool.

—In practice, these parameters would be included and verified as part of the project-specific CI calculation.

We appreciate the clarity of your feedback and believe there is strong alignment on the core principles—particularly the need for verifiable, measurement-based inputs.

Our request is simply that the Department recognize and approve a consistent, lifecycle-based methodology (via the submitted tool), which can then be applied

on a case-by-case basis using real operational data for each LL97 filing.

We would welcome the opportunity to discuss this further and to host your team at CCNY.

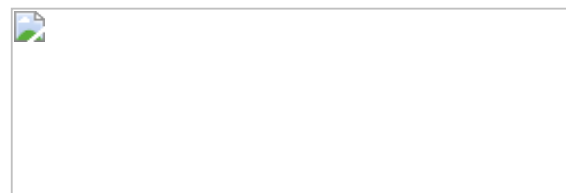
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer

[REDACTED]

+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 25/03/2026 15:19:03

Subject Re: Re[6]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan,

Thank you for your responses. What we are looking for is a spreadsheet that addresses our concerns all at once. At this time, we cannot approve this technology for an adjusted fuel coefficient for the following reasons:

1. You wrote on 3/19 that "Verification [of the hours that the electrolyzer was run] would be based on measured operating data" rather than a model. As we have previously emphasized, we cannot approve a proposed fuel coefficient that is based on modeled projections.

The coefficient must be based on verifiable data, which in this case could be a mass balance spreadsheet that accurately reflects electricity used on an 8,760 basis for:

1.
 - a. CO2 input, storage
1.
 - b. H2O input
1.
 - c. H2 output, storage
1.
 - d. CH4 output, storage

The following data points would need to be verified as well:

2.
 - a. CO2 tank storage capacity (to determine how often the electrolysis and methanation would need to happen)
2.
 - b. H2 storage tank capacity

2.

c. CH4 storage tank capacity

2.

d. Measured electrolyzer capacity

2.

e. Measured electrolyzer efficiency

2. The overall process relies on harnessing the waste heat of methanation for “100% of the process heat” for carbon capture. How does this happen if the carbon capture is continuous while the methanation only happens during times of low grid CI?

3. You acknowledge in your 3/14 email that “The LL97 framework explicitly prohibits carbon capture as a compliance mechanism,” yet the spreadsheet says “yes” to “Avoided Emissions Considered?” and sets the Avoided Emissions [feedstock] credit to 100%. This should be adjusted to reflect the ongoing combustion required in the non-closed-loop scenario.

4. You are still using the artificially low 0.034 kgCO₂e/kWh grid coefficient throughout the spreadsheet, even though your 3/19 email states otherwise.

5. Many variables in the spreadsheet are set to zero: CO₂ transmission losses, CO₂ compression emissions (which you write is dependent on waste heat recovery), Methanation heat integration, CH₄ leakage, Shipping distance of e-NG. When the measured data is provided, it is expected that many of these variables will become nonzero.

Regards,

Emily

From: Natan Shahar <[REDACTED]>

Sent: Thursday, March 19, 2026 11:53 AM

To: Emily Hoffman (Buildings) <[emhoff](#)>; Lee Ping Kwan (Buildings)

<[REDACTED]>

Cc: Rafik Ammar | eNG-coalition <[REDACTED]>; Donald Chahbazpour

<[REDACTED]>; mcastaldi <[REDACTED]>; Michael Bobker

<[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings)

<[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings)

<[REDACTED]>; Sam Lehr [REDACTED]
Subject: Re[6]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT
 AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you for your review — we have updated the attached spreadsheet to address these points.

Carbon capture vs. TOU electricity use

You are correct that CO₂ capture operates continuously. The revised model now reflects that:

- CO₂ capture runs year-round in tandem with boiler operation (~38,783 tCO₂e annually).
- The electricity associated with CO₂ compression and storage has been added and is modeled using the **annual average TOU carbon intensity**, rather than the low-carbon subset of hours.

CO₂ handling when electrolysis is not operating

During periods when the electrolyzer and methanation system are not running:

- Captured CO₂ is **compressed and stored on-site as a liquid**.
- This storage step is now included in the model (previously shown as zero compression).

Sufficiency of ~548 operating hours

Based on the 2024 TOU carbon intensity data for NYISO Zone J:

- ~500+ hours is sufficient to convert the full annual volume of captured CO₂ into eNG within the modeled system.
- The system is designed such that hydrogen production during those hours can process the annual CO₂ supply.

We also note that 2024 conditions reflect a relatively fossil-heavy generation mix in Zone J. As additional resources such as Empire Wind and the Champlain Hudson Power Express (Québec hydro) come online, the number of hours with lower grid carbon intensity is expected to increase materially, which would expand the available operating window.

Electrolyzer operating hours verification (Item B)

Our understanding is that verification would be based on **measured operating data rather than a fixed coefficient**:

- The filing RDP would provide supporting documentation (e.g., interval meter data) demonstrating hourly electrolyzer operation.
- This data would feed into an approved calculation framework (e.g., the submitted LCA tool or similar).

At CCNY, all relevant systems are metered at both the system and utility level with **5-minute resolution**, which enables this type of documentation.

REET modeling (Item C)

We have attached:

- A REET-based calculation submitted in the context of CARB LCFS, and
- Supporting correspondence from the third-party consultant (Adelante Consulting).

As noted in the attached email, the analysis applies REET emission factors and standard assumptions for CO₂ capture, hydrogen production, and methane synthesis.

We will defer to Sam Lehr and the eNG Coalition for any additional detail regarding REET methodology and regulatory context.

Please let us know if you would like us to walk through the updated model together.

Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



+972-50-648-8324



www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahr"
<[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald
Chahbazpour" <[REDACTED]>; "mcastaldi"
<[REDACTED]>; "Michael Bobker" <[REDACTED]>;
"Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu
(Buildings)" <[REDACTED]>; "Abbott Price (Buildings)"
<[REDACTED]>; "Jean Kim (Buildings)"
<[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 18/03/2026 23:01:21

Subject Re: Re[4]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Natan, thank you for the clarifications. It appears that the spreadsheet still needs some revision:

A. You write that the electrolysis and methanation processes are only run "during hours when grid carbon intensity is sufficiently low".

1.

- The "Carbon Capture" tab seems to say that you are capturing all of the carbon produced by the boiler, or **38,783 tCO₂e** annually. This implies that the carbon capture process is run continuously. Therefore, the spreadsheet needs to be modified to show that the carbon capture is using electricity year-round and cannot use the lower TOU coefficient.

1.

- The "TOU" tab says that the coefficient is derived by only using electricity for the 548 hours of the year when grid intensity is lower than your chosen threshold. If electrolysis and methanation are only being run during these 548 hours, is that enough to convert all the captured CO2 into e-NG?

1.

- For the other 94% of the time, what is occurring with all of the captured carbon? The spreadsheet says there is zero compression.

B. Can you provide records verifying that the electrolyzer was only run during those 548 hours in 2024? A proposed fuel coefficient is only approvable if it is based on quantifiable data.

C. Please send examples of GREET modeling for e-NG, as Sam offered.

Regards,

Emily

From: Natan Shahar <[REDACTED]>
Sent: Tuesday, March 17, 2026 10:11 AM
To: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]; Lee Ping Kwan (Buildings) <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] mcastaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>; Sam Lehr <[REDACTED]>
Subject: Re[4]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily,

Thank you again for your continued review and for the opportunity to clarify the below items. Please see our responses inline:

1. Grid Electricity Coefficient (0.3699 vs. 0.034 kgCO₂e/kWh)

The value of 0.034 kgCO₂e/kWh in the revised spreadsheet reflects the use of **time-of-use (TOU) marginal carbon intensities**, rather than the static MOCEJ annual average (0.3699 kgCO₂e/kWh).

In the updated submission, we added a dedicated “**LL97 TOU**” **tab**, which incorporates hourly electricity carbon intensities for 2024 derived from the DOB LL97 tool. This allows us to model electricity consumption based on *when* it occurs, rather than assuming uniform grid conditions.

Operationally, the electrolyzer (hydrogen generation) is **not run continuously**. Instead, it is dispatched only during hours when grid carbon intensity is sufficiently low to ensure that the resulting eNG has a materially lower carbon intensity than fossil natural gas. As such, the effective electricity CI reflected in the model represents a **weighted average of low-carbon operating hours**, not the full-year average.

This approach is forward-looking but grounded in expected grid evolution. In particular:

- The interconnection of **Empire Wind** and
- The **Champlain Hudson Power Express (Québec hydro)**

will significantly increase the availability of low-carbon electricity in NYC, especially during off-peak periods. Our operating strategy is explicitly designed to align with these periods of abundant low-carbon supply.

2. Status of Prior LCA Files

The previously submitted files:

- “Dynamic LCA Model - LCA of GHG Emissions of e-NG - Rev1”
- “Transform CO₂ into Natural Gas White Paper”

are **superseded by the updated Excel model and accompanying materials** in the revised submission.

While these earlier documents remain directionally consistent and are not contradicted, the new Excel file:

- Reflects a **fully updated, NYC-specific scenario**, and

- Consolidates the relevant assumptions into a single, reviewable framework.

Importantly, the model itself is not bespoke—it is the **standard eNG Coalition LCA tool**, which has been reviewed and accepted by multiple regulatory bodies, including:

- The European Commission (under RED II / RFNBO frameworks)
- The U.S. EPA
- California Air Resources Board (LCFS context)
- Québec (Énergir)
- Other OECD-aligned jurisdictions

For any detailed questions regarding the origin, validation, or regulatory acceptance of the tool, we have included **Sam Lehr and Rafik Ammar (eNG Coalition)** on this thread, who can provide direct context on its development and approvals.

3. Applicability of Biofuels Info Guide

We understand the concern regarding applicability. Our reference to the Biofuels Info Guide is not intended to suggest equivalency of specific coefficients, but rather alignment in **methodological framework**.

The core carbon accounting methodologies used by the EPA for biofuels—particularly lifecycle carbon intensity accounting—are the same foundational approaches underpinning:

- The **45Z Clean Fuels Production Credit**
- **California LCFS (CARB)**
- **EU RED III / RFNBO rules**
- The **REET model**

All of these frameworks explicitly account for **electrofuels (including eNG)** using the same lifecycle principles applied to biofuels.

Accordingly, the Biofuels Info Guide is relevant insofar as it reflects how LL97 already interprets **alternative fuels through a lifecycle CI lens**, rather than strictly point-of-combustion emissions.

4. Reduction of Combustion-Based Emissions

The Standard Carbon product reduces combustion-based emissions through several distinct but related mechanisms:

Closed-loop (on-site recycling) applications (primarily oil-fired buildings):

- Greater than **99% reduction in combustion emissions**
- All primary energy input is shifted from fossil fuel combustion to **off-peak electricity**
- CO₂ emitted from combustion is captured and reused, creating a near-complete carbon loop

Pipeline-delivered eNG (CCNY production → other buildings):

- Approximately **50% reduction in combustion emissions**
- The same carbon atom is used twice:
 -
 - First: CH₄ → CO₂ (combustion at CCNY)
 - Second: CO₂ → CH₄ → CO₂ (combustion at downstream building)

Biogenic CO₂ feedstock scenario:

- If the CO₂ used for methanation originates from biological sources (e.g., anaerobic digestion),
- The system can achieve **~100% reduction in combustion-based emissions**, as it effectively displaces fossil carbon with biogenic carbon.

Fundamental system advantage (key point):

eNG uniquely enables **temporal decoupling of energy production and consumption**:

- Methane can be stored in the gas network for extended periods (months if needed)
- CO₂ can also be stored prior to conversion

This allows electrolysis and methanation to operate **exclusively during periods of near-100% clean grid electricity**, thereby:

- Avoiding reliance on peaker plants or fossil generation
- Enabling building energy demand to be met with fuel produced only from **clean electricity inputs**

In this way, combustion at the building level is no longer tied to real-time grid emissions and can be effectively decarbonized through upstream fuel production timing.

We appreciate the depth of your review and are happy to provide any additional supporting detail or walk through the model together if helpful.

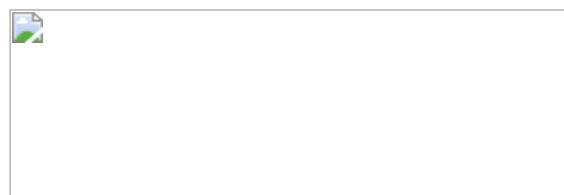
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



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----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>; "Donald Chahbazpour" <[REDACTED]>; "mcastaldi" <[REDACTED]>; "Michael Bobker" <[REDACTED]>; "Drew Standard Carbon" <[REDACTED]>; "Drewpattie Kallu (Buildings)" <[REDACTED]>; "Abbott Price (Buildings)" <[REDACTED]>; "Jean Kim (Buildings)" <[REDACTED]>; "Sam Lehr" <[REDACTED]>

Date 17/03/2026 15:20:10

Subject Re: Re[2]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted
152 CONVENT AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Marco, Natan,

Could you provide responses to the below so we can continue our review of the submission:

1. The suggestion was to use the MOCEJ grid electricity coefficient listed [here](#), which is **0.3699 kgCO₂e/kWh**. Instead, your revised spreadsheet uses **0.034 kgCO₂e/kWh**, which is off by a factor of 10 and then some - please clarify.
2. The files "Dynamic LCA Model - LCA of GHG Emissions of e-NG - Rev1" and "Transform CO₂ into Natural Gas White EH" were not included in the revised submission - are they still to be reviewed as part of the package?
3. The *Biofuels Info Guide* might not be an applicable comparison, since the coefficients and CI methodologies for biofuels are based on a significant amount of EPA research over time. Is there a similar document for e-NG that can be referenced?
4. One goal of LL97 is to reduce combustion-based emissions. Please clarify how the Standard Carbon product achieves this goal?

Regards,

Emily

Emily Hoffman, PE, CEM | Director, Office of Building Energy & Emissions Performance

NYC Department of Buildings | Bureau of Sustainability

280 Broadway – 3rd Floor | New York, NY 10007

[emhoff](#) [REDACTED]

From: Natan Shahrar <[REDACTED]>

Sent: Saturday, March 14, 2026 6:15 PM

To: Emily Hoffman (Buildings) <[emhoff](#) [REDACTED]>; Lee Ping Kwan (Buildings)

<[REDACTED]>

Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour

[REDACTED] mcastaldi <[REDACTED]>; Michael Bobker

<[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu

(Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim

(Buildings) <[REDACTED]>; Sam Lehr [REDACTED]

Subject: Re[2]: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT

AVENUE/MANHATTAN/PDA00012258 PDA00014175

Dear Emily and Lee,

Thank you very much for your thoughtful review of our original CCD1 submission and for the time and care your team has devoted to evaluating this request. We genuinely appreciate the energy and attention you have given to this filing.

We have superseded the prior submission with a new CCD1 filing (PDA00014175) that includes the full requisite fee. DOB NOW does not allow us to upload excel files to the CCD1 and hence I have attached all of the relevant documentation to this email. We apologize for the confusion regarding the fee exemption. We had been under the impression that, because the applicant site (CCNY) is a nonprofit public institution, the filing would be fee-exempt. We appreciate your clarification and will correct that immediately.

Below you will find your questions immediately followed by our responses. If our responses are still unclear, perhaps we can have a phone call to talk through those items.

1. The online CCD1 is missing several items and will need to be superseded with a new submission:

1. It is not fee-exempt; see Determinations Frequently Asked Questions - Buildings

Response: we will include the fee

2. Most of the attachments that were emailed separately on 11/4/2025 were not included in the online CCD1;

Response: included in new submission

3. Request needs to be clarified (see #2 below), ideally in the form of a cover letter.

Response: We hope this document meets the requirements of a cover letter. However, we are open to formatting and resubmitting as directed if needed.

2. The request for an eNG fuel coefficient is not supported by the calculations indicating that the fuel is shipped to Europe, where an NYC DOB-approved fuel coefficient may not be recognized or useful. Since the goal of Local Law 97 is to reduce emissions within NYC, would it be possible to reframe the request as a deduction from the annual emissions of the building where the equipment is located?

Response: We can reframe the request as a deduction from annual emissions of the buildings where the equipment is located if that is the only option. However, we have assembled more information to further support our original request for an eNG fuel coefficient.

Carbon Accounting Methodology – LL97 Biofuels Lifecycle Approach

In the attached Excel model, the carbon accounting methodology follows the lifecycle “net emissions” approach articulated in DOB’s LL97 Biofuels guidance.

Specifically, the methodology applies a lifecycle framework to quantify net avoided emissions, consistent with the principle that fuel carbon intensity may reflect upstream lifecycle impacts rather than solely stack emissions. In this context:

- The CO₂ captured from the CCNY central steam plant represents combustion-derived CO₂ that would otherwise have been released to the atmosphere.
- That CO₂ is captured, purified (>99% vol, as documented in the validated engineering report), and used as feedstock for eNG production.
- Upon combustion of the resulting eNG, the CO₂ released is the same carbon atom previously captured and prevented from atmospheric release.

Accordingly, under a lifecycle net-emissions framework, the previously avoided release of CO₂ is counted against the CO₂ emitted at the point of eNG combustion.

We think this is consistent with LL97’s structure, which assigns emissions factors to fuels (Administrative Code §28-320.3(1)) and defines building emissions as:

“the sum of the products of the amount of energy consumed by the building multiplied by the applicable greenhouse gas emissions coefficient for each energy source.” Under this framework, the coefficient applied to a fuel may reflect lifecycle characteristics, not merely combustion chemistry. The Excel model therefore incorporates a lifecycle net-emissions calculation consistent with the Biofuels guidance approach, rather than a simple stack-emissions-only treatment.

3. If the request is to remain as a fuel coefficient, then the end use should be in NYC. Furthermore the ask may want to be for a Time of Use methodology, i.e. 8,760 hourly emissions coefficients, since the supporting documents state that the eNG product relies on "arbitrage" to modulate its output based on "[wholesale renewable] electricity...prices [versus] the market value of the gas that can be produced...cheap electricity in, valuable methane out" – please confirm.

Response: The updated attached example use the TOU power CI for the analysis as suggested. We are applying solely for recognition of an alternative fuel coefficient for eNG delivered via pipeline and combusted at NYC properties. The closed-loop scenario is not the subject of this CCD1.

Scope of CCD1 Request – Alternative Fuel Coefficient Only. We would also like to clearly and respectfully distinguish between two entirely separate regulatory scenarios.

The present CCD1 application is strictly for an alternative fuel coefficient applicable to eNG delivered via the gas pipeline and combusted at a property. We are not seeking approval under this CCD1 for a scenario in which a Carbon Bridge unit is installed at a building and carbon is recycled in a closed loop entirely on-site (i.e., CO₂ stored on-site, converted to CNG/eNG on-site, combusted, and then recaptured on-site).

We view that closed-loop configuration — which we are pursuing separately for oil-fired buildings — as follows:

- LL97 regulates energy entering the property. The statute calculates building emissions based on "energy consumed by the building" multiplied by an emissions coefficient. The law looks to electricity, steam, and fuel entering the building.
- Reporting is based on ENERGY STAR Portfolio Manager (ESPM). LL97 reporting is grounded in ESPM energy consumption data.

What DOB sees for compliance purposes is:

- o Electricity entering the meter,
- o Steam entering the meter (if applicable),
- o Fuel delivered to the property.
- In a closed-loop on-site recycling scenario:
 - o Oil deliveries would go to zero.
 - o Electricity consumption would increase.
 - o ESPM would reflect a fully electrified building.
 - o No fuel would enter the property.

In such a configuration, the Carbon Bridge unit operates entirely behind the customer's energy meters. The net observable effect under ESPM is that the building becomes electrically heated. The fact that electricity is used to produce eNG on-site, which is then combusted and recaptured in a closed loop, does not alter the fact that no regulated fuel is crossing the property line.

It is precisely for this reason that the LL97 framework explicitly prohibits carbon capture as a compliance mechanism. The law states that building emissions are calculated based on energy consumption multiplied by emissions factors, and it does not provide for subtraction of captured stack emissions. In other words, compliance is based on energy inputs, not post-combustion capture adjustments.

Similarly, the rules explicitly allow on-site renewable generation to offset consumption. LL97 provides that on-site renewable electricity may be deducted from reported consumption, because the law evaluates net energy usage as reported in ESPM. The framework does not discriminate between forms of on-site energy production; it focuses on net metered energy.

Even in a scenario where eNG is injected into the gas grid and later repurchased for combustion at the same property, the ESPM reporting would show gas export equal to gas import, resulting in a net-zero fuel input from the grid. Electricity consumption would increase correspondingly. From a compliance perspective, this would function analogously to on-site solar generation exported to and later imported from the grid: the accounting reflects net energy flows.

There is alignment with LL97's Structure. LL97 is fundamentally a Scope 1 emissions law structured around energy inputs to buildings. Recognizing a lifecycle-based coefficient for a pipeline-delivered gaseous fuel is fully consistent with:

"emissions = energy consumed × greenhouse gas emissions coefficient."

The requested CCD1 determination would simply establish the appropriate emissions coefficient for a qualifying alternative gaseous fuel.

We deeply appreciate the care with which your office approaches these questions and are committed to providing any additional documentation or clarification necessary to ensure full alignment with LL97 and its implementing rules.

4. The submitted P&IDs do not appear to align with the diagram on page 22 of the "Transform CO2 into Natural Gas" PDF. Please clarify how the two are related.

Response: The P&IDs are more detailed schematics of the page 22 diagram. We consider the P&IDs for engineering purposes and the page 22 diagram to provide overall concept. Note the page 22 diagram does NOT include the waste heat recovery from the Sabatier reactor for driving the carbon capture process that is present in the P&IDs and the CCNY deployment. Below is a correspondence figure.



5. Suggest that the LCA spreadsheet be revised per the following:

1. Only "Combustion" should be listed as an end use. Any cells related to the other three end uses (Shipping Fuel, Power Production, Industrial Heating) can be disabled and hidden.

Response: Amended in attached excel

2. "Grid Carbon Intensity - Export Destination" can be disabled and hidden, as both production and consumption should be assumed to take place within NYC.

Response: Amended in attached excel The Grid Carbon Intensity for NYC can use the MOCEJ number, as shown in the CHP section of the Article 320 Info Guide.

Response: Amended in attached excel

3. Power supply at all stages can be set to 0% renewables to allow for a worst-case scenario.

Response: Amended in attached excel

4. How do "Upstream Natural Gas Emissions" factor into the requested coefficient?

Response: This reflects the scope 2 GHG emissions of gas transmission that are also built into LL97 existing CI for regular fossil natural gas

5. How is leakage addressed in the parts of the process other than "CO2 Capture" and "CO2 Transmission"? Also, the leakage rates listed in those sections are quite low (0.2%, 0.3%) compared to industry averages – please verify how these numbers were arrived at.

Response: Those leakage rates were derived from prototype testing.

6. P. 10 of the "Transform CO2 into Natural Gas" PDF describes the Sabatier methanation process at 95% efficient. This is beyond typical efficiencies for this process - can the number be verified?

Response: Yes, we have a prototype operating at CCNY where tests and analyses can be witnessed.

7. It is not clear how "Green Ammonia" and "Blue Ammonia" factor into the LCA.

Response: They don't... the LCA tool was developed for multiple alternative fuels. We have done our best to hide non-relevant sections in the new example; though utilizing an existing industry standard tool remains a better pathway for CI determination than developing a new calculator for solely LL97

8. More specifically, the carbon intensity of the MEA manufacture and transport process should be explicitly addressed in the LCA, including any make-up MEA that has to be fed into the system.

Response: industry standard MEA CI in CCU applications is 0.34 gCO₂e/MJ eNG including manufacture and transport and is added to the attached example

6. Note that a DOB OTCR1 or OTCR2 filing may be needed if the equipment is to be installed in situations other than a test lab.

Response: We completely understand and are ready to file when appropriate.

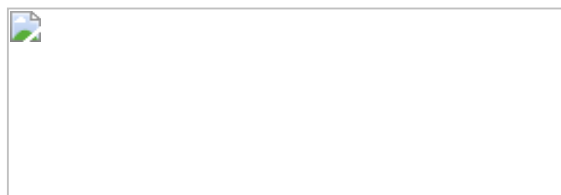
Sincerely,

Natan Shahar

Founder & Chief Strategy Officer



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www.standardcarbon.com

----- Original Message -----

From "Emily Hoffman (Buildings)" <[REDACTED]>

To "Lee Ping Kwan (Buildings)" <[REDACTED]>; "Natan Shahar" <[REDACTED]>

Cc "Rafik Ammar | eNG-coalition" <[REDACTED]>;
"Donald Chahbazpour" <[REDACTED]>;
"mcastaldi" <[REDACTED]>; "Michael Bobker"
<[REDACTED]>; "Matthew Landin" <[REDACTED]>; "Drew
Standard Carbon" <[REDACTED]>; "Drewpattie Kallu
(Buildings)" <[REDACTED]>; "Abbott Price (Buildings)"
<[REDACTED]>; "Jean Kim (Buildings)"
<[REDACTED]>

Date 13/03/2026 20:42:10

Subject Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152
CONVENT AVENUE/MANHATTAN/PDA00012258

Hi Natan,

Following up on Ping's email, we will be denying the current CCD1 application, as there are several outstanding questions that have not been addressed. If you prefer, you may choose to withdraw the application instead of having DOB issue a denial. Please let us know by today, as we plan to take action on Monday, March 16, 2026.

To move forward with consideration of this technology, you will need to submit a new CCD1 that addresses all of the questions outlined below and ensure that the applicable filing fee is paid.

Separately, we are aware that this unapproved technology is listed in dozens of LL97 Decarbonization Plans, as a projected carbon reduction measure. Please note that unapproved technologies cannot be accepted as carbon reduction measures for purposes of LL97 reporting.

Let us know if you have any questions.

Regards,

Emily

From: Lee Ping Kwan (Buildings) <[REDACTED]>
Sent: Friday, March 13, 2026 2:12 PM
To: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]; Natan Shahar <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] Marco Castaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Matthew Landin <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Hi Natan,

Any updates? It looks like the original CCD1 has not yet been withdrawn/deleted by the applicant - can you please do so, as there is no way for us to do on our end other than stamping it as a denial.

From: Emily Hoffman (Buildings) <[emhoff](#)> [REDACTED]
Sent: Thursday, February 26, 2026 1:17 PM
To: Natan Shahar <[REDACTED]>
Cc: Rafik Ammar | eNG-coalition [REDACTED] Donald Chahbazpour [REDACTED] Marco Castaldi <[REDACTED]>; Michael Bobker <[REDACTED]>; Matthew Landin <[REDACTED]>; Drew Standard Carbon <[REDACTED]>; Drewpattie Kallu (Buildings) <[REDACTED]>; Lee Ping Kwan (Buildings) <[REDACTED]>; Abbott Price (Buildings) <[REDACTED]>; Jean Kim (Buildings) <[REDACTED]>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

++

From: Emily Hoffman (Buildings) <[emhoff](#)>
Sent: Thursday, February 26, 2026 1:17 PM
To: Natan Shahar <>
Cc: Rafik Ammar | eNG-coalition; Donald Chahbazpour
 <>; Marco Castaldi <>; Michael Bobker <>; Matthew Landin <>; Drew Standard Carbon <>; Drewpattie Kallu (Buildings) <>
Subject: Re: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Thank you, Natan for submitting your CCD1 and bringing this technology to our attention.

We've reviewed the materials and would like to request some clarification:

1. The online CCD1 is missing several items and will need to be superseded with a new submission:

1. It is not fee-exempt; see [Determinations Frequently Asked Questions - Buildings](#)
2. Most of the attachments that were emailed separately on 11/4/2025 were not included in the online CCD1;
3. Request needs to be clarified (see #2 below), ideally in the form of a cover letter.

2. The request for an eNG fuel coefficient is not supported by the calculations indicating that the fuel is shipped to Europe, where an NYC DOB-approved fuel coefficient may not be recognized or useful. Since the goal of Local Law 97 is to reduce emissions within NYC, would it be possible to reframe the request as a deduction from the annual emissions of the building where the equipment is located?

3. If the request is to remain as a fuel coefficient, then the end use should be in NYC. Furthermore the ask may want to be for a Time of Use methodology, i.e. 8,760 hourly emissions coefficients, since the supporting documents state that the eNG product relies on "arbitrage" to modulate its output based on "[wholesale renewable] electricity...prices [versus] the market value of the gas that can be produced...cheap electricity in, valuable methane out" – please confirm.

4. The submitted P&IDs do not appear to align with the diagram on page 22 of the "Transform CO2 into Natural Gas" PDF. Please clarify how the two are related.

5. Suggest that the LCA spreadsheet be revised per the following:

1. Only "Combustion" should be listed as an end use. Any cells related to the other three end uses (Shipping Fuel, Power Production, Industrial Heating) can be disabled and hidden.
2. "Grid Carbon Intensity - Export Destination" can be disabled and hidden, as both production and consumption should be assumed to take place within NYC.
3. The Grid Carbon Intensity for NYC can use the MOCEJ number, as shown in [the CHP section](#) of the *Article 320 Info Guide*.
4. Power supply at all stages can be set to 0% renewables to allow for a worst-case scenario.
5. How do "Upstream Natural Gas Emissions" factor into the requested coefficient?
6. How is leakage addressed in the parts of the process other than "CO2 Capture" and "CO2 Transmission"? Also, the

leakage rates listed in those sections are quite low (0.2%, 0.3%) compared to industry averages – please verify how these numbers were arrived at.

7. P. 10 of the “Transform CO2 into Natural Gas” PDF describes the Sabatier methanation process at 95% efficient. This is beyond typical efficiencies for this process - can the number be verified?

8. It is not clear how “Green Ammonia” and “Blue Ammonia” factor into the LCA.

9. More specifically, the carbon intensity of the MEA manufacture and transport process should be explicitly addressed in the LCA, including any make-up MEA that has to be fed into the system.

6. Note that a DOB [OTCR1](#) or [OTCR2](#) filing may be needed if the equipment is to be installed in situations other than a test lab.

Please let us know if you have further questions on what information we are looking for.

Regards,

Emily

From: Natan Shahr <[REDACTED]>
Sent: Tuesday, November 4, 2025 5:28 PM
To: Emily Hoffman (Buildings) <[emhoff](#)>
Cc: Rafik Ammar | eNG-coalition <[REDACTED]> Donald Chahbazpour <[REDACTED]> Marco Castaldi <[REDACTED]> Michael Bobker <[REDACTED]> Matthew Landin <[REDACTED]> Drew Standard Carbon <[REDACTED]> Drewpattie Kallu (Buildings) <[REDACTED]>
Subject: [EXTERNAL] Fw[2]: Pre-Determination Request Submitted 152 CONVENT AVENUE/MANHATTAN/PDA00012258

Some people who received this message don't often get email from [REDACTED]. [Learn why this is important](#)

CAUTION! EXTERNAL SENDER. Never click on links or open attachments if sender is unknown, and never provide user ID or password. If **suspicious**, report this email by hitting the **Phish Alert Button**. If the button is unavailable or you are on a mobile device, forward as an attachment to [REDACTED]

Good evening Emily,

Thank you again for your time at the Urban Green Council fall reception, it was great to see you again after all these years!

Per our discussion and later correspondence on linkedin, I'd love to host you at CCNY to see our eNG production deployment. As requested, please see attached the following:

1. our formal CCD1 Pre-Determination Request for a CI assignment for eNG with respect to LL97
2. the PIDs for the eNG production deployment at CCNY
3. the eNG Coalition LCA modeling tool and related PDF documentation
4. the ISCC Mass Balance Guidance on transporting low carbon natural gas via pipeline with physical delivery as opposed to Book & Claim credit attribution
5. Standard Carbon's latest White Paper explaining our technology and business

I've copied relevant stakeholders to this email:

- [Rafik Ammar - eNG Coalition](#)
- [Donald Chahbazpour - National Grid](#)
- [Professor Marco Castaldi - CUNY Earth Engineering Center](#)
- [Michael Bobker - CUNY Building Performance Lab](#)
- [Matt Landin - NYC Economic Development Corporation](#)

I look forward to our discussion.

Sincerely,

Natan Shahar

Founder & Chief Strategy Officer

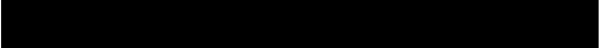


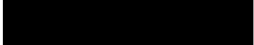
+972-50-648-8324



www.standardcarbon.com

----- Forwarded Message -----

From "DOBNOW donotreply" < >

To "Nathan Winkler" < >

Date 02/11/2025 15:02:19

Subject Pre-Determination Request Submitted 152 CONVENT
AVENUE/MANHATTAN/PDA00012258

This email references the Pre-Determination request for 152 CONVENT
AVENUE/MANHATTAN/PDA00012258/eNG carbon intensity protocol.

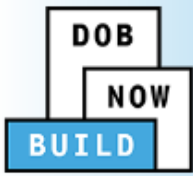
The Pre-Determination request has been submitted in [DOB NOW: Build](#).
You will receive another email notification with the status of the review.

This is an automated message. Please do not reply. If you have any questions, submit an inquiry at www.nyc.gov/dobnowhelp.

DOB NOW Support

NYC Department of Buildings





Request Highlights

Location:	152 CONVENT AVENUE MANHATTAN
BIN:	1084081
Request Number:	PDA00015616-A2
Request Status:	Review In Progress
Determination Class:	CCD1
Determination Type:	Appeal
Determination Sub Type:	Pre-Determination
Review Type:	Appeal of Pre-Determination

Payment Summary

Request Fee:	\$2,500.00
Amount Paid:	\$2,500.00
Amount Due:	\$0.00

General Information

Request Information

Request Number:
PDA00015616-A2

Determination Type:
Appeal

Request Status:
Review In Progress

Determination Sub Type:
Pre-Determination

Review Type:
Appeal of Pre-Determination

Building Identification Number:
1084081

Related Request Number:
PDA00015616

Location Information

House Number:
152

Street Name:
CONVENT AVENUE

Borough:
MANHATTAN

Block:
1957

Lot:
200

BIN:
1084081

Zip Code:
10031

Community Board:
109

Stakeholders

Applicant Information

Email:
[REDACTED]

License Type:
Professional Engineer

License Number:
095210

First Name:
Nathan

Middle Initial:

Last Name:
Winkler

Business Name:
LIVOLT LLC

Business Telephone:
[REDACTED]

Business Address:
[REDACTED]

City:
NEW YORK

State:
NY

Zip Code:
10004

Mobile Telephone:
[REDACTED]

Alternate Contact Information

Email:

Relationship to the Property:

First Name:

Middle Initial:

Last Name:

Business Name:

Business Telephone:

Business Address:

City:

State:

Zip Code:

Mobile Telephone:

Determination Details

Is this request associated with an existing project under the Major Projects Development Program (MPP)? No

Do you plan/intend to file your construction at the HUB? No

Determination Class:

Construction Code Determination: Yes Zoning Determination: No

Determination Sub Class (Select One):

Interpretation or Clarification: Yes

Variation of Construction Code or Rules per 28-103.3: No

Variation of Multiple Dwelling Law (MDL) 277.16 for Article 7B Buildings: No

Description of Request

The Applicant respectfully appeals the denial of PDA00015616 and requests approval, or approval with conditions, of a specific carbon coefficient for physically supplied biomethane under 1 RCNY 103-14(d)(3)(i)(c).The determination identified three principal concerns: the prior submission referenced an older CA-GREET model; the B0461 pathway was described by CARB as supplying California transportation users through book-and-claim accounting rather than demonstrating use at the subject building; and the application did not select one specific coefficient from the two B0461 dairy pathways. This appeal clarifies and cures those issues.1. Applicant now proposes one specific, conservative coefficientApplicant expressly elects CARB pathway B046101, Holsum Elm Dairy, having a CARB-certified Tier 2 carbon intensity of -130.23 gCO2e/MJ. CARB certified B046101 at -130.23 gCO2e/MJ and B046102 at -385.43 gCO2e/MJ. Applicant deliberately selects the higher, less favorable and therefore more conservative value.Converted to the units required by 1 RCNY 103-14, the proposed coefficient is:-0.00013740 tCO2e/kBtu.This directly resolves the Department's concern that the original request did not identify a single coefficient.Section 103-14 expressly provides that for an unlisted fuel combusted or consumed onsite and not otherwise prohibited, the owner must propose a carbon coefficient supported by documentation; the Department may approve that coefficient or alternatively assign a different coefficient. Accordingly, if DOB disagrees with the precise numerical conversion or treatment proposed above, Applicant alternatively requests that DOB assign the coefficient it determines appropriate rather than deny the fuel pathway altogether.2. Applicant is not requesting book-and-claim treatmentThe earlier submission relied on CARB B0461 to establish the lifecycle carbon intensity of the physical biomethane produced at Holsum. Applicant is not requesting that DOB recognize California LCFS credits, book-and-claim certificates, or environmental attributes separated from physical gas.CARB's B0461 record establishes that the underlying product is real biomethane: the gas is upgraded to common-carrier pipeline specification and physically injected into the Guardian Pipeline. The separate question is how qualifying volumes are delivered and attributed to the NYC end user.For LL97 purposes, Applicant proposes a physical mass-balance delivery protocol, under which:qualifying biomethane is physically produced and metered into the interconnected gas system; commodity ownership and the associated sustainability claim remain linked through the custody chain; equivalent quantities are commercially nominated/scheduled through the applicable pipeline and utility delivery chain; the subject building physically withdraws and combusts gas through its utility meter; claimed biomethane volumes cannot exceed qualifying injected volumes within the applicable reconciliation period; all relevant environmental attributes are retired exclusively against the NYC delivery to prevent double counting; and the complete injection, transaction, nomination, withdrawal, meter and retirement record is subject to independent verification.This is fundamentally different from purchasing an environmental certificate unrelated to the physical fuel supply.3. Mass balance is an established method for physical gas networksPipeline gas is necessarily commingled. Applicant is therefore not asserting that the identical methane molecules injected at the production facility can be molecularly traced to the burner at 152 Convent Avenue. That is not how interconnected common-carrier gas systems function.Rather, physical delivery is established through actual injection + interconnected transportation + actual withdrawal + auditable mass-balance allocation.The ISCC EU Mass Balance Guidance expressly distinguishes mass balance from a detached attribute claim: certified and non-certified material may be physically mixed, but the mass balance must follow the physical flow of material throughout the supply chain. For biomethane specifically, it treats the interconnected gas grid as one mass-balancing system with metered injection and withdrawal points.The framework requires physical biomethane injection, pipeline metering, traceable proof of sustainability, and

physical withdrawal to the end user. At the contractual trading stage, every unit bought and sold must correspond to physical volume injected into the grid, and the end user ultimately receives the associated proof of sustainability. EU Implementing Regulation 2022/996 similarly requires gaseous-fuel sustainability information to be registered when fuel enters interconnected infrastructure and registered out as consumed at the point of final consumption. Applicant submits that this provides a technically rigorous model for determining what constitutes physical supply through a commingled gas network under LL97.4. DOB's own guidance contemplates lifecycle evidence and customized coefficients DOB's Biofuels Info Guide states that lifecycle calculations may incorporate California LCFS Pathway Certified Carbon Intensities. It further states that when feedstock, production and transportation information is known, an adjusted emissions coefficient may be proposed and supported through production, end-use and audit documentation. Applicant therefore submits the CARB-certified Tier 2 CI as the technical carbon-intensity evidence, while separately proposing an ISCC-style physical mass-balance protocol as the delivery and chain-of-custody evidence. These are distinct questions and should not be conflated.

5. CA-GREET version Applicant acknowledges DOB's observation that CA-GREET 4.0 is now current. The requested -130.23 gCO₂e/MJ value, however, is not merely an unidentified output from a generic calculator; it is the specific B046101 Tier 2 pathway value certified by CARB after review of the project's operational data and methodology. If DOB requires recalculation or normalization using CA-GREET 4.0 as a condition of LL97 approval, Applicant respectfully requests an opportunity to provide that supplemental calculation or an approval with conditions, rather than rejection of the physical biomethane pathway.

Requested determination Applicant respectfully requests that Technical Affairs reverse the denial and determine that B046101 Holsum Elm biomethane may be treated as an unlisted fuel under 1 RCNY 103-14(d)(3)(i)(c), using a proposed coefficient of -0.00013740 tCO₂e/kBtu, subject to documented physical mass-balance delivery to the covered building, exclusive retirement/no double counting, and such additional verification conditions as the Department reasonably requires. Alternatively, if the Department does not approve the proposed coefficient, Applicant requests that the Department assign a different coefficient pursuant to 103-14(d)(3)(i)(c) and identify any additional evidentiary requirements necessary to establish the mass-balance delivery.

Request Details

Request Details

Is this Pre-Determination associated with any previously filed job?	No
Is Fee Exempt per 28-112.1?	No
Request for 1-3 family dwelling?	No
For Housing Preservation and Development Affordable Housing?	No

Request Description

Enter a Short Description of Request

biogas CI score approval for LL97 alternative fuels purposes: please see GREET CI excel:
<https://1drv.ms/x/c/0e73d32256050dfe/IQD-tEtRcvTR72ciJy4DyFg>

Construction Code Year 2022	Code Section 28-320	MDL Section (Multiple Dwelling Law):
Rule Number: RCNY 103-14	TPPN (Technical Policy and Procedure Notices), Memo:	BBs (Building Bulletins):

Zoning Resolution Section:

Zoning Information

Zoning District(s)	Zoning Overlay(s)	Special District(s)
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Documents

Document Name	Document Type	Document Status	Created On
Preceding Level Final Determination Document PDA00015616	Preceding Level Final Determination Document	Accepted	08/10/2026

Applicant of Record's Attestation



I hereby state the information on this form is correct and complete to the best of my knowledge. I understand falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. I also understand it is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name:

Nathan Winkler
(Electronically Signed)

Date:

08/17/2026

TESSER | RYAN
TESSER, RYAN & ROCHMAN LLP

Gregory J. Ryan *
Alexandra Lyras ‡
George Kontogiannis †
Randall Tesser *
Jackson Kerr •
Richard Grayson • ℄
Lewis F. Tesser • ℰ
Irwin Rochman, Dec'd.

• Admitted in NY
* Admitted in NY, NJ
† Admitted in NY, CT
‡ Admitted in NY, CT, DC
℄ Of Counsel
ℰ Counsel Emeritus

August 19, 2026

Via E-mail: [REDACTED]

Beth Golub, Esq.
Director, Sustainability Policy and Legal Affairs
Bureau of Sustainability
NYC Department of Buildings

Dear Ms. Golub,

I appreciate the NYC Department of Building's willingness to engage in a dialogue regarding my client Nathan Winkler's submissions on behalf of various building owners regarding the use of a novel alternative fuel production system developed by Standard Carbon and/or delivery of biofuel *via* the gas grid.

I write to make you aware of an impending deadline imposed by the DOB which will elapse in advance of our scheduled September 2, 2026 meeting. Specifically, the DOB has denied requests for Good Faith Effort (GFE) mitigation requests in LL97 filings on the basis of their proposed use of Standard Carbon low/zero carbon fuel systems and/or biofuel delivered *via* the gas grid and has stated that alternate filings must be made by Friday August 21, 2026.

First, I will briefly provide context regarding the public interests at stake.

Next, I will summarize the administrative history of this matter.

Finally, I will request interim relief—an extension of the above-referenced GFE mitigation submission deadline—to promote an efficient resolution of this matter.

Standard Carbon, Biofuel Delivery via the Gas Grid and the Public Interest

Transitioning buildings which depend on existing combustion systems to decarbonized systems is a key component of New York City's greenhouse gas reduction initiatives; however, many New York buildings still rely on combustion systems because their existing equipment has proven difficult, prohibitively expensive, or impractical to decarbonize via electrification or other means. City-scale electrical limitations have also presented challenges; the local grid does not have enough additional capacity to support electrification of buildings in certain areas. For those buildings, lowering the greenhouse gas emissions of the fuel they use is an effective decarbonization pathway that remains available.

Standard Carbon has developed technologies which provide a decarbonization pathway for buildings that cannot practicably electrify, by lowering and/or fully abating the greenhouse

gas emissions attributable to the fuel they consume rather than by replacing the equipment that consumes it.

On site, a novel device called a Carbon Bridge uses CO₂ from existing combustion exhaust and combines it with low-carbon electricity to produce methane. The methane can then be used in the building's existing systems, such as boilers, burners, and ovens. Whereas capture and sequestration models store carbon emissions, the Carbon Bridge instead converts those emissions into usable fuel

The fuel that is created from these emissions is a low-carbon fuel source, which has a lower greenhouse gas impact compared to traditional fuel sources.

This fuel can be generated and used on-site within a building or be transported *via* the gas grid from sites outfitted with a Carbon Bridge and supplied to other buildings with traditional combustion systems. This presents a unique opportunity for New York City's public institutional actors, which account for approximately 14% of the City's land area.

Standard Carbon has partnered with City College of New York (CCNY) for a pilot program which has demonstrated the effectiveness and promise of this technology. Standard Carbon has installed and operated an integrated demonstration which has successfully converted electricity and CO₂ into pipeline-compatible methane while leaving the existing building and steam infrastructure in place, without placing any capital or operating burden on CCNY. Standard Carbon has sponsored the cost for CCNY's Chemical Engineering department to validate the technology for more than a year. The demonstration has been hugely successful, enabling a gas fired boiler to eliminate its traditional fuel consumption and commensurately reduce greenhouse gas emissions.

Rolling out this technology on a broader basis throughout the CUNY system—and further throughout City owned buildings—would provide an opportunity not only for these buildings to reduce their greenhouse gas emissions, but also for these city institutions to develop a lucrative revenue stream. Buildings equipped with a Carbon Bridge can sell the fuel created from their own carbon emissions to other consumers. Indeed, Standard Carbon is presenting in discussions with CUNY for such an arrangement which is estimated to provide \$15 million per year in revenue to the City's University system.

Accordingly, the City and the public have a significant interest in these buildings being able to substantially reduce and, in some cases, fully abate their greenhouse gas emissions using the Standard Carbon system.

Administrative Challenges Faced So Far

As you know, Local Law 97 (LL97) provides a mitigation pathway for building owners who would otherwise be subject to penalties if the owners show an acceptable decarbonization plan to lower greenhouse gas emissions. This mitigation is requested through Good Faith Effort (GFE) extension requests.

GFE mitigation requests are appropriate where an owner has demonstrated “good faith efforts” to comply with emissions limits regulations and complied with various administrative actions. Substantively, an applicant must demonstrate that a proposed course of action will bring the owner into compliance with emissions standards according to several different timescales. *See* 1 RCNY § 103-14(i)(2).

The DOB has denied dozens of GFE mitigation requests made by building owners who submitted decarbonization plans using Standard Carbon technologies and/or physical delivery of biomethane/low carbon fuel *via* the gas grid on the basis that the technology “is not an approved decarbonization measure and cannot be included as part of a retrofit option.”.

However, the standards for GFE mitigation requests do not require that a decarbonization measure be pre-approved by the DOB; it merely requires that the owner scientifically establish the effectiveness of the proposed decarbonization measure. The DOB has denied these GFE mitigation requests without identifying any particular deficiency in the owners’ evidence that the proposed decarbonization plans would meet the required benchmarks.

Indeed, the owners have submitted analyses of their decarbonization plans which demonstrate projected compliance with emissions standards according to internationally accepted methodologies. Although not stated explicitly, it appears that the basis for the denial is that the Commissioner has not yet determined the amount of greenhouse gas emissions attributable to this new fuel source. This value is calculated through a number called a “carbon coefficient” which is assigned to the fuel source based on either an application by an owner or an alternate assignment by the DOB. The DOB has taken the position that it is not required to assign a carbon coefficient to the fuel if it is not yet being used in a building subject to LL97. The question of whether the DOB must prospectively assign a carbon coefficient appears to be a novel question, and will be the subject of our discussion on September 2, 2026.

However, the assignment of a carbon coefficient is not a prerequisite for finding that an owner has demonstrated good faith efforts sufficient for a GFE mitigation request. Such a request can be supported by independent scientific evidence by an owner, which has been presented.

While utilizing fuel produced by Standard Carbon within a building for the same building, with zero injection into the gas grid, restricts the LL97 regulatory question solely to determining the appropriate carbon coefficient for the fuel, it is acknowledged that transporting this fuel or other biomethane fuel *via* the gas grid introduces additional need for clarification. LL97 only considers fuel physically delivered to and combusted within a building; hence, traditional “book-and-claim” credits for low carbon fuels, as is common practice in California’s Low Carbon Fuel Standard, and similar jurisdictions, is not applicable. All of the denied Good Faith Effort Extension filings that involve buildings connected to the gas grid detailed physical delivery of low carbon fuel to the building *via* the gas grid, where the low carbon fuel would be either biomethane or produced by Standard Carbon, or a combination. Physical delivery of a specific source of fuel *via* the gas grid is an established commercial practice that is verified *via* contracts for all sources of fuel that explicitly account for the physical infrastructure used to move the fuel through the pipeline network to its destination. There are additional guidelines for the documentation requirements with respect to the transport of low carbon fuels that are defined

by the International Sustainability & Carbon Certification (ISCC) “Mass Balance” procedures, in explicit contrast to “Book and Claim” credits, that have been adopted wholly by the European Commission among other precedential regulatory jurisdictions. This approach to gas grid utilization is consistent with LL97’s definition of physical delivery.

In the meantime, building owners have been given until Friday August 21, 2026 to submit alternate GFE mitigation requests; otherwise, they will be subject to hearings which could result in the assessment of massive penalties.

It is respectfully submitted that building owners who are endeavoring in good faith to comply with emissions requirements should not be penalized while the DOB is engaging in good faith discussions regarding the appropriate methodology for evaluating emissions attributable to the proposed technology.

Request for Relief

In light of the DOB’s commitment to engage in good faith discussions regarding the use of Standard Carbon technology in New York City buildings, it is respectfully requested that the currently pending deadlines for the resubmission of GFE mitigation requests be stayed by at least 30 days, to allow for discussion of this matter at our previously scheduled meeting on September 2, 2026. A list of GFE extension requests which were denied on this basis is attached as **Schedule 1**, hereto.

I look forward to hearing from you and remain eager to productively discuss this matter.

Sincerely,

Randall Tesser

Cc:

Jean Kim, RA, CEM, CPHD, LEED AP
Deputy Director, Building Energy and Emissions Audits
Bureau of Sustainability
NYC Department of Buildings


SCHEDULE 1

Ticket ID	Ticket URL	BBL	BIN	Address
51280				
61473				
61484				
62330				
63165				
63219				
63223				
63306				
63316				
64130				
64530				
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65701				
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68314				
68469				
68784				
68786				
68850				
68984				
71684				
71968				
80922				
83024				
87390				
97351				
104808				Brooklyn
104810				
104811				
104812				
104813				
104814				
104815				
104817				
104818				
106273				
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111432				
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