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Ecology and taxation: converging struggles? The introduction of a carbon component into the TICPE in France

This working paper is the English version of a french paper published in Vertigo :

Marianne Ollivier-Trigalo, « Écologie et fiscalité : convergence des luttes ? Cas de l'introduction d'une assiette carbone dans la TICPE en France », Vertigo - la revue électronique en sciences de l'environnement [En ligne], volume 19 numéro 2 | octobre 2019. DOI : <https://doi.org/10.4000/vertigo.25651>

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Abstract

The 2014 Finance Bill (PLF 2014) introduced a carbon component, also called a climate-energy contribution or carbon tax, into the Domestic Consumption Tax on Energy Products (TICPE). The incorporation of this measure into the 2014 Finance Bill was a government act which formally drew on the work of a Standing Committee on Ecological Taxation (CFE), work that we studied in order to understand the background to the introduction of the carbon tax into the TICPE. On this empirical basis (numerous CFE documents and interviews conducted with members of the standing committee), the purpose of this article is to show the interdependence between tax and energy policy that emerged from the committee's work, which culminated in the vote in favour of the reform of the TICPE. Our analysis shows how the members of the CFE had to accommodate to rules and arrangements imposed by the tax system. Indeed, the influence of these rules is apparent in the decision to go through the TICPE, which reflects a twofold imperative: first, the requirement to generate returns, since a tax is above all a source of revenue; and second, the requirement not to create a new tax. There are several features of the decision to reform the TICPE that are meaningful in public policy terms. On the one hand, the use of a fiscal instrument brought into play arguments concerning a tax shift – a *fiscal transition*. At the same time, the focus on fossil fuel consumption and the associated CO₂ emissions, fostered discussions on the quest for energy frugality – an *energy transition*. Of course, in reality, the two orientations are not separate but interdependent.

Keywords: ecological taxation, carbon component, levelling of diesel and petrol, TICPE, energy policy, climate policy, transition policy

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Introduction. Return of the carbon tax.

Taxes on fossil fuels have increased in recent years and have notably been responsible for the emergence of the “yellow vest” movement¹. Apart from being associated with the price of the barrel of oil, this increase – with a further hike in 2018 – is caused by two structural phenomena, one recent, the other more long-standing. One of these was the levelling of tax rates on diesel and petrol², a measure announced³ and accomplished by Nicolas Hulot, at the time the new Minister of Ecological and Community Transition in the Macron presidency⁴. The other was the introduction of a carbon tax in the taxation applied to energy products, a measure decided and approved during the Hollande administration, which has a growth trajectory that has led to increases in the prices of energy products⁵.

The structure of France's TICPE (Domestic Consumption Tax on Energy Products) was reformed by the 2014 Finance Bill (PLF)⁶, which introduced a carbon component, also called a climate energy contribution or more commonly a carbon tax. Since the introduction of a carbon component into the French tax system had previously failed (2000, 2009), the success of this new attempt provided an

¹ The demonstrations began on Saturday 17 November 2018 throughout the country.

² The consumption of road fuels (gasoline, diesel) is taxed mainly by the TICPE. The amount applied to diesel is lower than the rate applied to gasoline. Historically, this preferential tax was implemented during the Reconstruction period (after the Second World War) in order to develop transport by heavy goods vehicles, the main users of this fuel, and in the context of several major strikes at the SNCF (Ribeill, 1987). According to *Avis du Comité pour la fiscalité écologique du 18 avril 2013 : écart de taxation entre le gazole et l'essence* (Perthuis, 2013, Tome 1, p. 20-23.) : “The tax differential in favor of diesel is greater in France than in the average of the Member States of the European Union: it amounts to 17 centimes / l against 12 centimes / l on average for the EU-27 and 16 centimes / l for the EU-15. The situation within the EU-15 varies greatly from one country to another, the United Kingdom having completely eliminated the gap since January 1, 2013, while it stands at 18 centimes in Germany and at 11 cents in Italy”.

³ Source: Nicolas Hulot au gouvernement : “Je reste tant que je crois qu'on peut changer collectivement les choses”, Interview by Jean-Michel Apathie and Bruce Toussaint, 8h30-9h30, France TV Info. [Online] (accessed 8 september 2017) Available at: http://www.francetvinfo.fr/replay-radio/8h30-aphatie/nicolas-hulot-au-gouvernement-je-reste-tant-que-je-crois-qu-on-peut-changer-collectivement-les-choses_2342253.html

⁴ Nicolas Hulot resigned from his position in September 2018.

⁵ In response to the “yellow vest” movement, the government decided in December 2018 to freeze the trajectory after voting on its acceleration at the end of 2017 (in the PLF for 2018).

⁶ Loi n° 2013-1278 du 29 décembre 2013 de finances pour 2014. Parliamentarians, against the government's advice, had voted to continue carbon pricing beyond 2016 and until 2030 through two laws: Loi n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte ; Loi n° 2015-1786 du 29 décembre 2015 de finances rectificative pour 2015.

interesting context for the analysis of decision-making processes and public policy changes.

The inclusion of this measure into the 2014 Finance Bill was an act of government. It formally drew on the work of a Standing Committee on Ecological Taxation (CFE), one of whose objectives, stated in the terms of reference sent to its chairman Christian de Perthuis⁷, was to propose ecological taxation measures that would bring in “€3 billion (...) by 2016”. Those revenues should contribute to the funding of the CICE (Crédit Impôt Compétitivité Emploi – Tax Credit for Competitiveness and Employment), the flagship economic policy of the new Hollande administration⁸.

For this reason, we examined the work of the CFE in order to understand the background to the introduction of the carbon tax into the TICPE (Ollivier-Trigalo, 2017). The purpose of this article is to analyze the committee’s work and to show an interdependence between taxation policy and energy policy, which took practical form in the vote for reform of the TICPE.

In so doing, we consider the tax system as an institution, which imposes its rules and arrangements. This approach, which takes the view that groups operate within a context of collective constraint (Hay, Wincott, 1998; Friedberg, 1998) and that these constraints take the form of institutions (Hall, Taylor, 1997), highlights the long-term budgetary rules that underpin taxation. Indeed, the effect of these taxation rules can be seen in the decision to use the TICPE as an instrument, which reflected a twofold imperative: first, the requirement to generate revenues, since a tax is above all a source of revenue, in this case for the purpose of funding the CICE; and second, the requirement not to create a new tax – the TICPE already existed, and it was only its structure that changed. This budgetary doctrine (Lemoine, 2014) draws on the ideas of economists in the 1980s who argued for cuts in taxation and in the state’s tax expenditure and for a shift to taxes on consumption (Steinmo, 2003), as instantiated by the reform of the TICPE in this case.

As a result, the government’s instruction to the CFE to contribute to the funding of the CICE and to restrict the scope of its work to “ecology” was perceived by the members of the CFE as a constraint embodied in the arrangements of the tax system. First, the requirement to direct revenues to the CICE, which itself undermined the principle of universal taxation (in which tax revenues go into the general public purse), left only a residual amount to dedicate to specifically environmental measures. Indeed, it is precisely this factor that led to the subsequent protests. Next, limiting the committee’s work to the environment prevented any discussion of taxation in general, something that most of the committee members nevertheless desired and advocated. These ambiguities reflect the peculiar nature of taxation, which is both an object of public policy – for example “tax policies” guided by the idea of reducing tax levels – and an instrument of other public policies (Leroy, 2007), encapsulated in expressions like environmental tax, energy tax, ecological tax.

After a brief analysis of the CFE, its composition and working methods, we return to its handling of these different tax rules.

The Committee for Ecological Taxation: “stakeholders” and a political entrepreneur

The CFE was established on 18 December 2012 by Delphine Batho (Ecology Minister). It came into being as a result of lobbying by environmental NGOs, in particular the FNH (Foundation for Nature and Humanity) and RAC (Climate Action Network), which were pushing for environmental taxation to be added to the government agenda by advocating the creation of a dedicated body of “stakeholders”⁹. The terms of reference sent to the chairman Christian de Perthuis indicate that the committee was to formulate opinions and proposals on ecological taxation for the 2014 Finance Bill (i.e. to submit proposals by spring 2013). This made it a distinctive and dedicated entity in the politico-administrative landscape.

The committee was placed under dual political and administrative oversight, by both the Ecology and Finance Departments. Two senior civil servants from the two departments operated as secretaries to the committee. Cabinet members from the Ecology and Finance departments would also be present at meetings. The origins of the committee’s two secretaries show how reflection on ecological taxation was envisaged: Finance laws with the DLF (tax law directorate), climate and energy with the DGEC

⁷ Co-signed by the Minister of Economy and Finance (Pierre Moscovici, from 16 May 2012 to 31 March 2014) and the Minister of Ecology, Sustainable Development and Energy (Delphine Batho, from 21 June 2012 to 2 July 2013).

⁸ Adopted on 6 November 2012 by the Government.

⁹ This is the expression used in the engagement letter. We discuss what it covers in a dedicated section below.

(energy and climate directorate).

For our analysis of the results of the CFE's work, we had access to substantial written materials, since the CFE had a website on which schedules, minutes of meetings and communications were accessible during our study (2013-2015). These primary materials cast light on the issues under debate, and the terms of controversial debates. Controversies were explicitly recorded in the CFE's written output, set out in the chairman's reports (Perthuis, 2013, Tomes 1 and 2)¹⁰.

More specifically, the output that interested us related to the topic of energy¹¹. This topic was divided into two main subtopics: the introduction of a carbon component into French taxation, associated with the fight against climate change; the levelling of the tax treatment of diesel and petrol fuels, associated with the prevention of local pollution. This output was articulated in two stages¹². First, two opinions/assessments have been developed –*introduction of a carbon component into French taxation (28 March 2013)*¹³; *tax gap between diesel and petrol (18 April 2013)*¹⁴. Then, two scenarios for reform to the structure of TICPE have been proposed –introduction of a climate energy contribution, modification (levelling) of tax rates on diesel and petrol, one endorsed by the committee chairman Perthuis, the other amended by the Foundation for Nature and Humanity (FNH) (Perthuis, 2013, Tome 1). In other words, a single tax instrument was employed to tackle the two environmental issues – combating climate change and tackling local pollution.

However, the documents do not explain all the aspects of the final agreement, or the nuances in the protagonists' representations of the problem (combating climate change, tackling local pollution), of the solution (reform of the TICPE), of their collective space (in particular the CFE), and of the constraints under which they were working (Hay, Wincott, 1998; Friedberg, 1998) (influence of the Finance function, CFE's operating procedures, governmental control, etc.). These aspects could only be explored through semistructured interviews. We were therefore able to interview 21 individuals (interviews conducted between April and October 2014): the chairman, the two general secretaries, 17 members of the CFE¹⁵, and in addition the member of parliament Jean-Paul Chanteguet¹⁶.

The work of the CFE divides into two periods. The first period ran from December 2012 to April 2013: it was the period during which the CFE developed and wrote the two assessments that interest us. The second, running from May to June 2013, was the time when the CFE drew up recommendations on the reform of TICPE, with the Budget Minister, Bernard Cazeneuve¹⁷, presenting the government's decision at a plenary session in October 2013. A third period then ensued, running through to October 2014, when the CFE was closed down, in reality if not officially. Indeed, at the time of our survey

¹⁰ [Online] (accessed on December 2013) URL disabled: <http://www.comite-fiscalite-ecologique.gouv.fr/le-rapport-d-etape-r13.html>

The report (volumes 1 and 2 in one document, 408 p.) is now available for download on the Documentation française website (accessed on 21 July 2017), at: <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/134000547.pdf>

¹¹ The CFE dealt with other areas such as water and biodiversity or waste.

¹² The meeting schedule shows that one meeting (at least) per month has been held between 30 January 2013 and 13 June 2013, with plenary sessions and working group sessions combined (list and online minutes (accessed on 4 June 2015) URL disabled: <http://www.comite-fiscalite-ecologique.gouv.fr/les-reunions-r14.html>).

The topic of diesel-petrol taxation occupied 4 meetings: 2 so-called "thematic" sessions (30 January and 16 May 2013) and 2 plenary sessions (28 March and 13 June 2013). The theme of the carbon base occupied 5 of them (including 3 municipalities with diesel-fuel taxation): 3 thematic sessions (28 February, 16 May, 4 June 2013) and 2 plenary sessions (28 March and 13 June 2013).

¹³ Avis du Comité pour la fiscalité écologique du 28 mars 2013 : introduction d'une assiette carbone dans la fiscalité française (Perthuis, 2013, Tome 1, p. 14-16).

¹⁴ Avis du Comité pour la fiscalité écologique du 18 avril 2013 : écart de taxation entre le gazole et l'essence (Perthuis, 2013, Tome 1, p. 20-23).

¹⁵ Who correspond to 15 member institutions out of a total of 32. Of the remaining 17 institutions, there are 8 for which we were unable to conduct interviews and we did not solicit the last 9 for which no representatives appeared either in thematic meetings or in plenary sessions on the energy topics of interest here.

¹⁶ See the list of interviewees at the end of the article. All interviews, lasting on average one and a half hours, were recorded and transcribed in full by us.

¹⁷ Bernard Cazeneuve has been the Budget Minister from 21 June 2012 to 31 March 2014.

(particularly July 2014) the CFE was more or less at a standstill. Repeated requests by its chairman Perthuis regarding the next steps had gone unanswered, to the point that he officially resigned¹⁸ and the CFE disappeared to become the Standing Committee for the Green Economy¹⁹.

“Stakeholders”

The CFE was made up of six sections – “stakeholders”²⁰ – five of which were inspired by the Grenelle de l’environnement (a large deliberative and consultative entity on the environment that sat between July and September 2007): central government, elected officials, trade unions, companies, civil society organisations. To these were added parliamentarians, and representatives of the CESE (Economic, Social and Environmental Council)²¹.

The question of the representativeness of the CFE’s members was a matter of dissension, especially with respect to the expected output of the committee (opinions, proposals) and the method of decision-making (by vote or otherwise). This issue crystallised around the composition of the CFE and around “stakeholder” status, which was largely inherited from the Grenelle de l’environnement and from a theory of managerial action initially developed in the 1980s to cover the relations of companies with their globalised environment, subsequently imported into the management of public affairs, along with other ideas originating in management theory (Freeman, Reed, 1983; Williams, Lewis, 2008; Mercier, 2010).

Explicitly, the source of dissension was the existence of two ways of acquiring “stakeholder” status: the old way, associated with years of social and economic dialogue; and a more recent way, which aimed to bring environmental NGOs into the dialogue process. For many CFE members, the environmental NGOs overrepresented (in terms of potential votes) interests that shifted the balance in favour of environmental taxation. In consequence, the other members questioned, not to say challenged, what the NGOs represented in terms of established interests within society.

This challenge to the composition of the CFE originated in the established forms of social and economic dialogue, perceived as legitimate because of their long history. For example, the corporate and union interests had a long tradition of representation in this dialogue and possessed mandates formally defined by their respective organisations, as well as procedures for obtaining the label of representatives, and thereby confirming their representativeness. The presence of these structures in the CFE made these issues – interests represented, mandates, representativeness criteria, approvals – part of the operation of the committee, with the result that the participation of the environmental NGOs was challenged on the same grounds.

At the same time, the operation of the CFE shows that the established arrangements were subject to interpretation in the practical exercise of their implementation. The categories represented were far from uniform, as was evidenced by several practices within the committee.

The best example of this occurred during the preparation of the assessment on the levelling of tax rates for diesel and petrol. This was a measure that involved several economic sectors, with competing interests. Nothing exceptional in that. However, some of those competing interests were represented by the same organisations. For example, the employers and employees in the oil production, carmaking and road haulage sectors were jointly represented by the employer federations

¹⁸ On Monday the 13 October 2014.

¹⁹ Following the 2014 Environmental Conference, Minister Ségolène Royal replaced the CFE with a Committee for the Green Economy, set up on 9 February 2015 under the chairmanship of Dominique Bureau, senior civil servant, General Delegate of the Economic Council for Sustainable Development to the Ministry of Ecology, who also spoke about a carbon tax at the CFE’s meeting on 28 February 2013.

²⁰ Expression and categorization set out in the engagement letter to President Perthuis.

²¹ In addition to the chairman and the two general secretaries, the complete composition includes 8 parliamentarians (3 deputies, 3 senators, 2 European deputies); 1 CESE representative; 6 local authorities representatives (1 ARF-Regions, 2 ADF-Departments, 1 AdCF-Communities of municipalities, 2 AMF-Mayors). 9 Employers’ representatives (3 MEDEF, 2 CGPME, 1 UPA-Craftpeople, 2 FNSEA-Agricultural companies, 1 AFEP-Private companies); 8 Trade Unions’ representatives (1 CFTC, 2 FO, 1 CFE-CGC, 2 CGT, 2 CFDT); 15 Associations representatives (environmental and consumers) (1 Amis de la Terre, 1 ESF-Family Social Economy, 1 LPO-Protection of Birds, 1 FNE-France Nature environnement, 1 FNH, 1 Réseau Action Climat, 1 WWF-Fond mondial pour la Nature, 1 Humanité et Biodiversité, 1 CLCV-Consumption, Housing, Living environment, 1 UNAF-Families, 1 CNAJEP-Youth and Popular Education, 1 Consular Assemblies, 1 UFC Que choisir ?, 1 Social and Solidarity Economy).

and trade unions; however, the interest of the oil refineries in seeing an increase in the price of diesel (where demand exceeded supply, by contrast with petrol, where there was a supply surplus) ran totally counter to the interests of the carmakers and their production of diesel vehicles.

“On diesel/petrol, we ourselves, within MEDEF, the viewpoints were divided between the oil industry, for example, which was essentially favourable to price levelling, and the auto industry which was totally hostile to an increase in tax on diesel; as a result, MEDEF had to abstain.” (Tax Affairs Director, MEDEF, 26 September 2014).

“There was the professional sector that had given us one lot of inputs, so we had the car sector and then the refineries as well, which had asked us to intervene to ensure that there were scenarios for industrial transition and for professional transition. And, there were also questions about the renewal of the automobile stock. So, we took the side of the employees in general, the impact that this would have in terms of purchasing power.” (Union Sustainable Development Councillor, CGT, 6 June 2014).

Indeed, there were also social interests, such as vulnerable households, rural populations, car-dependent households, which were defended equally by the unions and by family or quality-of-life organisations.

This issue of representativeness was something of a bottomless pit and in the end it was Christian de Perthuis who settled it as the work of the CFE progressed, both in direct interactions with the stakeholders and in the final drafting of the opinions, the proposals and the report. This was notably because he himself thought that there was an imbalance in the interests represented and that, at the same time, no conclusions could be reached without the economic organisations. That is also why he endorsed the proposals submitted to the government.

“In these committees, it is obvious that the ecological organisations are ultra well represented; in itself, this is a good thing, but all the same it is not quite the same to have the votes of Amis de la Terre (Friends of the Earth) as to have the support of MEDEF or FNSEA. So, I said: this is what we will do; I sent my proposals to all the members of the committee; there were a few hiccups.” (Christian de Perthuis, Chairman of the Standing Committee on Ecological Taxation, 9 July 2014)

A political entrepreneur

The chairman of the committee, Christian de Perthuis, is a professor of economics at Paris-Dauphine University, a specialist in the carbon economy. For the government that recruited him, he was also and perhaps above all the man who had headed the *Trajectoires 2050* group (Perthuis et al., 2011) at Centre d'Analyse Stratégique (CAS – centre for strategic analysis)²², in which some CFE members had participated.

According to the people we interviewed, the climate-energy contribution became a subject of the CFE's work at the instigation of chairman Perthuis²³, since the government (as well as the employer representatives) recommended waiting for the revision of the European Energy Taxation Directive²⁴. The chairman's intellectual and practical interest in the principle of carbon price setting led him to get the CFE to work in addition on the levelling of tax rates between petrol and diesel as a way of partially targeting the “diffuse emission sectors” (transport, housing, agriculture), i.e. sectors that were not subject to the European quotas market.

Christian de Perthuis had all the characteristics of a political entrepreneur. Indeed, his motives and experiences demonstrated a readiness to combine several roles in political and social life: he was simultaneously an economist (academic), an expert involved in the politico-administrative world (Rocard task force, CAS group), an advocate and promoter of a specific policy (in this case using economic instruments to combat climate change), with the capacity to speak on the political and economic aspects of this public action (Nelson, 1987).

Christian de Perthuis thus contributed actively to the process of disseminating and implementing the establishment of carbon pricing, drawing resources from different places, academic or otherwise. He

²² The CAS was a service of Prime Minister, that became France Stratégie in 2013.

²³ According to the minutes of the meeting of 28 February 2013, the CFE took the initiative to take up the subject of the introduction of a tax based on a carbon base.

²⁴ Principle included in the roadmap for ecological transition (published on 20 September 2012). ([Online] (accessed 11 March 2015) on Ecology, Sustainable Development and Energy Ministry website. URL disabled: http://www.developpement-durable.gouv.fr/IMG/pdf/Feuille_de_Route_pour_la_Transition_Ecologique.pdf)

was simultaneously professorial and proactive, most recently as holder of the Chair in Climate Economics²⁵.

“It is because of my knowledge of the CO₂ quota markets. Which means that even the chair I created here, originally, it’s the knowledge, it’s the understanding of CO₂ pricing issues. On which I began with systems of quotas and continued with systems of taxes, and now I am very interested in systems for valuing environmental externalities by other mechanisms, such as energy-saving certificates or biodiversity markets. If you like, for me, that’s what’s been my huge intellectual interest, understanding how one places the value of the environment in the economy. I try to do it in a way that is not too theoretical, and not too divorced from issues of distribution because, afterwards, the issues are about distribution.” (Christian de Perthuis, Chairman of the Standing Committee on Ecological Taxation, 9 July 2014)

Christian de Perthuis was performative, as defined by Muniesa and Callon (2008), in capitalising on his legitimacy, from the preparation of the reform through to its implementation in the PLF, in bringing his politico-academic network into the committee (as guest speakers) and in employing his standard practical instruments (scenarios, impact studies, economic theories on carbon pricing).

The analysis of what happened in the CFE can be used to characterise partnership-based approaches to the development of public policies (not entirely new in France). In particular, if one takes the view that the CFE was a body in which the parties interacted and reconfigured their practices, this analysis describes the type of interaction and the type of actors involved (Beuscart, Peerbaye, 2006). Here, the CFE mixed negotiation procedures instituted because of the presence, among the stakeholders, of institutions or organisations familiar with social and economic dialogue (representatives of economic and social interests), along with newer, less established procedures, in particular the inclusion of environmental NGOs whose presence raised questions of representativeness. However, the environmental NGOs had already acquired legitimacy to intervene in public action both at international level (the problem of combating climate change is above all structured at planetary scale) (Dezalay, 2007) as well as at the parliamentary level in France (party-based ecological mobilisation remains weak in a majority system, which gives the environmental NGOs a role in promoting change in public action) (Lockwood et al., 2017). The CFE, and its link with the Grenelle de l’environnement, legitimised the inclusion of these new actors within public policy development processes. In consequence, their inclusion notably makes it possible to analyse the nature of the head-to-head between ecology and the principles and development rules of the tax system.

The head-to-head between ecology and taxation

The effect of the singularity of the CFE’s working topic – “ecological taxation” – was to disrupt the negotiation and decision-making routines not just of the established economic and social interests, but of the NGOs representing civil society. The singularity of the topic was apparent in the definitional disagreements that emerged in the work of the CFE, characterised – according to the committee members – by recurrent conflicts opposing the incentive (economic logic) and revenue (fiscal logic) aspects of carbon taxation (Godard, 2014). The CFE’s agreement and decision-making processes operated neither by negotiated agreement (except on the general principle of carbon taxation), nor by vote. In fact, the conflicts were resolved, quite unapologetically, by the committee’s chairman, Christian de Perthuis – not only did he reject voting mechanisms and impose his own definition of consensus, but he also chose to endorse the proposal to submit to the government for the reform of the TICPE, though accepting that FNH should put forward its own proposal and that each member of the CFE should be able to express their views on these two scenarios.

The work of the CFE, in essence, was characterised by a persistence of the power balance in favour of finance and tax revenue priorities, against which (a few) different actors sought to introduce environmental and ecological objectives. This recognition of the environmental and technological objectives of tax policy lent them legitimacy insofar as they aligned with the dominant framework of action (Muller, 1994; Muller, Surel, 1998), with its emphasis on the use of economic and tax instruments to manage public affairs, in particular environmental affairs (Pestre, 2016; Boudia, 2016).

We will now analyse how ecological concerns accommodated to the two main tax constraints that the members of the CFE faced.

²⁵ Created in 2010, the Chair associates the University of Paris-Dauphine with the CDC, Total, EDF and the Louis Bachelier Institute. Other socio-economic partners support research programmes. The Chair is a financial partnership between the academic and socio-economic worlds, between research and action.

A tax is a source of revenue

Taxation specialists, whether lawyers or tax experts, teach that taxation is a long-standing mechanism employed by the state to acquire revenue, which it uses to fund different public policies and expenditure within the framework of a specific relationship with taxpayers (Schmitt, 2018; Crouy-Chanel, 2018). Tax is thus an instrument that sends a signal to taxpayers: the incentive effect of taxation would appear to be intrinsic to tax (Rotillon, 2007). Whether lawyers call it “tax interventionism” (Orsoni, 1995, quoted by Bin, 2018) or “behavioural tax” (Schmitt, 2018), the use of taxation for environmental purposes is a matter of dispute among specialists, disagreement that was also present in the work of the CFE.

First, the committee members we spoke to did indeed place environmental tax in the category of taxation intended to encourage behavioural change, in this case with respect to the use of fossil fuels. And strictly speaking, the environmental component of the tax should disappear, since if the incentive works, it should lead to a reduction in the use of fossil fuels. According to our interviewees, this principle was incompatible with the pursuit of tax revenues. In reality, as some tax experts have shown, incentives and revenues (reducing negative environmental externalities and funding public expenditure) are not necessarily incompatible (Rotillon, 2007). Others see incompatibility as a constant in the environmental sphere (Baudu, 2012). However, in this case it was more the allocation of the revenues –to the funding of the CICE – which was perceived by the CFE’s members as an ambiguity, as was very specifically formulated by the general secretary of the CFE (Bercy)²⁶.

“In any case, a taxation measure is primarily a revenue... This was perhaps the permanent ambiguity of the committee. In other words for the government, there was a revenue objective, whereas Christian de Perthuis wanted to make it a tool of environmental policy.” (CFE General Secretary, Bercy - DLF, 23 September 2014)

More than an ambiguity, the need to contribute to the funding of the CICE came across to the CFE’s members as a command, with the result that most of the anticipated revenues were directed towards something other than an incentive to consume less fossil fuel. Yet for the CFE’s members, the issue of the allocation of the revenues, their targeting or recycling towards the environmental sphere, was crucial.

First of all because, according to some CFE members, targeting gives meaning, clarity and acceptability to taxation.

“For example, on the problem of vehicle fuels in particular, when we learned that there would possibly be price increases, we, as a consumer association, it’s true that one of our principles, is to avoid price increases. But that is not all there is to it: broadly, the main thing is to be able to say, at a given moment, if there is a price increase, it must be justified, it must be understandable and it must, let’s say, be explained to consumers. The reason why, at a given moment, a given decision was taken. You can’t say to people: we’re going to increase your diesel bill because there is a problem of respiratory disease, (...) and then say that we’re going to use the tax for things that don’t directly address that problem.” (CLCV, 15 May 2014)

Indeed, a range of different uses were proposed, such as subsidies for building renovations, for photovoltaic panels, for local authorities to invest in green buses, energy vouchers, support for energy transition. Above all, however, what mattered to the CFE’s members, in particular its chairman Perthuis, was the guarantee of being able to give compensation to households, also a standard principle of tax policy, especially in the energy sphere²⁷.

Two types of debate seem to have taken place within the CFE on the topic of household compensation. First, who should receive the compensation: e.g. “vulnerable” households or “low-

²⁶ Bercy is the Paris district where the Ministry of Finances is located.

²⁷ The working group on energy taxation was to draw up an assessment/opinion on household compensation. This process was somewhat offended and the project was still pending at the time of our investigation (Spring 2014). The summary of the conclusions of the meeting of 13 February 2014 was not published on the CFE website until after the summer of 2014. It was explained that the opinion should be put to the vote again at a forthcoming plenary session, taking into account the vote against by the CLCV. For the same meeting, the following has been published online *l’Avis n°7 portant diagnostic sur la compensation des ménages vis-à-vis de la fiscalité de l’énergie* (version resulting from the debate in session 13 February 2014 (consultation of the CFE website on 29 April 2015) [Online] available at: http://www2.developpement-durable.gouv.fr/IMG/pdf/Avis_portant_diagnostic_sur_la_compensation_des_menages_vis-a-vis_de_la_fiscalite_de_l_energie.pdf (accessed 31 March 2017). However, it is this issue that the “movement of yellow vests” makes crucial and updated.

income” households. However, these descriptions, though repeated by most of our interviewees, do not seem to have been fully specified. For example, the administrator of UNAF spoke of the difficulty of defining the characteristics of the “poorest” households, since income alone does not define real living costs (e.g. middle-income two-car households living in expensive accommodation, or households forced drive to work, often in a diesel vehicle). The second debate concerned the form compensation should take: e.g. payment of bills, subsidies for home renovation, income-based redistribution.

Moreover, there was a fundamental disagreement between the employer representatives and the rest of the CFE’s sectors over the primary allocation of revenues to the CICE, in other words a conflict between the interests of households and businesses. Indeed, many committee members took the view that employing the TICPE as an instrument represented a transfer of household income (through their energy use) to companies (both in the contribution to the funding of the CICE and in the partial exemption from TICPE). The companies advanced two counterarguments: first, the CICE should not be perceived as a means of offsetting carbon tax; second, in response to this principle of compensation, the companies cited studies that indicated that the carbon tax and CICE would not apply to the same sectors.

This desire to target the anticipated revenues was connected with fiscal issues around the question of hypothecated taxes which, in the environmental sphere, are extensively used (Dort, 2018) despite the fact that they are challenged by advocates of the principle of universality in taxation (Bossier, Cargill, 2018). Within the CSE, the CGT representative, a tax expert, argued for this principle.

“Generally speaking, we are very reticent about hypothecated taxes; there are many of them in the environmental sphere, as I am well aware, but we are very reticent; specifically, we think that in order to finance public measures, tax contributions must go into a common pot and we are therefore very attached to the traditional budgetary rules in which there is no hypothecation. Because there is a genuine advantage to these traditional budgetary rules, which is that this common pot can contain a contribution that reflects the contributory capacities of the different economic agents.” (Union Sustainable Development Councillor, CGT, 6 June 2014)

However, this reasoning and this principle went largely unheard, given that the governmental instruction directed a (large) proportion of the revenues to CICE. According to the members of the CFE, only a residual amount was left for redistribution.

No new tax

Another constraint, also imposed by the government, was that no new tax should be created by the CFE’s work, under a principle called “*isofiscalité*”, according to which total tax contributions should remain level. There were two facets to the way the CFE tackled this constraint: one that advocated the principle of a tax shift; the other that sought to learn from the failure of the 2009 carbon tax.

The idea of a transition from tax on capital and labour to tax on [the consumption of] scarce resources is the essence of the principle of a “shift” to ecological taxation. Many of our interviewees, in particular most of the environmental NGOs, advocated this approach, on the basis that the current tax system has a negative impact on employment or economic activity.

“Generally speaking, from the get-go, what we advocate is a shift in the traditional tax system, which weighs heavily against employment, towards a more ecological tax system.” (Head of the Mobility Taxation Project, FNH, 6 May 2014)

The reasoning seems primarily economic, and relates to the notion of a “double dividend”²⁸. This concept refers to an expected benefit for society in two stages. First of all, a first benefit, called the environmental dividend, would come from a reduction in polluting emissions caused by the increase in the price of fossil fuels by carbon taxation. A second benefit, of a macroeconomic nature, would translate into a positive impact on GDP or employment, which would result from the use of tax revenues, for example towards a reduction in taxes on capital or labor. However, there are theoretical divides between economists over the “double dividend” concept (Chiroleu-Assouline, 2001).

It was also disputed in practice, notably by the members of the CFE directly involved in the business world. The trade union and employer representatives objected to the concept on different grounds. For the employees, there was a twofold problem. First, a reduction in social contributions raises the question of alternative ways of funding social security, both by employees and by employers. Second, the trade unions (and the family organisations) opposed the idea of making the hypothetical arrival of

²⁸ Elaborated by the English economist David Pearce (1991).

the “double dividend” dependent on a tax on consumption. For the employers too, the problem was twofold. Firstly, although they could accept the idea of job creation linked with new environmental sectors, the focus of their opposition was first of all the possibility of short-term job losses (e.g. in the automobile sector). Secondly, and above all, the employers – though obviously favourable to a reduction in taxes on labour – were opposed to the principle of a shift towards ecological taxation on the grounds that it was a trick, a fake reduction in charges.

The tax shift is a dominant current at international level. It was a benchmark for action emphasised by the CFE. For example, Opinion No. 1 on the introduction of a carbon tax referred to the revision of the 2003 European Directive on the taxation of energy products and electricity²⁹. Among the arguments in the revision of the energy directive (still not completed), there is a reference³⁰ to the *Europe 2020* strategy, a paper issued by the European Commission (2010) in which the rhetoric is clear:

“For example, raising taxes on labour, as has occurred in the past at great costs to jobs, should be avoided. Rather Member States should seek to shift the tax burden from labour to energy and environmental taxes as part of a “greening” of taxation systems” (p. 29-30)³¹.

To persuade CFE members to adopt this international criterion, Christian de Perthuis invited foreign speakers, in particular a representative of the European Commission³². However, Europe was also summoned as a counterargument. For example, MEDEF or CGPME took the view that the introduction of a carbon tax could only take place at European level, since it raised questions of business competitiveness. However, the most effective international legitimisation seems to have come from the OECD. According to Christian de Perthuis, this organisation provided support from the experience of other countries, and brought an international and European perspective to the French case: teaching by example.

In its political dimension, the argument for the principle of a tax shift relates to an ideological position that, in a variety of forms, calls for a societal choice or a change in development model³³. The members of the CFE who opposed the principle from an ideological standpoint attached the label of economic liberalism to this international current.

“I think that you have clearly understood that the decision to introduce an environmental tax is part of a process that has not only been initiated by the French government following the Grenelle de l’Environnement, but is part of a policy implemented more broadly at European level, which reflects OECD recommendations in favour of a transfer of tax contributions from companies to employees and consumers. (...) The new government’s policy is consistent with the liberal policy set by the European Commission bodies in favour of corporations.” (FO 1, 13 June 2014)

Nonetheless, the work of the CFE did indeed contribute to the introduction of a climate-energy contribution, a carbon component, justified by arguments relating to the tax “shift”. The CFE’s members therefore seem to have agreed on the limits of the segmentation of the tax questions imposed by the committee’s terms of reference: the objective of the CFE was limited to ecological

²⁹ European Commission, 2011, *Smarter energy taxation for the EU: proposal for a revision of the energy taxation directive*, Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, COM(2011) 168 final, Brussels, 13.4.2011, 13 p. [Online] (accessed 15 December 2016) Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0168&from=EN>

³⁰ European Commission, 2011, *Revision of the Energy Taxation Directive – Questions and Answers*, Memo/11/238 du 13 avril 2011, Brussels. [Online] (accessed 22/01/2016) Available at: http://europa.eu/rapid/press-release_MEMO-11-238_en.htm

³¹ European Commission, 2010, *EUROPE 2020. A strategy for smart, sustainable and inclusive growth*, Communication from the Commission, COM(2010) 2020 final, Brussels, 3.3.2010, 38 p. [Online] (accessed 15 December 2016) Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>

³² Rolf Diemer (Head of Unit, DG Taxation and Customs Union, Unit C2 “Environmental and other indirect taxes”, European Commission), 2013, *Fiscalité d’énergie : Directive 2003/96/CE et la proposition de directive COM(2011) 169*, Paris, Sénat – Comité pour la fiscalité écologique, 13 juin 2013, ppt, 30 slides, in: Perthuis, 2013, Tome 2, p. 329-343. [Online] (accessed 4 February 2014) URL disabled: <http://www.developpement-durable.gouv.fr/IMG/pdf/31-4.pdf>

³³ This is also what an actor like Jean-Charles Hourcade (2015), a researcher at CIRED (Centre international de recherche sur l’environnement et le développement), who has contributed to IPCC reports or studies related to the Rocard mission, can defend.

taxation. However, according to the CFE's members, taken in isolation, ecological taxation constitutes an additional, supplementary, layer of tax. Moreover, the Sainteny Report (2011)³⁴, referred to by several members, relates in concrete terms to tax inconsistencies, inconsistencies that are particularly salient in environmental protection (Caruana, 2015; Chiroleu-Assouline, 2015).

The lessons of the failure of the 2009 tax

The failure of the 2009 carbon tax, cited by everyone we spoke to, haunted the work of the CFE, several of whom had directly experienced it, starting with Christian de Perthuis. It was a learning experience that set constraints on the potential for action (Kay, 2005).

Our interlocutors referred to the conference of experts headed by Michel Rocard³⁵, which looked at the "principles and conditions of implementation of the Climate Energy Contribution (CCE)"³⁶, which they saw as the seminal process for the work of the CFE. Moreover, according to Criqui (2009), this conference was the event that placed the emphasis on the principle of a new tax "with constant total contributions".

Of course, the history of the carbon tax did not begin with the Rocard task force. Its beginnings can be traced back to France's proposal at the 1992 Rio Conference (Criqui, 2009), which attracted no support at European level, since the European Commission preferred the quota system rather than a European tax that would require unanimous agreement (Aykut, 2012). However, the idea had been promoted and shaped by senior civil servants and state institutions in France since the early 1990s (Criqui, 2009)³⁷. In 2009, the CAS (centre for strategic analysis), in some ways the successor to the *Plan*, tasked the senior civil servant Alain Quinet with heading a group specifically dedicated to the tutelary value of carbon³⁸. According to Criqui (2009), the connection between the carbon tax that emerged from the Rocard task force and the Quinet task force, was direct, since the carbon values were the same (32€/tCO₂ in 2010 ; 100€/tCO₂ in 2030). However, in 2009³⁹ as in 2013, the government chose a lower starting value, close to that of the European quota market.

The carbon tax passed in 2009 was referred to the Constitutional Council⁴⁰. The Socialist Party (then in opposition) objected to the fact that the revenues from the tax were intended to offset the elimination of corporation tax, which would mean that the cost of the new climate energy contribution would be borne by households, while company contributions would be reduced. The arguments were heated. Moreover, the Socialist Party proposed redistributive measures and advocated the inclusion of electricity in the tax base⁴¹. The Constitutional Council took little notice of these subtleties⁴² and

³⁴ In addition, Guillaume Sainteny gave a presentation on Environmental Taxation at the plenary session on 28 March 2013.

³⁵ Michel Rocard (1930-2016) was a French senior civil servant and politician (socialist party). Notably, he was Prime minister from 1988 to 1991 (François Mitterrand president).

³⁶ *Rapport de la conférence des experts et de la table ronde sur la contribution Climat et Énergie*, présidées par Michel Rocard, ancien Premier ministre, 28 juillet 2009, Ministère de l'Écologie, de l'Énergie, du Développement Durable et de la Mer, Ministère de l'Économie, de l'Industrie et de l'Emploi, 83 p. [Online] (accessed 3 February 2014) Available at: <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/094000351.pdf>

³⁷ In particular, Yves Martin, senior civil servant (X55), President of the Inter-ministerial Group on the Greenhouse Effect in the 1990s, advisor to Michel Rocard in 2009. The author also cites the Commissariat Général du Plan and the groups headed by Marcel Boiteux, economist, mathematician, senior civil servant, who headed EDF from 1967 to 1987.

³⁸ Quinet A. (Président), 2009, *La valeur tutélaire du carbone*, Centre d'analyse stratégique, Rapports et documents, Paris : La Documentation française. [Online] (accessed 7 October 2016) Available at: <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/094000195.pdf>

³⁹ In 2009, Chantal Jouanno was Secretary of state in charge of Ecology (from the 21 January 2009 successively to Nathalie Kosciusko-Morizet and until the 13 November 2010 when Jean-Louis Borloo has left).

⁴⁰ Conseil constitutionnel, La contribution carbone (articles 7, 9 et 10), in : Commentaire de la décision n° 2009-599 DC – 29 décembre 2009 Loi de finances pour 2010, Les Cahiers du Conseil constitutionnel, Cahier n°28, pp. 20-30. [Online] (accessed 7 October 2016) Available at: http://www.conseil-constitutionnel.fr/conseil-constitutionnel/root/bank/download/2009599DCccc_599dc.pdf

⁴¹ Communiqué by Laurence Rossignol, National Secretary for Environment and Sustainable Development, 22/07/2009, [Online] (accessed 14/06/2016) Available at: <http://presse.parti-socialiste.fr/2009/07/22/taxe-carbone/#more-2602>

rejected the carbon tax because of the exemptions that it contained, which meant that it failed to obey the fiscal rule of tax equality.

It is in reference to these vagaries that the legal question became central to the CFE⁴³. For example, Christian de Perthuis was concerned about the constitutionality of his proposal for a carbon component built into the TICPE, on which he notably consulted lawyers and members of the Council of State.

According to the CFE secretary from DGEC, who had also been one of the protagonists of the Rocard task force, it was the simplicity of Perthuis' proposal – the use of the existing tax regime – that prevented the risk of its being found unconstitutional, a sort of sword of Damocles that had hung over tax legislation in the ecological sphere not just since the 2009 plan, but also since that of 2000 (extension of the TGAP). And this solution did indeed pass the legal test, in particular with regard to exemptions for companies subject to the quota market. In addition, the solution was also consistent with European requirements. In fact, Christian de Perthuis had verified this with the protagonists of similar measures abroad (Sweden, Ireland), who were part of his network of contacts.

“With regard to energy, I steered the work in two directions. The first was the need to establish a carbon component in the tax system. So, I was well aware of the failure of the Rocard Committee, and well aware of what had been done on carbon taxation in other European countries, notably in Sweden where I know very well the person in the Swedish Economics and Finance Ministry who introduced the carbon tax, twenty years ago now; and above all, there is my colleague Frank Convery at Dublin University [Professor at UCD School of Geography, Planning & Environmental Policy, Dublin, Ireland], who had done the same thing as me in Ireland three years previously and had introduced a carbon tax. (Christian de Perthuis, Chairman of the Standing Committee on Ecological Taxation, 9 July 2014)

This method of incorporating the carbon component into the TICPE was consistent with European arrangements (energy directive)⁴⁴ and with constitutional rules, while retaining measures to protect companies (exemption of companies that are subject to the quotas market or whose business demands “intensive” use of energy).

Conclusion: energy transition, tax transition, or both?

Once the CFE had completed its work, Christian de Perthuis proposed to the government that it should use a single instrument, the TICPE, to tackle the two problems – combating climate change and local pollution – through the introduction of a carbon component and the levelling of the tax on fuels. Two scenarios for the future of these two processes, developed respectively by Christian de Perthuis and FNH (see comparative table), were submitted for evaluation by the government.

In the end, for the 2014 PLF, the government chose to introduce the climate-energy contribution into the TICPE – more quickly than proposed by Christian de Perthuis, in order to meet the funding target for CICE (revenues of €3 billion in 2016)⁴⁵ – but refused to implement a specific levelling of tax rates on diesel and petrol, though the differences in the carbon rate corresponded to a sort of slow levelling.

The taxation of CO₂ emissions from fossil fuels (petrol, diesel, fuel oil, gas and coal) is a public policy measure that contains within it a potential for change, whose origins we have traced here.

The final decision shows that emerging priorities, such as tackling climate change or pollution, came into conflict with existing and practical representations and systems of action. For example, with respect to roads, members of the CFE spoke as defenders of the automobile sector or of “captive” users, who were opposed to the levelling of tax on diesel and petrol. Or else, in the tax sphere, other members advocated a principle of acceptable returns or opposed any new tax. And the government

⁴² During our meeting (May 19, 2016), Deputy Chanteguet revisited this episode in which he participated, insisting that it was not the carbon tax that, in his opinion, was targeted in principle but rather its practical implementation.

⁴³ The CFE itself took note of this 2009 path dependence through a presentation by Dominique Bureau: *Taxe carbone : le projet de 2009 revisité*, Conseil économique pour le développement durable, in a thematic session held on 28 February 2013.

⁴⁴ Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity

⁴⁵ Article 20 of PLF 2014 adopts the following values per ton of carbon (in euros): 7 (2014), 14,5 (2015), 22 (2016). The PLFR 2015 specifies the trajectory of the value of the carbon ton (in euros): 30,50 (2017), 39 (2018), 47,50 (2019). La loi Transition énergétique pour la croissance verte (Energy transition for green growth Act) extends the trajectory of the value of the carbon ton (in euros): 56 (2020), 100 (2030).

could only implement its measure by applying these pre-existing principles. In this process of “transcoding” (Lascoumes, 1996), the TICPE functioned as a relatively autonomous instrument, a “hard” lever (Lorrain, 2004) whose origins were forgotten and which it seemed natural to use: taxing consumption in order to generate tax revenues was no longer really a matter of debate. On the other hand, it was a flexible instrument: its structure could be reformed (carbon component, levelling of taxes on fuels)⁴⁶, which means that these choices could be advanced politically by changing the objectives of the instrument (combating climate change, pollution).

There were several features of the decision to reform the TICPE that are meaningful in public policy terms: one linked with the sectorisation of public action – in this case, fossil energy products, in another case a tax on consumption – in which indirect taxation is employed. Both of these orientations combined for a reinterpretation of existing politico-economic regulations. However, the balance of these reinterpreted regulations fell significantly on the side of tax policies and, moreover, the use of a tax instrument meant that many of the arguments revolved around a tax shift, what we might call a *fiscal transition*. At the same time, the concentration on fossil fuel consumption and the associated CO₂ emissions prompted discussion on the pursuit of energy frugality, bringing into play what is often referred to as *energy transition*. Admittedly, the Government first and foremost acted to find a tax revenue, the primary destination of which appears far from a real search for energy sobriety. But, reality is more complex, because, by mixing the two orientations (fiscal and energy), the instrument that has been chosen made them interdependent. For the moment, it may be considered that this twofold transition is consistent with a market-based approach or else forms part of the cycle of the managerial state (Muller, 2015). History will tell whether or not the political, economic and civil actors will take them further, and under what conditions, given that the instrument studied here is obviously not the only possible measure that can be employed in the domains of climate or taxation.

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⁴⁶ We also recall the attempts to introduce a “floating” TIPP (for example, between 2000 and 2002) to take into account the evolution of oil prices, the idea of which resurfaced in November 2018.

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List of interviewees (institution, function) in chronological order

1. CESE (Economic, Social and Environmental Council), Environmental Group Member, 29 April 2014
2. UNAF (Families), Administrator, President of the Housing - Living environment department, and Project manager Environment and Sustainable development, 30 April 2014
3. FNH (Foundation for Nature and Humanity), Head of the Mobility Taxation Project, 6 May 2014
4. WWF France, Project manager Public policies, 13 May 2014
5. CLCV (Consumption, Housing, Living environment), Lawyer, 15 May 2014
6. Les Amis de la Terre, Former President, 28 May 2014
7. AdCF- Communities of municipalities Association, Executive Officer, 2 June 2014
8. RAC-Réseau Action Climat (Climate Action Network), Project manager Climate – Transports, 3 June 2014
9. Senate, Fabienne Keller, Senator (Bas-Rhin), 4 June 2014
10. CGT, Union Sustainable Development Councillor, 6 June 2014
11. FO 1, Tax expert and FO 2, Lawyer, 13 June 2014
12. CFDT, Economist, 18 June 2014
13. CGPME, Assistant to the General secretary, 27 June 2014
14. Christian de Perthuis, Chairman of the Standing Committee on Ecological Taxation (CFE), 9 July 2014
15. Ministry of Finances-Bercy-DLF (Tax Legislation Directorate), CFE General Secretary, 23 September 2014
16. MEDEF, Tax Affairs Director, 26 September 2014
17. Ministry of Ecology, CGDD (General Mission for Sustainable Development), DGEC (General Directorate for Energy and Climate), CFE General Secretary, 7 October 2014
18. National Assembly, Jean-Paul Chanteguet, Deputy (PS-Socialist party), President of the Commission on Sustainable Development, and Valérie Lainé, Assistant, 19 May 2016

**Table. Carbon tax base and levelling of tax rates on diesel and petrol.
Comparison between the proposals of Christian de Perthuis and FNH**

	C. de Perthuis*	FNH**
<i>From January 1st 2014, the Domestic Consumption Tax on Energy Products (TICPE) had two components:</i>		
Carbon base	7 €/tCO ₂ in 2014	7 €/tCO ₂ in 2014
Classical base		
<i>In 2014, the introduction of the carbon base was amortized:</i>		
Petrol classical base	-2 c€/l	-1,6 c€/l
Diesel classical base	-1,5 c€/l	-1,9 c€/l
<i>In the cruising regime:</i>		
Annual growth of the carbon base	20 €/tCO ₂ in 2020 (9,2 in 2015 ; 11,3 in 2016 ; 13,5 in 2017 ; 15,7 in 2018 ; 17,8 in 2019)	Objective: 40 €/tCO ₂ in 2020, can be revised according to energy Slow growth at the beginning, the accelerated beyond 2016
Diesel classical base	+1 c€/l by year	+2 c€/l by year

*Source : Christian de Perthuis, *Assiette carbone et rééquilibrage de la taxation essence-diesel. Propositions de mise en œuvre sur la période 2014-2020*, CFE – Groupe de travail “changement climatique”, 4 juin 2013, in : Perthuis, 2013, *Tome 2*, p. 317-323.

“Introductory conditions and the cruising regime” (p. 319)

** Source : FNH, *Carbone et diesel. Scénario alternatif*, comité fiscalité écologique, 13 juin 2013, in : Perthuis, 2013, *Tome 2*, p. 324-328.

“Introductory conditions and the cruising regime” (p. 325)