

**International Civil Aviation Organization (ICAO) Carbon Offsetting and Reduction
Scheme for International Aviation (CORSA)**

Application Form for Emissions Unit Programmes

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SECTION I: ABOUT THIS ASSESSMENT

Background

ICAO Member States and the aviation industry are implementing the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Together with other mitigation measures, CORSIA will help achieve international aviation's aspirational goal of carbon neutral growth from the year 2020.

Aeroplane operators will meet their offsetting requirements under CORSIA by purchasing and cancelling CORSIA eligible emissions units. The ICAO Council determines CORSIA eligible emissions units upon recommendations by its Technical Advisory Body (TAB) and consistent with the CORSIA Emissions Unit Eligibility Criteria (EUC).

In March 2019, the ICAO Council unanimously approved the CORSIA Emissions Unit Eligibility Criteria for use by TAB in undertaking its tasks¹. TAB conducted its first cycle of assessment in 2019, and its recommendations were considered by the Council in March 2020.

Now, ICAO invites emissions unit programmes² to apply for the second cycle of assessment by the TAB, which will involve collecting information from each programme through this programme application form and supplementary materials and requested evidence.

Through this assessment, the TAB will develop recommendations on the list of eligible emissions unit programmes (and potentially project types) for use under the CORSIA, which will then be considered by the ICAO Council.

This form is accompanied by, and refers to, Appendix A “*Supplementary Information for Assessment of Emissions Unit Programmes*”³, containing the EUC and *Guidelines for Criteria Interpretation*. These EUC and Guidelines are provided to inform programmes' completion of this application form, in which they are cross-referenced **by paragraph number**.

This form is also accompanied by Appendix B “*Programme Assessment Scope*”, and Appendix C “*Programme Exclusions Scope*”, which request all applicants to identify the programme elements⁴ they wish to submit for, or exclude from, TAB's assessment.

This form also requests *evidence of programme procedures or programme elements*. These evidentiary documents enable TAB to a) confirm that a given procedure or program element is *in place*, b) more fully comprehend the programme's summary responses, and c) archive the information as a reference for potential future assessments.

Programme responses to this application form will serve as the primary basis for the assessment. Such assessment may involve e.g. clarification questions, live interview(s) with TAB, and a completeness check of the application, as further requested.

Translation: The working language of the assessment process is English. Translation services are not available for this process. If the programme documents and information are not published in English, the programme should fully describe in English (*rather than summarize*) this information in the fields provided in this form, and in response to any additional questions. Where this form requests *evidence of programme procedures*, programmes are strongly encouraged to provide these documents in English, to provide for accuracy and comprehension. Where this is not possible due to time constraints or document

¹ Available on the ICAO CORSIA website: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx>

² “Emissions Unit Programme”, for the purposes of TAB's assessment, refers to an organization that administers standards and procedures for developing activities that generate offsets, and for verifying and “issuing” offsets created by those activities. For more information, please review the TAB FAQs on the ICAO CORSIA website: <https://www.icao.int/environmental-protection/CORSIA/Pages/TAB.aspx>

³ Available on the ICAO CORSIA website: <https://www.icao.int/environmental-protection/CORSIA/Pages/TAB.aspx>

⁴ At the “activity type” level (e.g., sector(s), sub-sector(s), and/or project “type(s)”)

length, the programme may provide such documents in their original language in a readily translatable format (e.g., Microsoft Word). Those programmes that need to translate documents prior to submission may contact the ICAO Secretariat regarding accommodation.

Disclaimer: The information contained in the application, and any supporting evidence or clarification provided by the applicant including information designated as “business confidential” by the applicant, will be provided to the members of the TAB to properly assess the programme and make recommendations to the ICAO Council. The application and such other evidence or clarification will be made publicly available on the ICAO CORSIA website for the public to provide comments, except for information which the applicant designates as “business confidential”. The applicant shall bear all expenses related to the collection of information for the preparation of the application, preparation and submission of the application to the ICAO Secretariat and provision of any subsequent clarification sought by the Secretariat and/or the members of the TAB. Under no circumstances shall ICAO be responsible for the reimbursement of such or any other expenses borne by the applicant in this regard, or any loss or damages that the applicant may incur in relation to the assessment and outcome of this process.

SECTION II: INSTRUCTIONS

Submission and contacts

A programme is invited to complete and submit the form, and accompanying evidence, through the ICAO CORSIA website no later than close of business on **20 April 2020**. Within seven business days of receiving this form, the Secretariat will notify the programme that its form was received.

If the programme has questions regarding the completion of this form, please contact ICAO Secretariat via email: officeenv@icao.int. Programmes will be informed, in a timely manner, of clarifications provided by ICAO to any other programme.

Form basis and cross-references

Questions in this form are derived from the CORSIA emissions unit eligibility criteria (EUC) and any *Guidelines for Criteria Interpretation* introduced in Section I (above). To help inform the programme's completion of this form, each question includes the paragraph number for its corresponding criterion or guideline that can be found in [Appendix A “Supplementary Information for Assessment of Emissions Unit Programmes”](#).

Form completion

The programme should respond to all questions in this application form. A “complete” response involves three components: a) a written summary response, b) selection of the “YES” check box if a procedure is fully *in place*, and c) supporting evidence.

- a) Written summary responses: The programme is encouraged to construct written summary responses in a manner that provides for general comprehension of the given programme procedure, independent of supporting evidence. TAB will confirm each response in the supplementary evidence provided by the programme. Please note that written summary responses should be provided in all cases—supporting evidence (described in *c*) below) should not be considered as an alternative to a complete summary response.
- b) “YES” check box: Each question is accompanied by a check box for the programme to indicate the status of a given procedure or programme element. Here, programmes should accurately represent the status of its procedures and programme elements. Please note that an unselected check box does not, in itself, disqualify an application from further assessment; it will be taken into account when TAB reviews the programme's accompanying information.

The programme *should* select the “YES” check box if a procedure or element is *in place*.

The programme *should not* select the check box in the following instances:

1. The procedure in question is *not relevant to the programme's application* (if, e.g., the question applies to activity(ies) that the programme is not submitting for assessment, or an alternative approach is taken to the procedure or element in question). In such cases, please provide justification in the written summary response.
 2. The procedure in question *is not yet in place, but the programme is planning to introduce such a procedure*. In such cases, please describe any such plans in the written summary response, according to form instructions.
 3. The procedure in question *is not in place*. In such cases, please provide justification in the written summary response.
- c) Supporting evidence: Most questions in this form request *evidence of programme procedures or programme elements*. Such evidence may be found in programme standards, requirements, or guidance documents; templates; programme website or registry contents; or in some cases, in specific methodologies. To help manage file size, the programme should limit supporting documentation to that

which directly substantiates the programme’s statements in this form.

Regarding such requests for evidence, programmes can substantiate their responses in any of these ways (**in order of preference**):

1. web links to supporting documentation included along with the written summary response; with instructions for finding the relevant information within the linked source, if necessary;
2. copying/pasting information directly into this form (no character limits) along with the written summary response;
3. attaching supporting documentation to this form at the time of submission, with instructions for finding the relevant information within the attached document(s);

Form scope

The programme may elect to submit for TAB assessment all, *or only a subset*, of the activities supported by the programme. The programme is requested to identify, in the following Appendices, the activities that it wishes to submit for, or exclude from, TAB’s assessment:

In **Appendix B “Programme Assessment Scope”**, the programme should clearly identify, at the “activity type” level (e.g., sector(s), sub-sector(s), and/or programme/project “type(s)”), elements that the programme **is submitting for TAB’s assessment** of CORSIA eligibility; as well as the specific methodologies, protocols, and/or framework(s) associated with these programme elements; which *are* described in this form.

In **Appendix C “Programme Exclusions Scope”**, the programme should clearly identify, at the “activity type” level (e.g., sector(s), sub-sector(s), and/or programme/project “type(s)”), any elements the programme **is not submitting for TAB’s assessment** of CORSIA eligibility, which *are not* described in this form; as well as the specific methodologies, protocols, and/or framework(s) associated with these programme elements.

Programme revisions

Where the programme has any plans to revise the programme (e.g., its policies, procedures, measures, tracking systems, governance or legal arrangements), including to enhance consistency with a given criterion or guideline, please provide the following information in response to any and all relevant form question(s):

- a) Proposed revision(s);
- b) Process and proposed timeline to develop and implement the proposed revision(s);
- c) Process and timeline for external communication and implementation of the revision(s).

“Linked” certification schemes

This application form should be completed and submitted exclusively on behalf of the programme that is described in Part I of this form.

Some programmes may supplement their standards by collaborating with other schemes that certify, e.g., the social or ecological “co-benefits” of mitigation. The programme can reflect a linked scheme’s procedures in responses to this form, where this is seen as enhancing—i.e. going “above and beyond”—the programme’s own procedures.

For example, the programme may describe how a linked scheme audits sustainable development outcomes; but is not expected to report the linked scheme’s board members or staff persons.

Programmes should clearly identify any information provided in this form that pertains to a linked certification scheme and/or only applies when a linked certification scheme is used.

Disclosure of programme application forms

Applications, including information submitted in Appendices B and C, and other information submitted by applicants will be publicly available on the ICAO CORSIA website, except for materials which the applicants designate as business confidential.

The public will be invited to submit comments on the information submitted, including regarding consistency with the emissions unit criteria (EUC), through the ICAO CORSIA website, for consideration by the TAB in its assessment.

SECTION III: APPLICATION FORM

PART 1: General information

A. Programme Information

Programme name:	CO2 Account
Administering Organization ⁵ :	450
Official mailing address:	jean-luc.baradat@compteco2.com
Telephone #:	+ 33 6 64 80 25 24
Official web address:	https://www.compteco2.com/

B. Programme Administrator Information

Full name and title:	Jean-Luc Baradat		
Employer / Company (if not programme):	450		
E-mail address:	jean-luc.baradat@compteco2.com	Telephone #:	+ 33 6 64 80 25 24

C. Programme Representative Information (if different from Programme Administrator)

Full name and title:	Jean-Luc Baradat		
Employer / Company (if not Programme):	450		
E-mail address:	jean-luc.baradat@compteco2.com	Telephone #:	+ 33 6 64 80 25 24

D. Programme Senior Staff / Leadership (e.g., President / CEO, board members)

List the names and titles of programme's senior staff / leadership, including board members:

Jean-Luc Baradat, CEO
Glenn Guegan, Lead developer
Benoit Praderie, Shareholder, energy expert
Cyril Esnault, Shareholder, wood-energy and marketing digital expert
Olivier Messenger, carbon expert advisor
Patrice Beaubeau, Historian economist advisor

Provide an organization chart (in the space below or as an attachment) that illustrates, or otherwise describes, the functional relationship a) between the individuals listed in D; and b) between those individuals and programme staff / employees; and c) the functions of each organizational unit and interlinkages with other units.

The company currently employs two full time engineers. Jean-Luc Baradat is in charge of the programme's qualification and quantification methodologies. Glenn Guegan is in charge of the CO2 accounting registry

External advisors are hired as needed.

⁵ Name of the business, government agency, organization, or other entity that administers the Emissions Unit Programme, if different from "Programme Name".

PART 2: Programme summary

Provide a summary description of your programme

450 is an organization that administers standards and procedures for developing activities that generate offsets, and for verifying and “issuing” offsets created by those activities.

450 was created in 2010 in France, with the sole aim of fighting climate change by rewarding economical agents abating CO₂ with carbon credits. Climate change, and positive valorisation of CO₂ reduction (as opposed to all punitive schemes) is therefore the ‘DNA of the company’.

Before operating this Programme activity, 450 first started as a project developer, running an open programmatic project for enterprises and households, reducing their CO₂ emissions on the scope of buildings plus ground transportation, not covered by the EU-ETS. 450 wrote a methodology and project description document that were approved in 2012 by the French Government (DG climate from the ministry of Environment, and DG Tresory from the ministry of Finance) and UNFCCC JI track one.

The choice of going through JI Track one, instead of starting a brand new Programme was justified by the international dimension of the climate change problem, and the international solution called Kyoto’s Protocol. Evaluating CO₂ emission with the exact same methodology and emission factors as Countries were evaluating their national GHG inventory seemed to be intellectually the most accurate solution to tackle the problem (and at a macro level, if all countries do this CO₂ calculation exercise, there is no more complexity of dealing with import and exports in GHG inventory).

In 2013, 450 thus managed to deliver 44 k ERUs to program participants.

With Kyoto Period 1 ending and no decision taken in Kyoto Period 2, 450 moved from a project developer, to an Emission Units Programme, focusing on former JI approved methodologies. Obviously, 450 first approved the methodology it had created.

This carbon credit generation constitute for 450, the upstream element for fighting climate change. On the downstream side, the selling of those carbon credits, i.e. the positive valorisation that can come out of them, is the biggest challenge to tackle. On many carbon markets (EU-ETS, voluntary offset markets, ..) there is too much supply of those credits for too little demand for them.

By addressing CO₂ emissions from international aviation, which are not included under the UNFCCC and its Paris Agreement, and therefore are not included in countries’ Nationally Determined Contributions (NDCs) under the Paris Agreement, CORSIA, will play a major role into tackling climate change by creating a new demand for carbon credits.

This new demand is not a financial burden for the airlines operators, but an opportunity to grow their business, while at the same time massively contribute to solving the climate change problem:

- IPCC reports keep showing that we should not exceed a concentration of CO₂ in the atmosphere above 450 ppm should we want to limit temperature increase below 2°C. This implies that we should not burn more than 20% of current fossil reserves.
- By rewarding, with an access to carbon credits, economic agents abating CO₂ emissions on their buildings plus land transportation, 450 contributes to promoting the message that fuel heating is an obsolete solution in the 21st century. The little fossil energy we can still burn (the 20%) is better off used in applications where no alternative technical solution are efficient, such as aviation (every body enjoys the family trip to a sunny place).
- By giving value to CO₂ reductions performed on ground, CORSIA could accelerate the energy transition. CORSIA is in a unique position to tell to all its customers “install carbon free appliances, and fly with your CO₂ reductions”. CORSIA has a unique pedagogic vector to teach economical agents the best carbon trade-offs they could operate. CORSIA will participate in bringing climate change in our daily lives, stimulating daily actions.
- **The current COVID 19 crisis offers a good example of such an application of this opportunity. For example, the Air France KLM group will receive € 7 bn liquidity from the French State (program accepted by the European commission. The Dutch State could also bring € 2-4 bn of financial aid) while France has also announced plans for certain green policy choices as regards Air France. By funding CO₂ reductions on the scope of ground transportation and heating of buildings, Air France could help the French State to meet it’s climate objectives.**

In part 5, 450 details the downstream proposition to use carbon credits as a new currency to fight climate change, and the neobanking application that has been developed around it. 450 will be happy to share with ICAO’s relevant bodies all necessary information to explore this unique opportunity.

PART 3: Emissions Unit Programme Design Elements

Note—where “evidence” is requested throughout *Part 3* and *Part 4*, the programme should provide web links to documentation. If that is not possible, then the programme may provide evidence of programme procedures directly in the text boxes provided (by copying/pasting the relevant provisions) and/or by attached supporting documentation, as recommended in “SECTION II: INSTRUCTIONS—*Form Completion*”.

Note—“*Paragraph X.X*” in this form refers to corresponding paragraph(s) in Appendix A “Supplementary Information for Assessment of Emissions Unit Programmes”.

Note—Where the programme has any plans to revise the programme (e.g., its policies, procedures, measures, tracking systems, governance or legal arrangements), including to enhance consistency with a given criterion or guideline, provide the following information in response to any and all relevant form question(s):

- Proposed revision(s);
- Process and proposed timeline to develop and implement the proposed revision(s);
- Process and timeline for external communication and implementation of the revision(s).

Question 3.1. Clear methodologies and protocols, and their development process

Provide *evidence*⁶ that the programme’s qualification and quantification methodologies and protocols are *in place* and *available for use*, including where the programme’s existing methodologies and protocols are publicly disclosed: (*Paragraph 2.1*)

The Programme is restricted to former JI (track one and two) approved methodologies and projects. The Programme has currently qualified one methodology and does not seek to approve new methodologies until current program emission reduction units can be sold (downstream focus for the Programme instead of upstream focus generating additional units).

Qualification process of the approved methodology rely in full on collection of all documentation provided for JI approval (Project Design Document (PDD) , Determination report (French), LoA France (562 KB), Methodology (French), ERU issuance 450, LoA BE, Verification report # 1, all available on <https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLO0T54CT1/details>). With the extinction of the Kyoto Protocol Period 1 on December 31, 2012, subsequent verification reports (# 2 for reduction made in 2013, and on) were not made public. Those reports will be posted on a specific Programme web page in 2020.

Summarize the programme’s process for developing further methodologies and protocols, including the timing and process for revision of existing methodologies: (*Paragraph 2.1*)

The Programme will not develop methodologies and protocols that were not previously JI approved. For approved methodologies, to be qualified by the Programme, an updated determination report will be requested. The auditor in charge of the production of the update determination report should prove track record experience in either JI, CDM, Gold Standard, or VERRA methodologies and projects.

⁶ For this and subsequent “evidence” requests, evidence should be provided in the text box (e.g., web links to documentation), and/or in attachments, as recommended in “SECTION II: INSTRUCTIONS—*Form Completion*”.

Provide *evidence of the public availability* of the programme's process for developing further methodologies and protocols: (*Paragraph 2.1*)

This section is not applicable to the Programme as there is no consideration of approving new methodologies in the next 3 years.

Question 3.2. Scope considerations

Summarize the level at which activities are allowed under the programme (e.g., project based, programme of activities, jurisdiction-scale): (*Paragraph 2.2*)

Allowed activities by the Programme are those described in already JI approved methodologies. In the current and sole approved methodology by the Programme, the scope is on emissions from heating of buildings and from land transportation. The project developed on the approved methodology is an open programmatic project. All activities that can reduce CO₂ emissions from heating of buildings and ground transportation are encouraged.

Summarize the eligibility criteria for each type of offset activity (e.g., which sectors, project types, and geographic locations are covered): (*Paragraph 2.2*)

The approved methodology is restricted to reduction of emissions in France only, on heating of buildings and land transportation.

Provide *evidence* of the Programme information defining a) level at which activities are allowed under the Programme, and b) the eligibility criteria for each type of offset activity, including its availability to the public: (*Paragraph 2.2*)

Allowed activities by the programme are those described in already JI approved methodologies. Programme information defining allowed activities are available on <https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLOOT54CT1/details> and on <https://www.compteco2.com/article/comment-sont-fabriques-les-eo2/>

Question 3.3. Offset credit issuance and retirement procedures

Are procedures in place defining how offset credits are... (*Paragraph 2.3*)

a) issued?

YES

b) retired / cancelled? YES

c) subject to discounting (*if any*)? YES

Are procedures in place defining... (*Paragraph 2.3*)

d) the length of crediting period(s)? YES

e) whether crediting periods are renewable? YES

Provide evidence of the procedures referred to in a) through e) (if any, in the case of “c”), including their availability to the public:

Issuance procedures. As detailed in the methodology that was approved by JI and subsequently by the Programme, offset credits are issued yearly and not over the total duration of the programmatic program (or lifetime of carbon free equipment installed). Credits are issued upon yearly verification report.

Offset credits are cancelled on the internal electronic registry of the programme according to the programme own electronic CO2 accounting registry.

As offset credits are issued yearly, there is no discounting

Crediting period is 10 years, renewable for another 10 years, as allowed by UNFCCC regulation.

Evidence of the procedures is available to the public on the project developer site at <https://www.compteco2.com/bilan-co2/>

Question 3.4 Identification and Tracking

Does the programme utilize an electronic registry or registries? (*Paragraph 2.4.2*) YES

Provide web link(s) to the programme registry(ies) and indicate whether the registry is administered by the programme or outsourced to a third party (*Paragraph 2.4.2*):

The Programme uses the European Union Registry (the French section of the EU registry) and still holds an account in this Registry. Should CORSIA manage to deal with the EU commission and to get CORSIA units allowed on this European Registry, we would continue to use this Registry. This would however require a modification of directive 2003/87/CE, which could be obtained according to article 6 of the Paris Agreement.

The Programme also uses its own electronic CO2 accounting registry.

Does the programme have procedures in place to ensure that the programme registry or registries: (*2.4.4*)

a) have the capability to transparently identify emissions units that are deemed ICAO-eligible, in all account types? (*Paragraph 2.4.3*) YES

b) identify, and facilitate tracking and transfer of, unit ownership/holding from issuance to cancellation/retirement? (*Paragraphs 2.4 (a) and (d) and 2.4.4*) YES

c) identify unit status, including retirement / cancellation, and issuance status? (*Paragraph*

YES

d) assign unique serial numbers to issued units? (*Paragraphs 2.4 (b) and 2.4.5*) YES

e) identify in serialization, or designate on a public platform, each unique unit's country and sector of origin, vintage, and original (and, if relevant, revised) project registration date? (*Paragraph 2.4.5*) YES

f) are secure (i.e. that robust security provisions are in place)? (*Paragraph 2.4 (c)*) YES

Summarize and provide evidence of the procedures referred to in a) through f), including the availability to the public of the procedures referred to in b), d), and f):

With only one methodology approved, the Programme only emits on type of credits. All credits are generated on an run-of-the-mill basis, once a project participant has given all documentation to calculate its emission and subsequent emission reduction. Programme's back-office calculates emissions and reduction of the project participant, and generates corresponding credits. All credits are created through being issued into the pending account of the Programme registry, so called M1 registry. Upon issuance each unit is not assigned a unique serial number. Instead, as reductions comes from buildings and land transportation by equipment that are uniquely identified (electrical power meter serial number in each building, and car plate registration numbers), programme internal procedures check that each equipment can not receive reduction more than once a year.

Credits are transferred to the M1 registry to the program participant account.

For cancellation, credits are transferred from the project participant account to the Programme cancellation account. Credits on the Programme cancellation account can no longer be transferred to any other account ("end of the line" account for all credits).

This CO2 credit accounting Registry is performed on the same rules a general accounting principles (double entry accounting).

e) is not applicable

The Programme IT system is API centric, and incorporates all up to date security technologies.

Total M1 supply is publicly disclosed on <https://www.compteco2.com/article/pourquoi-acheter-et-depenser-des-eo2-d-ou-vient-l-argent/>

List any/all international data exchange standards to which the programme's registry(ies) conform: (*Paragraph 2.4 (f)*)

No international data exchange so far.

Are policies and robust procedures in place to:

a) prevent the programm

e registry administrators from having financial, commercial or fiduciary conflicts of interest in the governance or provision of registry services? (Paragraph 2.4.6)

YES

b) ensure that, where such conflicts arise, they are appropriately declared, and addressed and isolated? (Paragraph 2.4.6)

YES

Summarize and provide evidence of the policies and procedures referred to in a) and b):

The Programme also operates a banking activity, which imposes to all employees trainings and production of documents (judicial records) on fraud and anti money laundry.

Are provisions in place...

a) ensuring the screening of requests for registry accounts? (Paragraph 2.4.7)

YES

b) restricting the programme registry (or registries) accounts to registered businesses and individuals? (Paragraph 2.4.7)

YES

c) ensuring the periodic audit or evaluation of registry compliance with security provisions? (Paragraph 2.4.8)

YES

Summarize and provide evidence of the registry security provisions referred to in a) through c):

For the European Unique Registry, the Programme follows the rules and process imposed by the registry.

As the programme also operates a banking activity, Holding accounts in the internal CO2 credit accounting registry may only be opened in the name of public or private entities whose participation has been validated through the banking « Know Your Customer » (KYC procedure.)

No businesses and individuals can have access to the registry, which is accessible only to a restricted number of 450 employees.

Question 3.5 Legal nature and transfer of units

Does the programme define and ensure the underlying attributes and property aspects of a unit? (Paragraph 2.5)

Summarize and provide evidence of *the process by which the programme defines and ensures the underlying attributes and property aspects of a unit*, including its availability to the public:

Legal nature of the credits and property aspects are detailed in term & conditions for project participant in the footer of <https://www.compteco2.com/>

Question 3.6 Validation and verification procedures

Are standards, requirements, and procedures in place for... (*Paragraph 2.6*)

- a) the validation of activities? YES
- b) the verification of emissions reductions? YES
- c) the accreditation of validators? YES
- d) the accreditation of verifiers? YES

Provide evidence of the standards, requirements, and procedures referred to in a) through d), including their availability to the public:

Validation of activities is performed on a run-of-the-mill basis upon request of project participant directly from their CO2 Account (<https://www.compteco2.com/>). Verification of emissions reductions is performed by personnel with a strong carbon track record background whom is training and validating personnel validating activities. Accreditation of verifiers is performed by the founder of the Programme.

Question 3.7 Programme governance

Does the programme publicly disclose who is responsible for the administration of the programme? (*Paragraph 2.7*) YES

Does the programme publicly disclose how decisions are made? (*Paragraph 2.7*) YES

Provide evidence that this information is available to the public:

With only one methodology approved and no new methodologies to be approved, the Programme has no new information to be made public.

Can the programme demonstrate that it has... (*Paragraph 2.7.2*)

- a) been continuously governed and operational for at least the last two years? YES
- b) been continuously operational for at least the last two years? YES
- c) a plan for the long-term administration of multi-decadal programme elements? YES
- d) a plan for possible responses to the dissolution of the programme in its current form? YES

Provide evidence of the activities, policies, and procedures referred to in a) through d):

The Programme was first created in 2010 as a project developer, and moved to an organization that administers standards and procedures for developing activities that generate offsets, and for verifying and "issuing" offsets created by those activities, in 2013.

Are policies and robust procedures in place to...

a) prevent the programme staff, board members, and management from having financial, commercial or fiduciary conflicts of interest in the governance or provision of programme services? (*Paragraph 2.7.3*) YES

b) ensure that, where such conflicts arise, they are appropriately declared, and addressed and isolated? (*Paragraph 2.7.3*) YES

Summarize and provide evidence of the policies and procedures referred to in a) and b):

Given the size of stakeholders involved in the Programme, such procedures are not in place yet.

If the programme is not directly and currently administered by a public agency, can the programme demonstrate up-to-date professional liability insurance policy of at least USD\$5M? (*Paragraph 2.7.4*) YES

Provide evidence of such coverage

This liability insurance is not available yet.

Question 3.8 Transparency and public participation provisions

Does the programme publicly disclose... (*Paragraph 2.8*)

a) what information is captured and made available to different stakeholders? YES

b) its local stakeholder consultation requirements (if applicable)? YES

c) its public comments provisions and requirements, and how they are considered (if applicable)? YES

Provide evidence of the public availability of items a) through c): YES

All data available on <https://www.compteco2.com/>

Does the programme conduct public comment periods relating to... (*Paragraph 2.8*)

a) methodologies, protocols, or frameworks under development? YES

b) activities seeking registration or approval? YES

c) operational activities (e.g., ongoing stakeholder feedback) YES

d) additions or revisions to programme procedures or rulesets? YES

Summarize and provide evidence of any programme procedures referred to in a) through d):

Not applicable given that the programme approved only one methodology with no plan to assess new methodologies for the next 3 years

Question 3.9 Safeguards system

Are safeguards in place to address... (*Paragraph 2.9*)

a) environmental risks? YES

b) social risks? YES

Summarize and provide evidence of the safeguards referred to in a) and b), including their availability to the public:

Documentation available on <https://www.compteco2.com/>

3.10 Sustainable development criteria

Does the programme use sustainable development criteria? (*Paragraph 2.10*)

Does the programme have provisions for monitoring, reporting and verification in accordance with these criteria? (*Paragraph 2.10*) YES

Summarize and provide evidence of the policies and procedures referred to above:

YES

Documentation available on <https://www.compteco2.com/>

3.11 Avoidance of double counting, issuance and claiming

Does the Programme provide information on how it addresses double counting, issuance and claiming in the context of evolving national and international regimes for carbon markets and emissions trading? (*Paragraph 2.11*) YES

Summarize and provide evidence of the information referred to above, including its availability to the public:

There is no agreement from the host country. As CORSIA addresses CO₂ emissions from international aviation, which are not included under the UNFCCC and its Paris Agreement, and therefore are not included in countries' Nationally Determined Contributions (NDCs), there will be no double accounting. As credits delivered by the Programme are additional (demonstration in the methodology, available at <https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLO0T54CT1/details>), there will be no double claiming as well as explained in Question 4.7.

The electronic CO₂ accounting registry prevents from double issuance.

PART 4: Carbon Offset Credit Integrity Assessment Criteria

Note—where “evidence” is requested throughout *Part 3* and *Part 4*, the Programme should provide web links to documentation. If that is not possible, then the programme may provide evidence of programme procedures directly in the text boxes provided (by copying/pasting the relevant provisions) and/or by attached supporting documentation, as recommended in “SECTION II: INSTRUCTIONS—*Form Completion*”.

Note—“*Paragraph X.X*” in this form refers to corresponding paragraph(s) in Appendix A “Supplementary Information for Assessment of Emissions Unit Programmes”.

Note—Where the programme has any plans to revise the programme (e.g., its policies, procedures, measures, tracking systems, governance or legal arrangements), including to enhance consistency with a given criterion or guideline, provide the following information in response to any and all relevant form question(s):

- Proposed revision(s);
- Process and proposed timeline to develop and implement the proposed revision(s);
- Process and timeline for external communication and implementation of the revision(s).

Question 4.1 Are additional

Do the Programme’s carbon offsets... (*Paragraph 3.1*)

a) represent greenhouse gas emissions reductions or carbon sequestration or removals that exceed any greenhouse gas reduction or removals required by law, regulation, or legally binding mandate? YES

b) exceed any greenhouse gas reductions or removals that would otherwise occur in a conservative, business-as-usual scenario? YES

Summarize and provide evidence of the policies and procedures referred to in a) and b), including their availability to the public:

With a focus on already approved JI methodology, the Program used all JI procedures to prove additionality. In particular the methodology that was approved by the Programme is available at (<https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLO0T54CT1/details>)

with an english version is attached to this document, demonstrates additionity by using the 3 out of 4 steps recommended by UNFCCC (UNFCCC tool, entitled « Methodoligal Tool – Tool for the demonstration and assessment of additionality », report EB 39, annex10, <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v5.2.pdf>);

In the current approved methodology, the 3 steps used are :

Step 1 :Alternative investments

Step 3: Barriers related to leading practices

Step 4: Complementary demonstration (« If Sub-steps 4a and 4b are satisfied, i.e.(i) similar activities cannot be observed or (ii) similar activities are observed, but essential distinctions between the project activity and similar activities can reasonably be explained, then the proposed project activity is additional))

Is additionality and baseline-setting... (Paragraph 3.1)

a) assessed by an accredited and independent third-party verification entity? YES

b) reviewed by the programme? YES

Summarize and provide evidence of the policies and procedures referred to in a) and b), including their availability to the public:

With a focus on already approved JI methodology, the program used all JI procedures to assess baseline an additionality. In particular the determination report established by an independent third party is available at (<https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLO0T54CT1/details>)
As stated in 3.1, for approved methodologies, to be qualified by the Programme, an updated determination report (assessing additionality) will be requested. The auditor in charge of the production of the update determination report, should prove track record experience in either JI, CDM, Gold Standard, or VERRA methodologies and projects.

Identify one or more of the methods below that the programme has procedures in place to ensure, and to support activities to analyze and demonstrate, that credited mitigation is additional; which can be applied at the project- and/or programme-level: (Paragraphs 3.1, and 3.1.2 - 3.1.3)

- Barrier analysis
- Common practice / market penetration analysis
- Investment, cost, or other financial analysis
- Performance standards / benchmarks
- Legal or regulatory additionality analysis (as defined in Paragraph 3.1)

Summarize and provide evidence of the policies and procedures referred to in the above list, including describing any/all additionality analyses and test types that are utilized under the programme:

With a focus on already approved JI methodology, the Programme used the UNFCCC tool, entitled « Methodoligal Tool – Tool for the demonstration and assessment of additionality », report EB 39, annex10, <http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v5.2.pdf>;

If the Programme provides for the use of method(s) not listed above, describe the alternative procedures and how they ensure that activities are additional: (Paragraph 3.1)

If the programme designates certain activities as automatically additional (e.g., through a “positive list” of eligible project types), does the programme provide clear evidence on how the activity was determined to be additional? (Paragraph 3.1) YES

Summarize and provide evidence of the policies and procedures for determining the automatic additionality of activities, including a) the criteria used to determine additionality and b) their availability to the public:

Explain how the procedures described under Question 4.1 provide a reasonable assurance that the mitigation would not have occurred in the absence of the offset programme: (*Paragraph 3.1*)

The procedures used by the Programme are those of UNFCCC as explained above, and are considered by the Programme to be the most rigorous procedures in carbon offsetting. In particular, the program tracks reports of CO₂ emissions of Annex 1 countries, which do not display reductions on the scope of buildings and ground transportation. The Programme also tracks regulation evolution and analyses why despite increased regulation, CO₂ emissions are not meeting Countries objectives or Paris Agreement. Kaya's equation, Rebound effect, and free riding effect bring a strong economic rationale for the European Green deal, and the procedures used by the Programme check additionality bearing those economic data in the analysis.

Question 4.2 Are based on a realistic and credible baseline

Are procedures in place to... (*Paragraph 3.2*)

a) issue emissions units against realistic, defensible, and conservative baseline estimations of emissions? YES

b) publicly disclose baselines and underlying assumptions? YES

Summarize and provide evidence of the policies and procedures referred to in a) and b), including how “*conservativeness*” of baselines and underlying assumptions is defined and ensured:

The programme approved one methodology available on

(<https://ji.unfccc.int/JIITLProject/DB/GMGWRMNOYGCDK2S9ISWRHLO0T54CT1/details>)

). In this methodology baseline are individualized for each project participants, based on their real CO₂ emissions (real ex-post measurements), as opposed to “conventional” ex-ante estimation energy consumption. The individualized baseline is also very conservative as it is the addition of emission from buildings plus ground transportation, implying that CO₂ emission in one sector will not generate credits if emission rose in the other sector. Finally, baseline assumptions over the 10 years period is a 0.37 % annual decrease of the baseline.

Are procedures in place to ensure that *methods of developing baselines*, including modelling, benchmarking or the use of historical data, use assumptions, methodologies, and values do not over-estimate mitigation from an activity? (*Paragraph 3.2.2*) YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable yet, as the Programme do not intend to approve new methodologies within the next 3 years.

Are procedures in place for activities to respond, as appropriate, to changing baseline conditions that were not expected at the time of registration? (*Paragraph 3.2.3*) YES

Summarize and provide evidence of the policies and procedures referred to above:

With emissions rising in the two sectors covered by the sole approved methodology by the Programme, the case did not occur yet.

Question 4.3 Are quantified, monitored, reported, and verified

Are procedures in place to ensure that...

- a) emissions units are based on accurate measurements and valid quantification methods/protocols? (*Paragraph 3.3*) YES
- b) validation occurs prior to or in tandem with verification? (*Paragraph 3.3.2*) YES
- c) the results of validation and verification are made publicly available? (*Paragraph 3.3.2*) YES
- d) monitoring, measuring, and reporting of both activities and the resulting mitigation is conducted at *specified intervals* throughout the duration of the crediting period? (*Paragraph 3.3*) YES
- e) mitigation is measured and verified by an accredited and independent third-party verification entity? (*Paragraph 3.3*) YES
- f) *ex-post* verification of mitigation is required in advance of issuance of emissions units? (*Paragraph 3.3*) YES

Summarize and provide evidence of the policies and procedures referred to in a) through f):

The Programme is focused on methodologies and protocols previously JI approved, and continues to apply JI procedures. All JI procedures fulfill requests of questions a) through f). As stated in 3.1, for approved methodologies, to be qualified by the Programme, an updated determination report will be requested. The auditor in charge of the production of the update determination report, and subsequent verification reports, should prove track record experience in either JI, CDM, Gold Standard, or VERRA methodologies and projects.

Are provisions in place... (*Paragraph 3.3.3*)

- a) to manage and/or prevent conflicts of interest between accredited third-party(ies) performing the validation and/or verification procedures, and the programme and the activities it supports? YES
- b) requiring accredited third-party(ies) to disclose whether they or any of their family members are dealing in, promoting, or otherwise have a fiduciary relationship with anyone promoting or dealing in, the offset credits being evaluated? YES
- c) to address and isolate such conflicts, should they arise? YES

Summarize and provide evidence of the policies and procedures referred to in a) through c):

The Programme, is currently too small to face those potential conflicts of interest (there is more supply of credits than demand for those credits). Should the Programme grow (approving new methodologies), or the project activity grow, those procedures will be put in place.

Are procedures in place requiring that... (Paragraph 3.3.4)

a) the renewal of any activity at the end of its crediting period includes a reevaluation of its baselines, and procedures and assumptions for quantifying, monitoring, and verifying mitigation, including the baseline scenario? YES

b) the same procedures apply to activities that wish to undergo verification but have not done so within the programme's allowable number of years between verification events? YES

Summarize and provide evidence of the policies and procedures referred to in a) and b), including identifying the allowable number of years between verification events:

The Programme has approved only one methodology, in which same procedures apply over a 10 years crediting period. Credits are issued on a yearly basis, on real ex-post measurements, and after the issuance of a verification report.

Are procedures in place to transparently identify units that are issued *ex-ante* and thus ineligible for use in the CORSIA? (Paragraph 3.3.5) YES

Provide evidence of the policies and procedures referred to above:

The Programme has approved only one methodology, in which there is no ex-ante credit issuance.

Question 4.4 Have a clear and transparent chain of custody

SECTION III, Part 3.4—Identification and tracking includes questions related to this criterion. No additional information is requested here.

Question 4.5 Represent permanent emissions reductions

List all emissions sectors (if possible, activity types) supported by the Programme that present a potential risk of reversal of emissions reductions, avoidance, or carbon sequestration:

The Programme supports 2 sectors (buildings and ground transportation) that could be subject to reversal of emissions reduction. However, the Programme has approved only one methodology, in which same procedures apply over a 10 years crediting period. Credits are issued on a yearly basis, on real ex-post measurements compared to the baseline, and after the issuance of a verification report, preventing from non permanent emissions reductions as shown in the example presented in Part 5.

What is the minimum scale of reversal for which the Programme provisions or measures require a response? (Quantify if possible)

Not applicable to the methodology that was approved by the Programme, as credits are issued on a yearly basis.

For sectors/activity types identified in the first question in this section, are procedures and measures in place to require and support these activities to...

a) undertake a risk assessment that accounts for, *inter alia*, any potential causes, relative scale, and relative likelihood of reversals? (Paragraph 3.5.2) YES

b) mitigate identified risks of reversals? (Paragraph 3.5.3) YES

c) mitigate identified risks of reversals? (*Paragraph 3.5.3*)

d) ensure full compensation for material reversals of mitigation issued as emissions units and used toward offsetting obligations under the CORSIA? (*Paragraph 3.5.4*)

Summarize and provide evidence of the policies and procedures referred to in a) through d):

Credits are issued on a yearly basis, on real ex-post measurements compared to the baseline, and after the issuance of a verification report, preventing from non permanent emissions reductions as shown in the example presented in Part 5.

Are provisions in place that... (*Paragraph 3.5.5*)

a) confer liability on the activity proponent to monitor, mitigate, and respond to reversals in a manner mandated in the programme procedures? YES

b) require activity proponents, upon being made aware of a material reversal event, to notify the programme within a specified number of days? YES

c) confer responsibility to the programme to, upon such notification, ensure and confirm that such reversals are fully compensated in a manner mandated in the programme procedures? YES

Summarize and provide evidence of the policies and procedures referred to in a) through c), including indicating the *number of days within which activity proponents must notify the programme of a material reversal event*:

Credits are issued on a yearly basis, on real ex-post measurements compared to the baseline, and after the issuance of a verification report, preventing from non permanent emissions reductions as shown in the example presented in Part 5. Activity proponents thus monitor emissions from project participant on a yearly basis, preventing from the issuance of credit for non permanent reductions.

Does the programme have the capability to ensure that any emissions units which compensate for the material reversal of mitigation issued as emissions units and used toward offsetting obligations under the CORSIA are fully eligible for use under the CORSIA? (*Paragraph 3.5.6*) YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable to this Programme, as only one methodology has been approved.

Would the programme be willing and able, upon request, to demonstrate that its permanence provisions can fully compensate for the reversal of mitigation issued as emissions units and used under the CORSIA? (*Paragraph 3.5.7*) YES

Question 4.6 Assess and mitigate against potential increase in emissions elsewhere

List all emissions sectors (if possible, activity types) supported by the programme that present a potential risk of material emissions leakage:

None by design of the sole methodology approved by the Programme.

Are measures in place to assess and mitigate incidences of material leakage of emissions that may result from the implementation of an offset project or programme? (*Paragraph 3.6*) YES

Summarize and

provide evidence of the policies and procedures referred to above:

Not applicable as the sole methodology approved by the Programme does not present potential risk of emission leakage.

Are provisions in place requiring activities that pose a risk of leakage when implemented at the project-level to be implemented at a national level, or on an interim basis on a subnational level, in order to mitigate the risk of leakage? (*Paragraph 3.6.2*) YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable as the sole methodology approved by the Programme does not present potential risk of emission leakage.

Are procedures in place requiring and supporting activities to monitor identified leakage? (*Paragraph 3.6.3*) YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable as the sole methodology approved by the Programme does not present potential risk of emission leakage.

Are procedures in place requiring activities to deduct from their accounting emissions from any identified leakage that reduces the mitigation benefits of the activities? (*Paragraph 3.6.4*) YES

Not applicable as the sole methodology approved by the Programme does not present potential risk of emission leakage.

Question 4.7 Are only counted once towards a mitigation obligation

Does the Programme have measures in place for the following:

- a) to ensure the transparent transfer of units between registries; and that only one unit is issued for one tonne of mitigation (*Paragraphs 3.7.1 and 3.7.5*)
- b) to ensure that one unit is issued or transferred to, or owned or cancelled by, only one entity at any given time? (*Paragraphs 3.7.2 and 3.7.6*)
- c) to discourage and prohibit the double-selling of units, which occurs when one or more entities sell the same unit more than once? (*Paragraph 3.7.7*)
- d) to require and demonstrate that host countries of emissions reduction activities agree to account for any offset units issued as a result of those activities such that double claiming does not occur between the airline and the host country of the emissions reduction activity? (*Paragraph 3.7.3*)

Summarize and provide evidence of the policies and procedures referred to in a) through d):

a) to c) There is only one registry. With only one methodology approved, the Programme only emits one type of credits. All credits are generated on an run-of-the-mill basis, once a project participant has given all documentation to calculate its emissions and subsequent emission reductions. Programme's back-office calculates emissions and reduction of the project participant, and generates corresponding credits. All credits are created through being issued into the pending account of the programme registry, so called M1 registry. Upon issuance each unit is not assigned a unique serial number. Instead, as reductions comes from buildings and land transportation by equipment that are uniquely identified (electrical power meter serial number in each building, and car plate registration numbers), programme internal procedures check that each equipment can not receive reduction more than once a year. Credits are transferred to the M1 registry to the program participant account. For cancellation, credits are transferred from the project participant account to the Programme cancellation account. Credits on the Programme cancellation account can no longer be transferred to any other account ("end of the line" account for all credits). This CO2 credit accounting Registry is performed on the same rules a general accounting principles (double entry accounting). Those accounting principles prevent from double selling by design.

d) There is no agreement from the host country. As CORSIA addresses CO₂ emissions from international aviation, which are not included under the UNFCCC and its Paris Agreement, and therefore are not included in countries' Nationally Determined Contributions (NDCs), there will be no double accounting. As credits delivered by the Programme are additional, there will be no double claiming as well. Indeed, activities performed by project participants will reduce the host country's (France) emissions which are accounted into the French States emission allocations (AEAs - imposed by Effort Sharing Decision to be soon the Effort Sharing Regulation). France will beneficiate from the CORSIA action (and money), and will comply to its European AEAs obligation. However, as shown in the past 3 phases of the EU carbon markets, and as anticipated for the phase 4, AEAs have no value, and there is no trade on such instruments. France will thus not be able to sell the unused AEAs and won't make a profit out of CORSIA's money.

The non agreement from the host country comes from the misalignment of the administration of the two ministries in charge of climate issues in France: The ministry of Environment (also country's national accounting focal point) and its DG Energy Climate administration on one side, and the ministry of finance, with its DG Tresory administration on the other side.

DGTresory sees AEAs as the carbon asset of the country, and do not want to convert this into a new form of reduction units as it was the case with the conversion of AAUs into ERUs under the former JI Track one procedure. To overcome this issue, DG Energy Climate issued a new label (so called Label Bas Carbone - <https://www.ecologique-solidaire.gouv.fr/label-bas-carbone>) with the emission of a new type of carbon credit, to be used for voluntary carbon offsetting schemes.

By accepting former JI Track one ERUs, CORSIA will have a huge impact on limiting climate change through real ex-post reductions (as powerful as tree-planting), as well as on climate policies, and policy makers, by funding the ecological transition in Annex 1 countries.

Does the Programme have procedures in place for the following: (*Paragraph 3.7.8*)

- a) to obtain, or require activity proponents to obtain and provide to the programme, written attestation from the host country's national focal point or focal point's designee? YES
- b) for the attestation(s) to specify, and describe any steps taken, to prevent mitigation associated with units used by operators under CORSIA from also being claimed toward a host country's national mitigation target(s) / pledge(s)? YES
- c) for Host country attestations to be obtained and made publicly available prior to the use of units from the host country in the CORSIA? YES

Summarize and provide evidence of the policies and procedures referred to in a) through c):

Not applicable as there is no agreement from the host country (see response to previous question).

Does the Programme have procedures in place requiring... (*Paragraph 3.7.9*)

- a) that activities take approach(es) described in (any or all of) these sub-paragraphs to prevent double-claiming? YES
 - Emissions units are created where mitigation is not also counted toward national target(s) pledge(s) / mitigation contributions / mitigation commitments. (*Paragraph 3.7.9.1*)
 - Mitigation from emissions units used by operators under the CORSIA is appropriately accounted for by the host country when claiming achievement of its target(s) / pledges(s) / mitigation contributions / mitigation commitments, in line with the relevant and applicable international provisions. (*Paragraph 3.7.9.2*)
 - Programme procedures provide for the use of method(s) to avoid double-claiming which are not listed above (*Paragraph 3.7.9.3*)
- b) that Host Country attestations confirm the use of approach(es) referred to in the list above? YES

Summarize and provide evidence of the policies and procedures referred to in a) and b):

Not applicable as there is no agreement from the host country (see response to previous question).

Does the Programme... (Paragraph 3.7.10)

a) make publicly available any national government decisions related to accounting for units used in ICAO, including the contents of host country attestations described in paragraph 3.7.8?

YES

b) update information pertaining to host country attestation as often as necessary to avoid double-claiming.

YES

Summarize and provide evidence of the policies and procedures referred to in a) and b):

Not applicable as there is no agreement from the host country (see response to previous question).

Does the Programme have procedures in place to compare countries' accounting for emissions units in national emissions reports against the volumes of eligible units issued by the programme and used under the CORSIA which the host country's national reporting focal point or designee otherwise attested to its intention to not double-claim? (Paragraph 3.7.11)

YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable as there is no agreement from the host country (see response to previous question). However, the Programme do track country's accounting for emissions on the scope of the approved methodology, and observes an increase of CO₂ emissions, in both sectors.

Does the Programme have procedures in place for the programme, or proponents of the activities it supports, to compensate for, replace, or otherwise reconcile double-claimed mitigation associated with units used under the CORSIA which the host country's national accounting focal point or designee otherwise attested to its intention to not double-claim? (Paragraph 3.7.13)

YES

Summarize and provide evidence of the policies and procedures referred to above:

Not applicable as there is no agreement from the host country (see response to previous question).

Would the Programme be willing and able, upon request, to report to ICAO's relevant bodies, as requested, performance information related to, *inter alia*, any material instances of and programme responses to country-level double-claiming; the nature of, and any changes to, the the number, scale, and/or scope of host country attestations; any relevant changes to related programme measures? (Paragraph 3.7.12)

YES

Question 4.8 Do no net harm

Are procedures in place to ensure that offset projects do not violate local, state/provincial, national or international regulations or obligations? (*Paragraph 3.8*) YES

Summarize and provide evidence of the policies and procedures referred to above:

All documentation available on <https://www.compteco2.com/>

Describe, and provide evidence that demonstrates, how the programme complies with social and environmental safeguards: (*Paragraph 3.8*) YES

All documentation available on <https://www.compteco2.com/>

Describe, and provide evidence of the programme's public disclosure of, the institutions, processes, and procedures that are used to implement, monitor, and enforce safeguards to identify, assess and manage environmental and social risks: (*Paragraph 3.8*) YES

All documentation available on <https://www.compteco2.com/>

PART 5: Programme comments

Are there any additional comments the programme wishes to make to support the information provided in this form?

As only real ex-post verified reduction matters to solve the climate change problem, 450 became an independent Programme organization in complement to its project development activity, generating its own carbon credits, out of a methodology previously validated by UNFCCC. The current Programme focuses in France only, in order to develop a robust downstream business model for the usage of those carbon credits. Once traction is demonstrated in France, deployment to the rest of the world will be performed.

We present here the downstream use of the carbon credit, and how CORSIA could have a decisive on climate change issue.

In the existing platform (at www.compteco2.com), **supply of carbon credits is created by individuals and businesses successfully proving emissions reductions** as follows:

- A household or business opens, free-of-charge, an online **CO₂ Account** (at www.compteco2.com);
- Online tools calculate baseline emissions (preceding 2 years-based on uploaded fuel bills and mileage records) from heating and transport, and simulate potential emissions reductions;
- *Account* holder invests in new heating system with lower CO₂ emissions, insulation or less fossil fuel-transport); *Account* holder changes his behaviour and reduces his energy consumption;
- As shown on figure 1 below, the platform's online tools calculate (on UNFCCC and Government approved methodology) and verify achieved reductions (compared to baseline) based on new receipts submitted by the *Account* holder, and sends them for verification to independent third party audit (oracle);

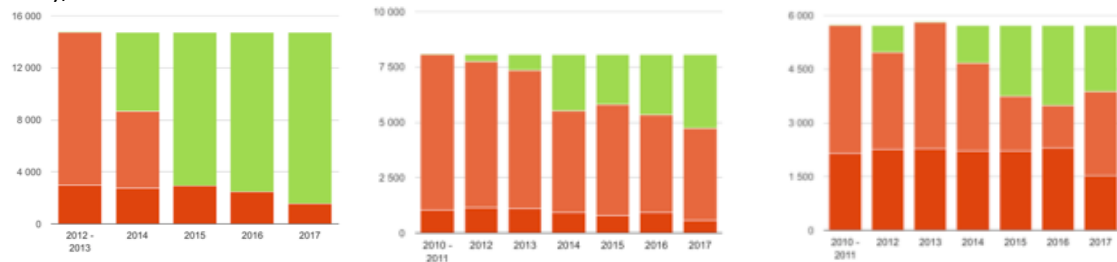


Fig. 1: 3 **CO₂ Account** examples. Left column is the reference year (baseline). In green the quantity of credits received. In light orange emission from heating. In dark orange, emission from transport. Those examples show that once a customer as opened a **CO₂ Account**, he is willing to calculate his yearly carbon gains.

The left graph illustrate a typical switch from fossil to carbon free heating (switch made in the middle of 2014, hence 50% of reductions in 2014). Middle and right figures illustrate the power of the *ex-post* calculation tool : reductions vary yearly, and sometimes do not generate credits. Rebound effect is removed. Continuous long time series proved also very efficient to correct misdeclarations: in those graphs, when evaluating 2018 emissions, if a mistake is discovered, the tool recalculates all the past baseline and emissions, and can reajust the 2018 credit according to the entire past emissions, thus preventing from fraud.

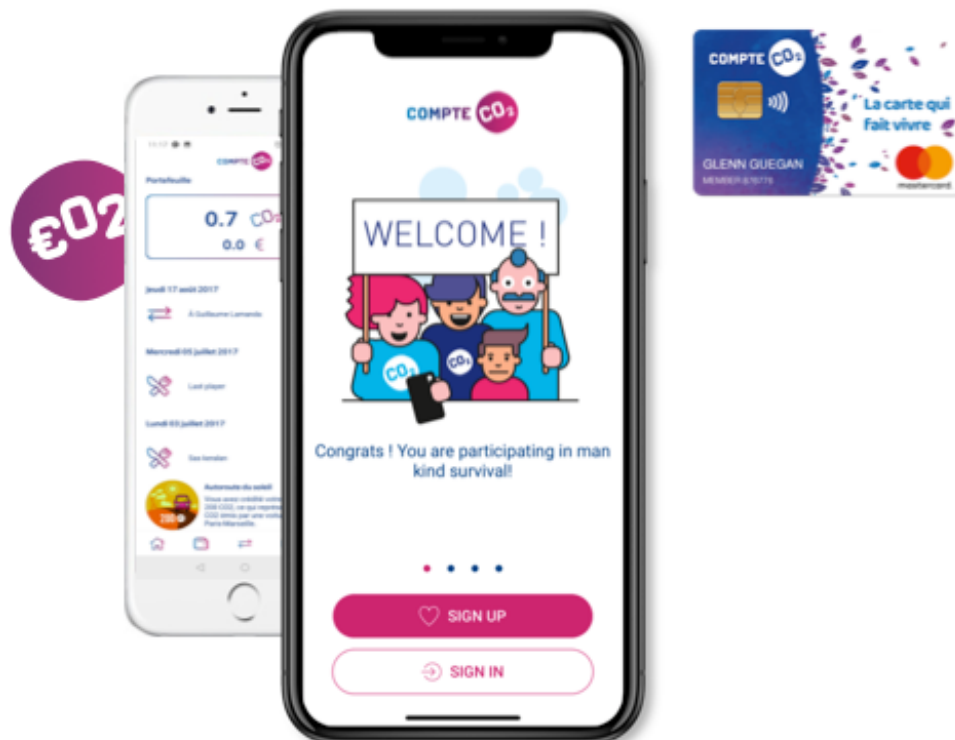
- The *Account* is credited with so-called **€O₂s** equivalent to the calculated reduction (1 tCO₂ abated = 1000 **€O₂s**). For example, replacing a fuel heating boiler with a heat-pump, reduces CO₂ emissions by approx. 6t thus credits of 6.124 **€O₂s** annually, for 10 years as long as the saving is maintained.
 - A **CO₂ card** -pre-paid MasterCard- transforms **€O₂s** to Euro (52.64 € per 1000 **€O₂s**) allowing spending **€O₂s** in shops. Alternatively, **€O₂s** can be used for mobile payment, or may be exchanged over social networks. **Consequently, for CO₂ Account holders, €O₂s pay off (generating benefits and revenues) !**
 - The existing *platform* is fully operational and accessible by computer and smartphone.

The circulations of the **€O2s** is show on the figure 2 below. Few screens of the neobank App are shown on figure 3.



Figure 2: Circulations of **€O2s**. As a major offsetter, airline operators would accelerate the circulation of **€O2s**, hence, the production of more CO₂ reductions.

a)



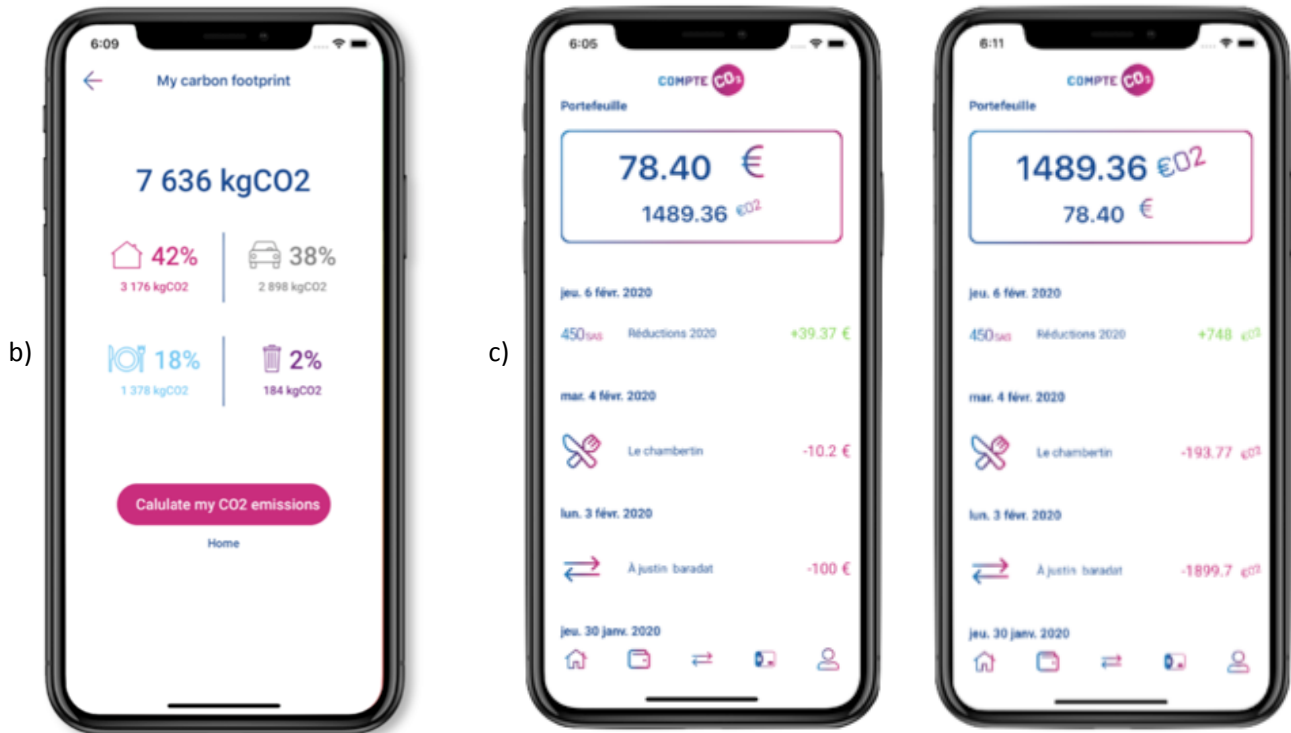


Figure 3 : Screenshots of the neobank App. a) overall scheme. b) Carbon footprint example. c) account balance showing **€O₂**s gains, and displayed in euros and **€O₂**s, upon user’s choice.

In the medium run, a public open ledger could be created, to register all **€O₂** movements. It could be possible to create a ledger with all CORSIA Units, and using carbon credits as the currency to pay miners recording all transactions. 450 would be happy to expose to ICAO’s relevant bodies how this blockchain evolution could be put in place rapidly, should ICAO wishes to explore this unique opportunity.

SECTION IV: SIGNATURE

I certify that I am the administrator or authorized representative (“Programme Representative”) of the emissions unit programme (“Programme”) represented in a) this form, b) evidence accompanying this form, and c) any subsequent oral and/or written correspondence (a-c: “Programme Submission”) between the Programme and ICAO; and that I am duly authorized to represent the Programme in all matters related to ICAO’s analysis of this application form; and that ICAO will be promptly informed of any changes to the contact person(s) or contact information listed in this form.

As the Programme Representative, I certify that all information in this form is true, accurate, and complete to the best of my knowledge.

As the Programme Representative, I acknowledge that:

the Programme’s participation in the assessment does not guarantee, equate to, or prejudice future decisions by Council regarding CORSIA-eligible emissions units; and

the ICAO is not responsible for and shall not be liable for any losses, damages, liabilities, or expenses that the Programme may incur arising from or associated with its voluntary participation in the assessment; and

as a condition of participating in the assessment, the Programme will not at any point publicly disseminate, communicate, or otherwise disclose the nature, content, or status of communications between the Programme and ICAO, and of the assessment process generally, unless the Programme has received prior notice from the ICAO Secretariat that such information has been and/or can be publicly disclosed.

Signed:

Jean-Luc Baradat

April, 20th, 2020

Full name of Programme Representative (*Print*)



Date signed (*Print*)

Programme Representative (*Signature*)

(This signature page may be printed, signed, scanned and submitted as a separate file attachment)



ICAO

Programme Application Form, Appendix B

Programme Assessment Scope

CONTENTS: With this document, programmes may define which of their activities they are submitting for assessment by the TAB. The two sheets are described below:

- Sheet A) Activities the programme describes in this form, which will be assessed by ICAO's T.
- Sheet B) List of all methodologies / protocols that support activities described under Sheet A

AB



| ICAO

Programme Application Form, Appendix C

Programme Exclusions Scope

CONTENTS: With this document, programmes may define which of their activities they are **excluding** from TAB's assessment. The two sheets are described below:

- Sheet A) Activities the programme describes in this form will be **excluded** from assessment by
- Sheet B) List of all methodologies / protocols that support activities described under Sheet A

γ ICAO's TAB

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methodology attached to this document

DIFFUSE CO₂ EMISSIONS

Experimental methodology for households and tertiary sector industries in order to modify their consumption pattern and reduce their CO₂ emissions.

The development of this methodology benefitted from CITEPA general advice and more specifically, regarding the emissions quantification, the follow-up and the consideration in the inventory of the GES national emissions.

Version 10 as of 21 décembre 2011

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1. Background and rationale of the methodology

1.1. The acceleration of climate change

The IPCC 4th report published in 2007 provided meaningful observations and tendencies.

GHG emissions are increasing drastically (Raupach et al., 2007; Canadell et al., 2007¹).

While the CO₂ content in the atmosphere steadily increased by about 1% per year before the beginning of the 21st Century, this growth reached 3% per year since 2000.

The CO₂ emissions during the years 2005, 2006, 2007 have now exceeded the worst case scenario developed by the IPCC experts.

The climate change consequences highlight possible future catastrophes if no urgent measures are taken. S. Rahmstorf (Potsdam Institute for Climate Impact Research) gave the figure of **1 metre sea level increase** (instead of 18 to 54 cm in the latest IPCC report). Schellenhuber (University of Oxford) presented the expected world consequences with an average temperature 5°C higher than the beginning of the industrial era. Lord N. Stern (London School of Economics) **insisted upon the geopolitical risks and possible conflicts to come.**

Beyond the climate change acceleration, five others messages were delivered at the COP 15 conference preparation:

1. To restrict the global warming to 2°C. This temperature limit implies the global emissions to be halved at the year 2050, and. **divided by 4 for the developed countries** during the same period.
2. This objective is realistic and achievable if a collective will is created for the sake of equity (between generations, between north and south, etc.).
3. All the leads must be followed, at the level of technological developments (D. Kammen, university of California, Berkeley) as well as behavioral changes (D. Liverman, University of Oxford).
4. Significant funding will be necessary. The pros and cons of a Carbon tax at the international level (W. Nordhaus) have been debated with economists advocating the efficiency of the carbon market (N. Stern). No matter what the mechanism is, it has been reckoned that the essential is to **start by giving an real price to carbon**, a price that everyone would be aware of (D. Kammen, N. Stern). **« Inaction will be inexcusable ».**
5. We must give ourselves the means to act quickly and efficiently, at the level of individuals as well as the level of the governance to be set up.

¹ Full articles on <http://www.pnas.org/content/104/47/18866.full.pdf+html> and <http://www.pnas.org/content/104/24/10288.full>

1.2. CO₂ and energy

The approaches « energy savings » and « CO₂ emissions», are neither conflictive nor redundant (there is a linear relation between these 2 variables in the methodology). They are complementary and additive. Both are based on different objectives.

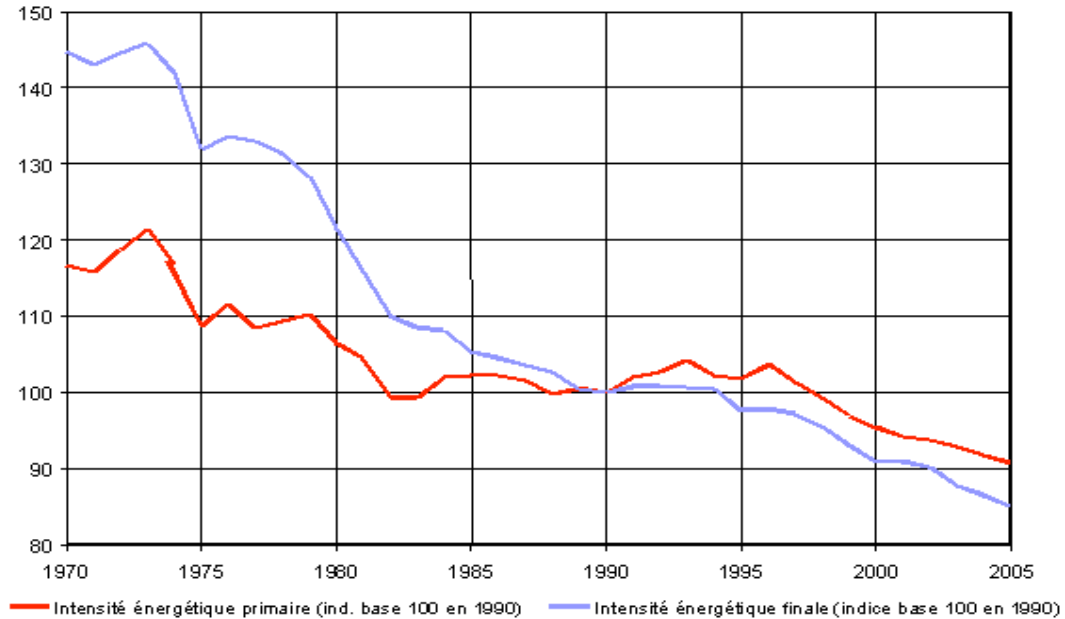
France, just like Europe, does not have enough necessary fossil energy reserves to provide for the currently used energies (gas, oil, coal, uranium). Consequently, their energy policies are directed towards securing their energy supply, and therefore allowing national energy markets, external energy policies, and defining energy efficiency objectives.

Within these energy policies, monitoring the energy demand (energy savings) seems to be an effective and inexpensive way to reach energy safety, and to reduce the national energy bill. Every support for energy saving has originated from this ancient goal.

Within these energy policies, the challenges of the sustainable development (including the climate change) appear and reducing the CO₂ emissions is a possible scope of action and a more recent objective.

Results obtained from old energy-saving promotion campaigns demonstrate that these campaigns can not be regarded as the unique way to fight the climate change, in the same way, that climate change is not the only way to answer the energy security problems. Indeed:

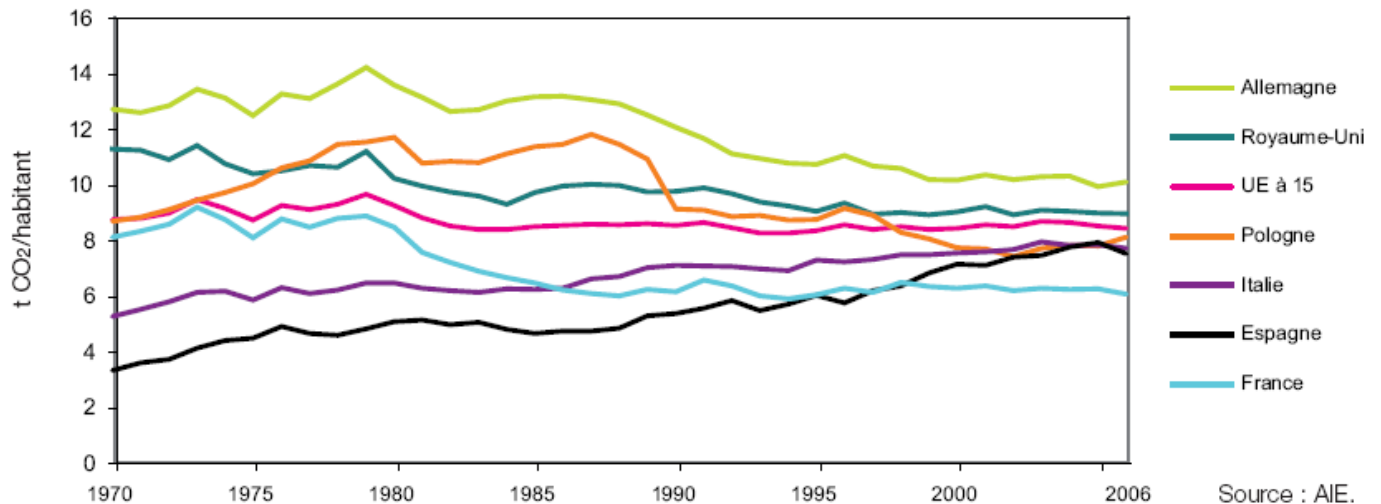
- If a global decrease of the energy intensity in France (Sch. 1) must be noticed, it is also strongly varying from one sector to another one. The situation is preoccupying in the transport sector. It increases on average 1 % per year from 1997 to 2004 in the residential sector. **The evolution of the Carbon intensity is also decreasing.**



Sch. 1 : Decrease of French Energy Intensity since 1970

Source: Ademe²

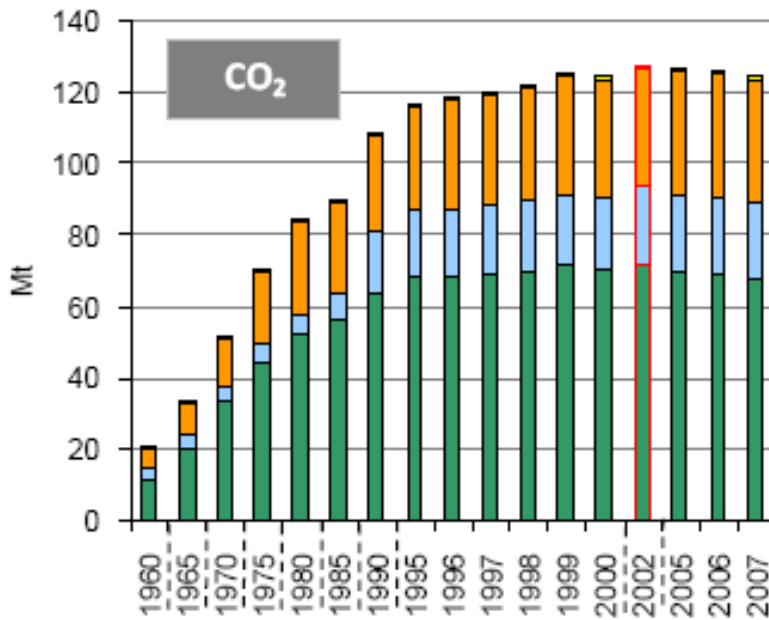
- This decrease of the energy and carbon intensity shows that the awareness of the energy consumption management improves in the households and that the actions and political implementations are efficient. Nonetheless the total consumption per capita over the last 20 years is stable (Fig. 2). Moreover the national energy consumption is growing due to the increase in population. **The energy consumptions, and CO₂ emissions related to fossil energy, are globally on the upswing all over the world or only stationary, or in weak decrease, in a few countries such as France.** The energy consumption for housing sector rises every year. With regards to the transportation sector, and in particular emissions resulting from private cars, one can observe a stabilisation of emissions since 1999, despite a regular increase of the transport activity (total mileage record) until 2006 (figures 3 and 4). This can probably be explained by improvements from car manufacturer (e.g. engine consumption) combined with various others regulatory measures (e.g. speed limits, agrofuels).



Sch. 2 : Per capita CO₂ emissions in EU since 1970

Source : AIE.

² <http://www2.ademe.fr/servlet/KBaseShow?sort=-1&cid=96&m=3&catid=12563>

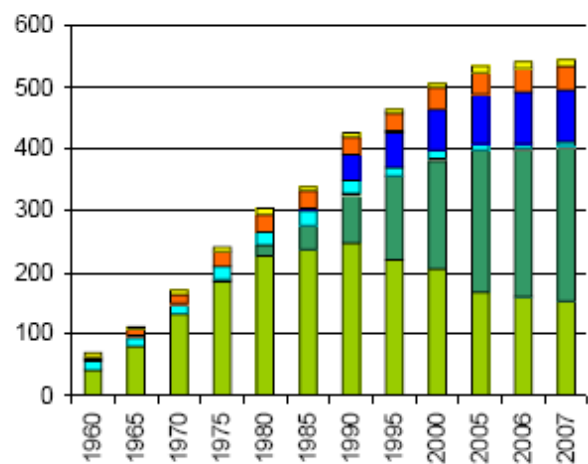
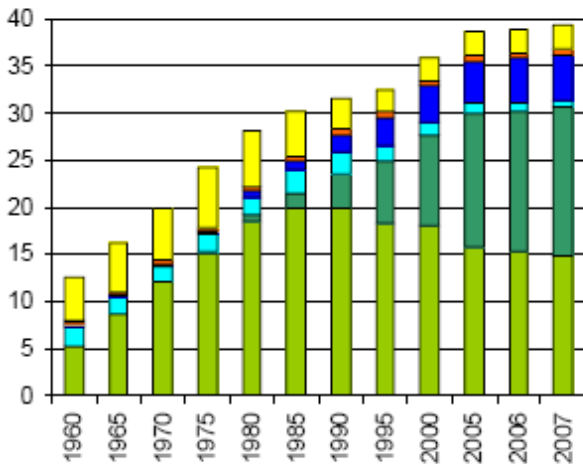


Parc statique

Evolution du parc statique du transport routier en France métropolitaine
en millions de véhicules

Parc roulant

Evolution du parc roulant en France métropolitaine
en milliards de véhicules.km



Schemes 3 and 4 : CO₂ emissions in transport sector in France, Source CITEPA (April 2009)

The decrease in energy simultaneously to the raise of the energy and carbon consumption reveals the importance of the behaviors, beyond the sole performance of the equipment.

The energy saving campaigns have improved (abatement of energy intensity) the performance of equipments which are now more efficient as they consume less. However, this observed improvement may be counterbalanced by a low level evolution of the user's behaviour. For example, the production of cars emitting 120 g of CO₂ per km instead of 150g will correspond to a possible 20% abatement of CO₂ emissions. Conversely, it is to be noted on sch.4 that the rolling stock is growing since 1960. This raise of the vehicles x covered kilometers illustrates a rebound effect: the price drop of the kilometer enables, with a constant budget, to acquire it in significant quantity (rebound effect).

It is obvious that in absolute value, CO₂ emissions and fuel consumption, after a significant increase, are not yet substancially lessening. The concept of good behavior includes the use of existing equipment (turning off lights in empty rooms), the choice of increasing the number of the equipment (number of light bulbs), and the choice to invest in equipment weakly consumers (energy-saving light bulbs). This increase in CO₂ emissions and energy consumption highlights the existence of barriers related to prevailing practices.

The "carbon signal" brings new and complementary elements to the "energy saving" approach which allows for the expected changes in behaviour:

- **Urgent action: change in time scale.** The physical reality of climate change requires an immediate action. Current and future energy reserves do not impose any emergency of this kind: after the use of oil (which peak date is constantly revisited and which price still suffers drops), the reserves of uranium, gas, and coal (yet highly CO₂ emitter) ensure energy supplies for the next two centuries³.
- **CO₂ Budget:** Energy savings are focused solely on financial gains, and facilitate the management of a financial budget. By adding a carbon dimension, we can now manage a carbon budget (targeting a division by 4 for example), we can adapt our behavior to stay within that budget as shown in the numerical application in Appendix 1, where the use of the train is compared to the one of the automobile. The carbon budget also provides for a comprehensive approach to one's emissions (applicability of the methodology in Chapter 2) that does not exist with energy savings: the amounts saved through energy reduction action (replacement of a boiler fuel by a heat pump for example) can lead to an expense heavily emitting CO₂, such as holiday by plane for example. The carbon budget approach allows to focus on which transportation mean to use in order to go on holiday and can consider various means (e.g. ferry). Alternatively, the tax household may decide to reserve its CO₂ budget for transport plane, and provide CO₂ reduction efforts elsewhere.
- **Carbon price signal:** In some areas, demand is inelastic to the price signal. Particularly in the field of transport, up to a threshold price close to \$ 145 per barrel, under which car users do not tend to drive less (reducing their consumption). By adding the pricing of CO₂ (non-existent today) to the oil price, these thresholds of behavior will be achieved sooner, and changes in behaviour will occur faster. The European carbon market shows that the carbon price signal promotes changes in behaviour. Economists all agree today to put a price on carbon, although they differ on the method (tax or market).
- **New references and unit change.** Changing l/km to gCO₂/km for a car for example, may modify behaviours by anchoring new references: should I buy a car emitting 50 gCO₂/km (Loremo for example) instead of 120 gCO₂/km? (new European standards). The price of a barrel of oil is part of the daily news, the price of one ton of CO₂ could become too. This change in the unit that is also found in the scientific community (Moles counting instead of g/l for example) proves its usefulness.

³ Coal : about 200 years at current rythm, Gaz : 60 years (Hubert peak for gaz is scheduled 20 years later than peak oil. Uranium : 60 years in current use, thousand of years if plutonium is used (although data are quiete controversial due to huge investments costs required to develop rapid neutron reactors, which success has not been proven yet).

- **Educational dimension.** The methodology has an educational dimension. It enables each and every one of us to get informations on this theme and on the importance of the climate change, to capture a scientific approach (I take measure, I compute, I figure out possible solutions, etc.), which works with the idea of creating a knowledge society (Caracostas 2007⁴): each individual becomes an actor, a responsible citizen. This work must be accompanied by experts who participate in this educational approach, and thus see their actions enhanced. Thus, the methodology described below fits in the existing actions, by calling upon such experts as **EPC** (Energy Performance Certificate) experts and EIE (Energy Information Space) counselors.

⁴ Caracostas, P., 2007. Une prospective de la société de la connaissance. Dans : /Sciences et société en mutation/, sous la direction de J.-P. Alix. CNRS Editions, pp. 19-31

1.3. Role of households in CO₂ emissions

The so called task force « Factor 4 »⁵ and the French Institute of the ENvironment (FIEN, now part of the MEDDTL in the General Commission on Sustainable Development (GCSD), Observatory and Statistics Service (SOeS)) believes that **the household consumption and way of life have an influence on the GHG emissions**⁶. This conclusion is shared out of France in a German recent study (2008) titled « climate protection requires action »⁷. This change-of-behaviour theme has been subject to special sessions during the Copenhaguen Congress (March 2009 – presentation in a plenary lecture from Diana Liverman, University of Oxford for example). The GHG emissions are stemming from numerous individual decisions that become important to work on. A modification of household behaviour may contribute to emission reduction, to abate the GHG emissions by 4 in France before 2050. Housing and individual car offer the highest potential reduction on a daily use: 50% of GHG emissions are connected to the energy spent on our daily car transportation and our household or office comfort. A household may lead its consumer choice towards products that need less energy to manufacture and less energy in their use.

Furthermore, experts agree on the fact that a sole economic sector or a sole technology can not solve the problem of climate change. Therefore, it becomes necessary to deploy combinations of various technical solutions together with behavioural changes. This implies that each individual will have to choose and adapt its own "action plan" according to his way of life, his place of work, the region he lives in, the technologies adapted to its needs, etc. For example, the city dweller can more easily use public transport than the rural one, solar energy may be better developed in sunny regions, etc. **The collective goal will also be achieved by implementing different individual solutions adopted by sensible and informed consumers.**

Tools and incentive systems should therefore be available to households in order to encourage their involvement in the fight against climate change.

⁵ Report from so-called working group "Factor 4", chaired by Christian de Boissieu, August 2006

⁶ Florence Naizot, Patrice Grégoire, Ifen 2006

⁷ Study available on http://www.sozial-oekologische-forschung.org/_media/Klimaforschung_final_web.pdf

1.4. Conclusion on the background and rationale of the methodology

Domestic projects suggested by France and allowing the delivery of ERU (Emissions Reduction Unit in the Kyoto Protocol), are interesting tools to promote in order to divide by 4 CO₂ emissions by 2050.

This methodology aims at testing pragmatic and realistic tools for fiscal households and tertiary sector firm in order to sensitize and make the civil society aware of its responsibilities as to the climate change. It is an answer to the key message presented during the preparatory reunion at the COP15 and to the recommendation N° 15⁸ (out of 28 in total) proposed in the so-called "factor 4" task force.

This methodology can also be considered like an educational program in order to favour learning knowledge related to CO₂ emissions in addition to communication actions undertaken by the different State services such as :

- a. recommendations N° 16⁹ proposed in the report of the working group « factor 4 »,
- b. willingness to communicate topics to the public such as the ones described in the report "Climate change"- 2006 actualization of the 2004-2012 climate plan", dated 13 november 2006, from MIES,.

Therefore, the implementaion of a methodology adapted to fiscal households and tertiary sector firms is doable in France, as all legal tools exist and since a strong interest is expressed by important public parties (Brittany,...).

This methodology, which is part of a long-standing strategy concerning the reduction of CO₂ emissions, could be experimented until the 1st of January 2011. To launch this experimental work, technical dimensions will necessitate a specific attention, which will be the object of the pilot phase, but the collective willingness will be the determining criterion.

⁸ Recommendations N° 15 : Enhance the useful information in order to fight against climate change, at the sensibilization/formation level as well as at the instantaneous information level.

⁹ Recommendations N° 16 : Sensitize all the individual buyers and consumers in order to encourage them to buy as many local and seasonal products as possible, so that the impact on the GES emissions during the production process is minimized.

2. Applicability

This methodology applies to tax households and tertiary sector firms not covered by the NAP (National Allocation Plan) which are engaged in a modification of their behaviour to reduce **their direct CO₂ emissions** originating from their consumption mode, without taking the NAP into account (no electricity consumption/production).

The approach is global and does not concern a specific activity sector. Indeed, to ensure the methodology efficiency, the behaviour modification must be global: a registered gain in a given sector (housing for instance) must not be compensated by an emission increase in a different sector (transport for instance), if we want to reduce the total emission volume of the project participant. The aspect of overall budget management of CO₂ resulting from the methodology aims to educate project participants about the possibility of maintaining a consistent attitude.

This methodology applies to all CO₂ reduction solutions implemented by a tax household on its main housing, and its modes of transport, which to date are not covered by the National Allocation Plan (NAP). This methodology also applies to all solutions implemented by tertiary sector firms concerning their real estate assets and transportation mode of their collaborators, which to date are not covered by the NAP.

International air transport modes are also excluded from this methodology as the associated GHG emissions are not included in the total national GHG emissions inventory related to the Kyoto Protocol.

This methodology is used to define a baseline scenario, and to calculate the emissions of a proposed program. Consequently, the program coordinator using this methodology will write a descriptive document of the programmatic project (DDPP).

This includes the following projects:

- Yearly mileage abatement of current transportation modes using fossil energy (cars, domestic flights) by substitution of the transport mode (bicycle, public transport, train, car pooling...).
- Fossil energy abatement through a modification of the driving method, and mainly through a lower speed driving (driving trainings).
- Total or partial substitution of the current fossil energy used by the vehicle: gas or fuel changed into electric, hybrid, or LPG vehicle.
- Total or partial substitution of the fuel used in the existing household: conversion fuel to electricity or wood burning heating, solar water heaters ... (Emissions due to electricity are excluded)
- Reduction of consumption of the various energy sources (except for electricity already covered by EU directive on NAP) of the housing and tertiary sector firms, and property assets, (cubic metres of gas, litres of fuel) resulting from a better insulation, the use of equipment with a better energy efficiency (condensation boilers, heat pumps), or from a thriftier behaviour (house heated to 19 ° C instead of 21 ° C, automatic light suppression system, etc.).

Tax household and tertiary sector firms wishing to participate in the CO₂ emissions reduction program will be registered with the program coordinator (aggregator). Each program participant in his statement will justify the implemented actions and the associated consumption bills.

Double delivery of ERUS :

In order to prevent from multi delivery of ERUs for the same reduction, in accordance with test 2.1 described in chapter 8.4, each project participant will justify that he does not belong to any other approved project (project with due LoA). Project coordinator will also check among approved programs for potential redundancies, and will ask project participants to elect only one program.

3. Project scope

The CO₂ assessment which will be done by the tax household or the SRI will highlight all the resulting emissions in order to give an exact representation (see below). However, ERUs generated and quantified reductions will only be attributed on the boudaries not covered by NAP.

CO₂ emissions resulting from the participant's and SRI behaviour are taken into account in the baseline scenario and into the reductions projects. Available data regarding the consumption per household show that emissions from transport and housing represent approximately 50% of the total household emissions. The methodology will focus on this specific point. Several different sources of reductions (transport, housing, energy) can be used in the project.

Inclusion of transport within the project boundaries meets both the following conditions:

- Compatibility with the national GHG inventory,
- Application of the « MRV » (Measurable,Reportable,Verifiable) principle.

All company cars are excluded from the project boundaries for tax households, as they are taken into account in the CO₂ balance of the entreprises.

4. Emissions calculus

CO₂ emissions are calculated from the spreadsheet on the next page, where it is easy to directly declare the necessary information pertaining to the transportation, and buildings related consumptions.

The principles for the calculation of GHG emissions are based on using emission factors of various energies in line with those used in the national inventory reported in the framework of the UNFCCC. Emissions factors are produced by CITEPA and are coherent with French law "Arrêté du 15 septembre 2006 relatif au diagnostic de performance énergétique"¹⁰ and document "Bilan Carbone®" from l'ADEME¹¹ (French Energy Agency).

The national emission factors are likely to evolve in the future with the knowledge improvement and/or the fuel characteristics changes (for example the progressive introduction of agofuels). These factors must be consequently modified according to the available CITEPA data.

Project Description Documents using this methodology can use additional emission factors produced by CITEPA in order to account for specific geographical transportation modes (metro in cities, marine routes in Région Bretagne...). In all cases variations to this methodology will have to justify the method, the data sources, the selected hypothesis and the current regulation in the PDD.

CH₄ and N₂O emissions are included but have a very low impact, taking them into account affects the coefficient of CO₂ at the margin. Except for individual transports, HFC emissions are neglected due to their marginal impact (~2% of housing emissions - cf. CITEPA rapport SECTEN April 2009). The follow-up of these possible actions would be complicated anyway and its basis of cost-effectiveness prohibitive. At last, this disposition is conservative regarding the created credits. Except in special cases (heating system such as urban heating which are not covered by the NAP), only emissions due to the combustion caused by the participant's equipment or to the collective transports are included. For the electricity (housing and train) and the heating system, the emissions due to the combustion required to produce such energy is taken into account.

Emissions are calculated by the formula: $E_{ges} = Q_{act} \times FE_{ges/act}$, where

- E_{ges} is the quantity of GHG emitted in kilograms of equivalent CO₂
- Q_{act} is the amount (quantity) of activity expressed in « specific unit » of energy consumed (dwelling), or fuel consumed (individual transport). The « specific unit » depends on the category type and fuel type, as well as other parameters, where appropriate:

Housing		Transports	
Natural Gas	kWh pcs	Essence	litres
Domestic fuel	litres	Gazole	litres
Electricity	kWh	GPL-c	litres
Coal	kg	Essence aviation	litres
Urban Heating	ton of steam		
Wood/biomass	stère		
GPL (butane / propane)	kg		

¹⁰ Arrêté du 15 septembre 2006 regarding the energy performance diagnosis for the existing buildings in sale in metropolitan France available on <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000788395&dateTexte=>

¹¹ Bilan Carbone®, ADEME, version 6.0 de 2009

Habitat

Energie	Conditionnement	Unité	Quantité consommée	kg éq. CO ₂ par unité de quantité consommée	Emission (kg éq. CO ₂)	Référence	Commentaire
Gaz naturel	réseau	kWh pcs		0.187	0.00	RH1	CH1
	bouteille 5 kg	nombre de bouteilles		14.9	0.00		
Gaz propane ou butane	bouteille 10 kg	nombre de bouteilles		29.8	0.00	RH2	CH2
	bouteille 13 kg	nombre de bouteilles		38.8	0.00		
	bouteille 35 kg	nombre de bouteilles		104	0.00		
	citerne	kg		2.98	0.00		
Fioul domestique	citerne	litre		2.68	0.00	RH3	
Pétrole lampant	bidon	litre		2.57	0.00	RH7	
Électricité	réseau	kWh		0.084	0.00	RH4	CH4 et CS1
Combustibles minéraux solides (charbon)	vrac	kg		2.50	0.00	RH5	CH5
Chauffage urbain, réseaux de chaleur	réseau	t de vapeur		0.056	0.00	RH6	CH4 et CS1
Bois	vrac	stère		73	0.00	RH8	CH8
Solaire	-	kWh		0	0.00		CH9
Sous-total habitat	-	-	-	-	0.00		

Transport Individuel

Mode	Carburant	Unité	Quantité consommée	kg éq. CO ₂ par unité de quantité consommée	Emission (kg éq. CO ₂)	Référence	Commentaire
Voiture et deux roues (y compris remplissage de bidons destinés à des équipements tels que tondeuse, tronçonneuse, groupe électrogène, bateau, etc.)	essence y c agro-carb	litre		2.358	0.00	RT1	CT1
	gazole y c agro-carb.	litre		2.639	0.00		
	GPL-c	litre		1.631	0.00		
Avion, hélicoptère	essence aviation	litre		2.490	0.00	RT2	CT2
Bateau (hors avitaillement via station service auto)	essence	litre		2.429	0.00	RT3	
	gazole	litre		2.680	0.00		
Sous-total transport individuel	-	-	-	-	0.00		

Transports Collectifs

Mode	Energie	Unité	Personnes x Trajets	kg éq. CO ₂ par unité de personnes x trajets	Emission (kg éq. CO ₂)	Référence	Commentaire
Train	TGV électrique	passager x kilomètre		0.00256	0.00	RT4	CT4 et CS1
	Corail électrique / diesel	passager x kilomètre		0.0128	0.00		
	TER électrique / diesel	passager x kilomètre		0.374	0.00		
Bateau	diesel	passager x kilomètre		0.212	0.00	RT5	CT5
	diesel / urbain	passager x kilomètre		0.0854	0.00	RT6	CT6
Bus	diesel / interurbain	passager x kilomètre		0.0339	0.00		
	vols domestiques métropole	carburacteur	passager x kilomètre	0.117	0.00	RT7	CT7
vols métropole - DOM uniquement	carburacteur	passager x kilomètre	0.103	0.00			
Total	-	-	-	-	0.00		