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ACLE

**Amsterdam Center for Law & Economics
Working Paper No. 2009-09**

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(De)Centralized Law-making in the Revised EU ETS

Josephine A.W. van Zeben*

After a highly pressurized political process, the European Parliament and the Council adopted Directive 2009/29/EC, which amended Directive 2003/87/EC so as to “improve and extend the European Emissions Trading Scheme (EU ETS)” in April of 2009. The changes in the so-called third phase of the EU ETS will be substantial, altering some of the essential features of the EU ETS. This paper discusses these changes in relation to two key aspects of the EU ETS – cap-setting and allowance allocation. In relation to both aspects, changes regarding the level of governance in terms of law-making competences are foreseen. This paper analyses the desirability of these changes with reference to the economic theory of federalism in order to ascertain whether the latter provides a justification beyond the political and legal arguments provided by the European institutions and the Member States.

I. Introduction

On 17 December 2008, the European Parliament voted in favour of the political agreement reached with the Council regarding the revision of the European Union’s Emissions Trading Scheme (EU ETS).¹ The revision of the EU ETS forms part of a larger climate and renewable energy package, which is meant to translate the political commitment to reduce greenhouse gas emissions by 20% by 2020, into legislative action.² The Council adopted the complete climate and energy package on 6 April 2009, including Directive 2009/29/EC, which

amends Directive 2003/87/EC³ (Directive 2009/29/EC). Directive 2009/29/EC will put in place the foundations for the post-2012 EU ETS regime; some key elements, such as the form of the introduced auctioning scheme, the definition of carbon leakage sensitive industries and criteria for the selection of Carbon Capture and Storage projects, are still to be decided upon through comitology⁴ and other legislative procedures.⁵

During the first two phases, the EU ETS was considered to be a rather decentralized system of regulation, with some decisions placed in the hands of the European Commission but with ample discre-

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1 Full adopted texts of the European Parliament legislative resolution of 17 December 2008 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community (COM(2008)0016 – C6-0043/2008 – 2008/0013(COD)) are available on the Internet at <www.europarl.europa.eu/sides/getDoc.do?language=EN&type=TA&reference=20081217&secondRef=TOC> (last accessed on 19 May 2009).

2 For details on the European climate change program, see Commission of the European Communities, 20 20 by 2020 – Europe’s Climate Change Opportunity, 31 January 2008, COM(2008)30, available on the Internet at <ec.europa.eu/commission_barroso/

president/pdf/COM2008_030_en.pdf> (last accessed on 19 May 2009).

3 Directive 2009/29/EC amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community of 23 April 2009, OJ L140/63.

4 Comitology is the term used to describe the process where the European Commission is aided in its task to implement legislation at a European level (Article 202 EC Treaty) by committees which consist of national representatives. Since Council Decision of 17 July 2006 amending Decision 1999/468/EC laying down the procedures for the exercise of implementing powers conferred on the Commission, OJ L 200/11, there are four categories of committees: advisory; management; regulatory and regulatory with scrutiny.

5 For further information regarding the use of the respective comitology procedures in relation to Directive 2009/29/EC, supra, note 3, see Table 1 below together with a full overview of the remaining procedures and time-line for decision-making.

tion for the Member States, especially in relation to the implementation of these decisions.⁶ The post-2012 “Phase III” however, introduces several shifts in law-making power from the Member States to the European level (represented mainly by the European Commission). In this context, “law-making” refers to the process where institutions translate political goals set by democratically elected bodies into regulation containing specific legal standards.⁷ Some legal scholars have been sceptical as to the compatibility of these changes with legal principles of the European Community and consider the Commission’s grounds for further harmonization⁸ insufficient to legally justify these changes.⁹ Other writers focused on the efficiency implications of a decentralized versus a centralized system of emissions trading and found several positive effects of centralization.¹⁰ This article will approach the question of the “optimal level of law-making” from yet another angle; it will base its analysis on the economic theory of federalism, focussing on the shifts in competences regarding cap-setting and allowance allocation as distinct instances of law-making within the EU ETS. The definition of federalism for the purposes of this article will be limited to the theory concerning the economic implications of regulation on a local or

central level, excluding the legal debate as to what amounts to a federalist system in terms of institutions, division of powers and so on.¹¹

This article will thus deal with the following question: Is the centralization of certain competences and the (continued) decentralization of other competences within the EU ETS justifiable in reference to the economic theory of federalism?¹² The answer will be provided by discussing the existing economic theory of federalism and the respective advantages and disadvantages of (de)centralization (part II); applying the trade-offs of (de)centralized governance to the recent changes in the EU ETS, focussing on cap-setting and allocation of allowances (part III); and, finally, drawing several conclusions concerning the desirability¹³ of the discussed shifts in law-making competences within the EU ETS (part IV).

II. Economic Theory of Federalism

Most of the original literature regarding the economic theory of federalism stems from the United States and assumes two alternate choices in the location of law-making power: the central or the local level.¹⁴ In other words, centralized or decen-

6 On the general structure of the EU ETS during Phase I and Phase II, see Joseph Kruger, Wallace Oates and William Pizer, “Decentralization in the EU Emissions Trading Scheme and Lessons for Global Policy”, 1 *Review of Environmental Economics and Policy* (2007), 112.

7 Within this analysis, the role of enforcement will not be specifically addressed: since enforcement decisions are made through an “internal” process based on discretionary policy, generally without influence of the democratic demos, the processes of law-making and enforcement may be viewed as distinctly different. Moreover, the effect of law-making and enforcement on the attainment of certain policy aims is different. This does not preclude any effects of law-making on the functioning of the enforcer or vice versa but the criteria that will be applied to law-making in this paper cannot automatically be applied to an enforcement scenario. In relation to the EU ETS, the most important enforcement measures include the monitoring, reporting and verification responsibilities. These will remain with the Member States in Phase III as it did in Phases I and II. The expectation is that in this area there will be a significant shift towards harmonization of these processes between Member States – e.g. Article 14(4) of Directive 2009/29/EC, *supra*, note 3 – leaving less discretion for Member States.

8 The conceptual difference between harmonization and centralization must be stressed: in the context of this paper, the term “centralization” is used to describe the conferral of discretionary decision-making powers to the central legislator whereas “harmonization” refers to the conscious effort of the legislator to bring national laws in line with one another. Harmonization may also take place de facto without explicit provision by the legislator, if the author believes this has been the case it will be referred to separately from de jure harmonization.

9 Javier De Cendra de Larragán, “Too Much Harmonization? An Analysis of the Commission’s Proposal to Amend the EU ETS from the Perspective of Legal Principles”, in Michael Faure and Marjan Peeters (eds.), *Climate Change and European Emissions Trading: Lessons for Theory and Practice* (Cheltenham: Edward Elgar, 2008), 53, at 54.

10 Kruger, Oates and Pizer, “Decentralization in the EU”, *supra*, note 6, at 112.

11 As put by Inman and Rubinfeld, the question is: “Which level of government is best suited to make public policies, given that we want those policies to be democratically decided, respectful of personal rights, and economically efficient?” (emphasis added), see Robert Inman and Daniel Rubinfeld, “Federalism”, in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopaedia of Law and Economics* (Cheltenham: Edward Elgar, 2000), 611, at 662.

12 Although the author is aware that the choice of allocation of legislative power within the European Community is primarily a political one, this question will be answered without reference to the political and legal considerations underlying the Commission’s and Member States’ decision-making. Concerning the political process see De Cendra de Larragán, “Too Much Harmonization?”, *supra*, note 9, at 83.

13 “Desirability” here is considered as there being a positive net-result of the trade-offs made between the (dis)advantages of centralized and decentralized law-making.

14 In the European setting, the central level is represented by the European institutions, and the local level by the European Member States.

tralized governance. In this setting, centralized governance was considered to be one, which provides a centrally determined, uniform level of public goods – a “one-size-fits-all” solution. The original debate therefore puts much credence in the ability of decentralized governance to take account of the needs of local populations as opposed to the “blind” central regulator. It must be kept in mind that the framework currently offered by the European Community goes far beyond this simplified model.

The conditions that generally speak in favour of a centralized approach are: i) the presence of (inter-jurisdictional) externalities; ii) economies of scale and scope; iii) the race-to-the-bottom phenomenon; iv) public choice considerations. Conditions which speak in favour of a decentralized approach, on the other hand, are: i) implementation externalities of law-making; ii) heterogeneity of local preferences and conditions; iii) possibility of a race-to-the-top; iv) public choice considerations. The strong and weak points of decentralized and centralized systems are typically mirror images of one another and thus shifts from one level to another often lead to necessary trade-offs. This section will highlight these interactions and consider the influence of the environmental nature of the problem regulated by the EU ETS. As such, this section will highlight the factors that could justify the changes within the EU ETS discussed in section III.

1. Centralization

a. (Interjurisdictional) Externalities

In economics, externalities refer to the costs (or benefits) created by an activity, which do not directly impact the person performing the activity. This means that the cost (or market price) of the activity will not reflect the full costs or benefits it creates since the person performing it is either not fully aware of the externalities or does not have to bear their costs, or both. In the case of a marketable good, this will lead to either over- or underproduction of a certain good or service. The problem of externalities is especially salient regarding environmentally costly activities. Production processes that cause greenhouse gas emissions create large negative externalities that seldom manifest themselves near the place where the activity takes place.¹⁵ Especially activities creating air pollutants go beyond jurisdictional boundaries causing the costs

and benefits of certain activities to manifest themselves in different jurisdictions.

When a regulated problem crosses the borders of (local or national) competence, the decision-making power should be at a higher regulatory level, with an authority that has jurisdiction over a territory large enough to deal adequately with the problem.¹⁶ Even in case of “local” problems, where the externalities of an activity do not only manifest themselves in a different jurisdiction but also within one jurisdiction, the local regulator may still over- or under-regulate, since the problem continues to be valued incorrectly, taking account only of local fall-outs. In order for regulators to make an accurate cost-benefit analysis, the full costs and benefits of the regulated activity must be internalised. This is less likely to take place when the local regulator does not, or cannot, take account of cross-border externalities. In these cases, regulation by a central regulator has significant benefits.

b. Economies of Scale and Scope

Economies of scale may occur in terms of information gathering and distribution, expertise-building but also in terms of administrative costs. Gathering information needed in order to set efficient regulatory standards is often very costly, since it may require a high level of expertise regarding the technical specifics of the regulated activity and, in case of the EU ETS, the environmental impacts of the activity. Although this knowledge may, at times, be easier to access from a local level¹⁷, regulation on the central level usually creates certain scale advantages which means that the total cost of gathering similar information for all activities across jurisdiction will be lower when gathered on a central level rather than on many local levels independent of one another. This is especially true since this kind of information gathering leads to expertise-building within the central regulator, who can then redistribute this knowledge from a central point to lower levels of governance. In general, certain invest-

¹⁵ For the (inequitably) dispersed cause-and-effect pattern of greenhouse gas emissions and associated climate change phenomena, see Richard Tol, “The Economic Effects of Climate Change”, 23 *Journal of Economic Perspectives* (2009), 29, at 34–36.

¹⁶ Michael Faure and Goran Skogh, *The Economic Analysis of Environmental Policy and Law – An Introduction* (Cheltenham: Edward Elgar, 2003), at 317.

¹⁷ This scenario will be discussed below in part II.2.a.

ments regarding databases and other large administrative projects may only be feasible when undertaken at a central level.

Moreover, so-called “economies of scope” may occur where the interaction of a certain policy with measures in different policy areas could cause policies to reinforce, or undermine, each other. A central regulator could oversee this process and stimulate the reinforcement effect while preventing policies from cancelling each other out. For a local government, it would be nearly impossible to have this type of oversight regarding other national or supra-national policies, or in any case, far more costly. In the European setting, the awareness of policy interaction has led to environmental policy integration within other policies whenever possible in order to ensure the highest level of environmental integrity.¹⁸ Moreover, the EU ETS forms part of the European Climate action and renewable energy package¹⁹, which has combined policy on greenhouse gas emissions, renewable energy and carbon storage. This indicates a strong push towards economies of scope regarding legislation on environmental problems.

c. Race-to-the-Bottom

If there is no centrally imposed minimum standard, regulation has been known to fall victim to the

“race-to-the-bottom” phenomenon. The hypothesis is that, in order to attract foreign investment or protect local industries, communities (in case of the European Union, Member States) would be likely to enact sub-optimally lax (environmental) laws. This is especially likely when the effect of policies can be externalised to other jurisdictions as discussed above. In these cases, a centralized approach will have a preventive effect, since certain standards are protected. Moreover, a race-to-the-bottom could lead to distortions of competition due to lowered standards for national industries, something that would seriously undermine the internal market of the European Union.

At the present time, empirical testing of this hypothesis has partially discredited the formerly popular²⁰ “race-to-the-bottom” theory.²¹ In relation to environmental regulation, it has been shown that the infamous “pollution havens”²² are more likely to be created by low tax rates on capital rather than by pollution control costs (the most common form of environmental regulation), which form only a very small part of the total production costs of manufacturing industries.²³ In order to truly solve the “race-to-the-bottom” problem in all areas of society and maintain high levels of social welfare across the board, one would therefore need to federalize all regulatory and fiscal decisions, which at present is not an option within the European Union.²⁴

Although not part of traditional literature, one may also note the legislative process as it takes place at the European level involves negotiation and compromise between the Member States and as such may already represent the lowest common denominator. In this respect, race-to-the-bottom may be considered to exist also at the central level.

d. Public Choice Considerations

Public choice theory emphasises the role of interest groups within the legislative process. The position of interest groups varies depending on the level of governance; it has been argued that both the influence and effort of interest groups increase as the size of the government decreases.²⁵ In practice it has been found that public interest groups, especially also environmental groups, are large and diffuse whereas industry groups are small(er) and focused. The need to lobby at state level therefore makes it difficult for environmental interest groups to mobilize the public in several different jurisdic-

18 See extensively Nele Dhondt, *Integration of Environmental Protection into other EC Policies: Legal Theory and Practice* (Groningen: Europa Law Publishing, 2003).

19 Directive 2009/29/EC, *supra*, note 3.

20 See for instance Richard Stewart, “Environmental Regulation and International Competitiveness”, 102 *Yale Law Journal* (1993), 2039, at 2058–2059, and Daniel Esty, “Revitalizing Environmental Federalism”, 95 *Michigan Law Review* (1996), 570, at 629–638, as quoted in Gareth Porter, “Trade Competition and Pollution Standards: ‘Race to the Bottom’ or ‘Stuck at the Bottom’”, 8 *Journal of Environment & Development* (1999), 133, at 133.

21 Richard Revesz and Robert Stavins, “Environmental Law”, in A. Mitchell Polinsky and Steven Shavell (eds.) *Handbook of Law and Economics* (Elsevier, 2007).

22 On this topic see Daniel Esty and Damien Geradin (eds.), *Regulatory Competition and Economic Integration: Comparative Perspectives* (Oxford: Oxford University Press, 2001), at 282–294.

23 Revesz and Stavins, “Environmental Law”, *supra*, note 21, at 565, have argued that very low capital tax rates will often be combined with high environmental standards, which are defined by equating the willingness to pay for environmental quality with the corresponding change in wages.

24 On this see also Revesz and Stavins, “Environmental Law”, *supra*, note 21, at 568.

25 Inman and Rubinfeld, “Federalism”, *supra*, note 11, at 611.

tions.²⁶ Alternatively, it is submitted that the scale of economies functioning on a central federal level can aid the interest group.²⁷ Since industries often already function on a federal level, this advantage is relatively smaller for these groups.²⁸ Yet, the (economic) stakes involved in the EU ETS and its visibility ensure that the pressure of interest groups will guarantee a high level of involvement of the Member States in the European process, meaning that pressure on the local level will indirectly affect decisions made on the central level.

Aside for the public choice arguments regarding interest groups, regulatory capture is an important consideration regarding the optimal level of governance. Capture is a term used to describe the process whereby – due primarily to information dissymmetry or other power imbalances – the regulator, and consequently regulation, is manipulated in favour of the regulated party’s interests rather than the public interest for which the regulation was originally designed.²⁹ This is not uncommon in the area of environmental regulation where the level of expertise needed to set effective standards is often very high. Capture theory suggests that industry lobbies and other interested (regulated) parties are more likely to be able to influence the legislative process at the lower regulatory level due to the proximity of the regulator and the regulated and possible budget and expertise constraints of the local regulator. In the European setting, the applicability of this theory will also depend on the institutional and political structure of the different Member States.

2. Decentralization

a. Heterogeneity of Local Preferences and Conditions

One of the earliest, and still very influential, advocates of decentralized governance structures was Tiebout, who published his so-called “voting-with-the-feet” theory in 1956.³⁰ In his seminal article, Tiebout argues that under certain conditions³¹, it is possible to have an optimal allocation of public funds to certain goods, even if there is no real market for these good – for instance, security, environmental protection, and health.³² Moreover, due to the proximity between the voter/consumer and the local government, expenditure for local public goods also reflects preferences more accurately than when these decisions are taken on a national or central level.³³ The term “voting-with-the-feet” then refers to Tiebout’s assumption that the (silent) preferences of individuals will be made explicit through their choice to reside in, or leave, a certain community if they are (un)happy with the expenditure on certain public goods.³⁴ In other words, the heterogeneity of preference regarding the expenditure on certain issues of voters/consumer will (ideally) lead each individual to move to the community where his or her preferences are best served. Decentralized governance can thus also lead to an increase in allocative efficiency in the provision of public goods where the allocation of goods is not only efficient in terms of costs and scale effects but also in terms of allocating the goods where they are most appreciated.

26 Richard Stewart, “Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy”, 86 *Yale Law Review* (1977), 1196, at 1213–1214.

27 Functioning at federal level may also augment the free-rider problem. See Mancur Olson, *The Logic of Collective Action: Public Goods and The Theory of Groups* (United States of America: Harvard University Press, 1971), at 5–65.

28 Stewart, “Pyramids of Sacrifice?”, supra, note 26, at 1213–1214.

29 See Robert Baldwin and Martin Cave, *Understanding Regulation* (Oxford: Oxford University Press, 1999), 36.

30 Charles Tiebout, “A Pure Theory of Local Expenditures”, 64 *The Journal of Political Economy* (1956), 416, at 419.

31 These assumptions are: 1) consumer-voters are fully mobile, 2) consumer-voters have full knowledge of differences between communities, 3) there is a large number of communities to choose from, 4) no employment-related restrictions, 5) public services exhibit no external economies or diseconomies between communities, 6) for every preference pattern there is an optimal community size which is determined by the number of residents for which this bundle of preferences can be produced at the low-

est average cost, 7) communities under the optimum size will seek to attract new residents to lower average costs. See *Ibid.*, at 419.

32 Tiebout’s article was written in response to Musgrave and Samuelson’s public finance theory; see for instance Richard Musgrave, “The Voluntary Exchange Theory of Public Economy”, 53 *Quarterly Journal of Economics* (1939), 213, and Paul Samuelson, “The Pure Theory of Public Expenditures”, 4 *Review of Economics and Statistics* (1954), 387.

33 Tiebout, “A Pure Theory of Local Expenditures”, supra, note 30, at 416.

34 *Ibid.*, at 416–424. Dennis Mueller, *Public Choice III* (Cambridge: Cambridge University Press, 2003), 192 onwards discusses the effects of the height of the rental income of the individual joining an optimal size community. It is submitted that if an individual has a high enough rental income, the welfare of the existing member will always be increased, even if this individual brings the community over its optimal size. The full effects of rents in relation to voting-with-the-feet are beyond the scope of this paper but are well set out in Mueller, *Public Choice III*, infra, note 34.

The idea that different localities will have different preferences continues to be popular among American scholars³⁵ and, in case of environmental issues, is often underlined by reference to the inherently different environmental conditions in different states. One could easily expect this heterogeneity of preferences and conditions to exist in a diverse and ever-growing European Union. The effects of greenhouse gas emissions, in terms of climate change effects, are set to differ substantially in different jurisdictions. Combined with differing preferences regarding environmental quality in general, this may very well mean that the interests of the public, and thus their willingness to pay for the product of environmental protection, will differ depending on their location, something which speaks in favour of a decentralized approach.³⁶

b. Implementation Externalities of Law-Making

Aside from the externalities of activities as discussed above, one could also identify externalities of law-making itself. In terms of implementation externalities, it is important to note that the central regulator, in the case of the European Union, is not necessarily the enforcer or implementer of its own regulations. Rather, the implementation of central legislation is left to the local regulator. This distance between institutions means that the legislator does not need to internalise the costs of implementation, at times resulting in very costly legislation in terms of application. Although this may also be a problem when legislation is created locally, there is usually far less distance between the legislator and the enforcer and the accountability of both by the public is greater.³⁷

c. Race-to-the-Top

Decentralization stimulates interjurisdictional competition in terms of the quality and efficiency of services provided. When voters/consumers are fully mobile, localities will compete with each other in order to secure the “best” regulation that appeals to the most desirable constituency.³⁸ This may be considered a key advantage of decentralized law-making since there will be a continued learning-by-doing process where localities will invest in information gathering and institutional reform in order to attract desired voters/consumers. In the context of environmental legislation, there may be tensions between which groups one wants to please, the voters/consumers or voters/producers, since their interests may be conflicting. Governments will typically value social welfare in general but will also value political contributions by (industrial) interest groups.³⁹ Therefore, race-to-the-top may also result in efficient legislation from the perspective of the industry depending on the interests of the government.

d. Public Choice Considerations

Lobbying activities of interest groups at the national level requires much less organisational effort than interjurisdictional lobbying efforts at the European level. Moreover, it has been argued that people are more likely to be invested in the political process when it is “closer” to them.⁴⁰ On the other hand, capture is also more likely on a local level due to the proximity between the interest groups and the regulator.⁴¹ Also, the need to lobby at state level makes it difficult for environmental interest groups to reach a critical mass.⁴²

35 For instance, Revesz and Stavins, “Environmental Law”, *supra*, note 21, at 565.

36 This principle is also reflected in the legal and political European principle of subsidiarity, which can be found in Article 5 of the EC Treaty. In accordance to this principle, local problems should be dealt with by the authority ‘closest’ to the problem, which is very alike to the argument made by the economic theory of federalism but originates from the idea of state sovereignty rather than economic efficiency.

37 The assumption is that the higher the level of accountability, the less likely governments are to ignore the will of the majority. See Paul Seabright, “Centralized and Decentralized Regulation in the European Union”, in Peter Newman (ed.), *The New Palgrave Dictionary of Economics and the Law* (London: Macmillan Reference Limited, 1998), 214. This does not mean that there will be optimal allocation of resources. The will of the majority may not

reflect Pareto optimality. For the purposes of this paper however, we will assume that it does.

38 William Oates, *Fiscal Federalism* (New York: Harcourt, Brace, Jovanovich, 1972).

39 For a model incorporating both these interests in the EU ETS setting see Niels Anger, Christoph Böhringer and Niels Oberdorfer, “Public Interest vs. Interest Groups: Allowance Allocation in the EU Emissions Trading Scheme”, Discussion Paper 08-023, Centre for European Economic Research, available on the Internet at <ftp://ftp.zew.de/pub/zew-docs/dp/dp08023.pdf> (last accessed on 22 July 2009).

40 Inman and Rubinfeld, “Federalism”, *supra*, note 11, at 611.

41 See part II.1.d. above.

42 Esty, “Revitalizing Environmental Federalism”, *supra*, note 20, at 649–651.

3. Conclusions

The optimal level of governance not only depends on the presence of the factors discussed above⁴³ but also on the relative weight that one is willing to contribute to each of these factors. The latter is a normative question, which will be answered differently depending on the policy area at hand and the constitutional setting of the problem. Recent empirical research regarding the preference of European citizens concerning competence allocation suggests that much depends on the policy area and that there is a negative relationship between Europeanism (pro-centralized law-making) and trust in national institutions.⁴⁴ *Prima facie*, there appears to be a positive attitude towards the centralized legislation of environmental issues within the European Community.⁴⁵ In the following section, the shifts within the EU ETS will be discussed in reference to the issues mentioned above.

III. The EU ETS: A Strong Case for Centralization?

The United Nations Framework Convention on Climate Change⁴⁶ (UNFCCC) of 1992 and the later Kyoto Protocol, which established legally binding emissions reduction commitments for the parties to the UNFCCC conditional to ratification, signalled the start of the development of the EU ETS.⁴⁷ On 29 April 1998, the Member States signed the Kyoto Protocol, and after coming to a further political

agreement regarding the redistribution of the Kyoto reduction burden among the European Member States, the EU and its Member States ratified the Kyoto Protocol in 2002.⁴⁸ The so-called Burden Sharing Agreement⁴⁹ (BSA) assigns percentages to each Member State based on considerations of equity and efficiency,⁵⁰ which combined will lead to the 8% reduction obligation under the Kyoto Protocol. When the European Union was enlarged to include 12 more Member States, the Commission issued a Decision⁵¹ extending the BSA to include these new Members. During this process, the European Commission played an active role in mobilizing the, initially reluctant, Member States behind the emissions trading scheme.⁵² The Commission emphasised the certainty regarding the environmental benefits, which would result from the scheme and opportunities for cost-effective implementation;⁵³ arguments which, together with the leadership role that was left vacant by the United States, led to the present situation where the EU ETS has been, and continues to be, the key instrument in “reduc[ing] greenhouse gas emissions substantially in order to fulfil the commitments of the Community and its Member States under the Kyoto Protocol.”⁵⁴

The first “learning by doing” trading phase of the EU ETS (2005-2007) has been used to establish an administrative framework for trading, whereas the current “Kyoto Commitment” phase (2008-2012) is aimed at achieving the reduction targets set by the Kyoto Protocol. The EU ETS is a highly ambitious project and, as such, has been under close scrutiny

43 The theories mentioned above are based on models, which are unlikely to fully reflect reality. Tiebout’s voting-with-the-feet theorem assumes perfect mobility of voters/consumers, which is often far more limited; consumers seldom have perfect knowledge or set preferences (Tiebout, “A pure theory of local expenditures”, *supra*, note 25, at 423) and in case of inter-communal externalities there may be strong arguments in favour of some form of integration. See Tiebout, “A pure theory of local expenditures”, *supra*, note 30, at 423).

44 Floriana Cerniglia and Laura Pagani, “The European Union and the Member States: An Empirical Analysis of Europeans’ Preferences for Competences Allocation”, 55 *CEsifo Economic Studies* (2009) 197, at 228.

45 *Ibid.*, at 222–225.

46 Full text available on the Internet at: <unfccc.int/essential_background/items/2877.php> (last accessed on 19 May 2009).

47 See for example: Communication from the Commission, Climate Change – Towards a EU Post-Kyoto Strategy, COM(98)353, 1.

48 Council Decision concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments there under, OJ 2002 L130/1.

49 This agreement can be found in Annex II to *Ibid.*

50 Much has been written about the role of the “equity” and “efficiency” considerations leading up to the BSA. For more detail see: Per-Olov Marklund & Eva Samakovlis, “What Is Driving the EU Burden-sharing Agreement: Efficiency or Equity?”, 85 *Journal of Environmental Management* (2007), 317.

51 Commission Decision determining the respective emission levels allocated to the Community and each of its Member States under the Kyoto Protocol pursuant to Council Decision 2002/358/EC, OJ 2006 L 358/87.

52 See Environmental Commissioner Ritt Bjerregaard as quoted in Jon Skjærseth and Jørgen Wettstad, *EU Emissions Trading: Initiation, Decision-making and Implementation* (Aldershot: Ashgate, 2008), at 36.

53 *Ibid.*, at 39. The goal of cost-effectiveness is now also included in Article 1 of Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ 2003 L 275/32.

54 Case T-374/04, *Germany v Commission* [2007] ECR II-4431, at para. 124.

of environmental and economic stakeholders within (and outside of) the European Union. The disappointing end of the first phase with low carbon prices and (suspected) over-allocation in many countries led to a lot of criticism regarding the lack of environmental benefits and economic viability of the system. The following section will focus on two key changes of Phase III that have been implemented in light of the lessons of Phase I and II: the creation of a Community-wide cap in the new Article 9 and the move from grandfathering⁵⁵ to auctioning as allowance allocation mechanism. Each of these changes will be discussed in terms of positive legal change. Moreover, shifts in law-making competences and discretion will be signalled in order to depict the new system of (de)centralized governance which is created for the EU ETS. Finally, the effects of these shifts in terms of (dis)advantages as identified by the economic theory of federalism will be discussed.

1. Cap-setting

a. Phase I & II: Cap-setting through National Allocation Plans

In Phase I and II of the EU ETS, each Member State had to develop “a national plan stating the total

quantity of allowances that it intends to allocate for that period and how it proposes to allocate them” (National Allocation Plan or NAP).⁵⁶ The number of allowances available for allocation in each NAP depends on the respective Member State’s obligations as set out in the Burden Sharing Agreement.⁵⁷ National Allocation Plans only refer to those sectors set out in Annex I of Directive 2003/87/EC⁵⁸ with the only greenhouse gas covered by the EU ETS during Phase I being CO₂ – In Phase II, the scope of the EU ETS was extended to include all six greenhouse gasses included in the Kyoto Protocol.⁵⁹ Although the scope of the EU ETS has increased, it continues to be difficult to assess the likelihood of a Member State achieving its Kyoto objectives only by looking at its NAP; non-ETS sectors will also have to act and other greenhouse gases will also have to be reduced so NAPs have to be adopted with other national strategies in mind.⁶⁰ Due to this interdependency, the amount of allowances allocated through NAPs has direct relevance for all other sectors of a Member State’s economy since any emission reduction not required from the ETS sectors needs to take place in non-ETS sectors, which thus means that the reduction burden shifts to non-ETS sectors.

The National Allocation Plans are to be based on 12 criteria, set out in Annex III of the Directive, which include: allocation consistent with the proportional share which the allowances represent in comparison with sources not covered by the Directive; consistency with actual and projected progress towards fulfilling the commitments of the Member State; consistency with other Community instruments; and non-discrimination between companies and sectors.⁶¹ The criteria are the basis upon which the Commission may review the NAPs and choose to reject them if considered incompatible with (one of) these criteria.⁶² In order to provide guidance for the Member States as to the relative importance of the Annex III criteria and their interpretation, the Commission published a Communication (the Commission’s Guidelines).⁶³ Despite the fact that these Guidelines do not constitute a measure of secondary legislation as provided for in Article 248 EC, and thus have no “general” legal effect, they do bind the Commission in terms of their review discretion.⁶⁴

The tension between the Commission’s right to review and the Member States’ autonomy in composing the NAPs is one of the most important

55 The term “grandfathering” is used to describe a process by which allowances are distributed to installations on the basis of past emissions, free of charge.

56 Article 9(1), Directive 2003/87/EC, *supra*, note 53.

57 Commission Decision determining respective emission levels, *supra*, note 51.

58 These include most importantly the energy and metal industries. See Annex I of Directive 2003/87/EC, *supra*, note 53 for more detail.

59 The greenhouse gases covered by the Protocol are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride. The aggregate target is based on the carbon dioxide equivalent of each of the greenhouse gases.

60 For a full analysis of the relative role of the EU ETS in Member States’ programs to achieve their Kyoto objectives see Alyssa Gilbert, Jan-Willem Bode and Dian Philipsen, “Analysis of the National Allocation Plans for the EU Emissions Trading Scheme”, August 2004, available on the Internet at <ecofys.co.uk/uk/publications/documents/Interim_Report_NAP_Evaluation_180804.pdf> (last accessed 21 July 2009).

61 For a full overview of the criteria see Annex II of Directive 2003/87/EC, *supra*, note 53.

62 *Ibid.*, Article 9(3).

63 Communication from the Commission on guidance to assist Member States in the implementation of the criteria listed in Annex III to Directive 2003/87/EC and on the circumstances under which force major is demonstrated, COM (2003) 830.

64 *Germany v Commission*, *supra*, note 54, at para. 110.

issues of Phase I and II of the EU ETS in terms of the location of competences within the multi-level governance system of the EU ETS. In *Germany v Commission*⁶⁵, the wide discretion of the Member States in transposing Directive 2003/87/EC was confirmed. According to the Court of First Instance (CFI), the Commission did not prove that the German ex-post adjustment mechanism⁶⁶ was incompatible with criteria 5 and 10 of Annex III to Directive 2003/87/EC.⁶⁷ The mere fact that “the practice of ex-post adjustments are liable to deter operators from reducing their production volume and, therefore, their emission rates is not sufficient to call into question the adjustments’ legality in light of the directive’s objectives as a whole.”⁶⁸ This case marked an important re-setting of the boundaries between the competences of the Member States and that of the Commission in relation to the NAPs.⁶⁹

Once the Commission has approved the NAP, the Member State will issue the allowances to the

installations by means of an Article 11 allocation decision.⁷⁰ The total European ETS cap can be determined by adding up the allowances allocated by the NAPs. Many of the reviews of Phase I have focussed on the fact that the allocation by many, if not all, of the Member States was very generous, which lead to a situation of over-allocation.⁷¹ The suspected over-allocation was confirmed by the verified emissions data and caused a dramatic drop in the price of European Union Allowances (EUAs) in the last period of Phase I.⁷² Analysis of 2005-06 emissions data suggests that there has *also* been abatement of emissions during Phase I, which could be explained by decisions of affected facility managers to incorporate CO₂ prices into their production decisions.⁷³

The Proposal for a Directive amending Directive 2003/87/EC in January of 2008⁷⁴ (the Commission’s 2008 Proposal) focussed on the problem of over-allocation and stated that the over-allocation had meant that Phase I was a failure in respect to actu-

65 Ibid.

66 Germany wanted to include an ex-post adjustment mechanism in its NAP, which would allow the German government to take back allowances from installations under five different scenarios and to place them in the new entrants reserve. For the full facts of the case and the different scenarios see *Ibid.*, at para. 24–47.

67 In relation to the incompatibility with criterion 5 of Annex III, the CFI held that the arguments of the Commission were neither “factually substantiated nor legally well founded” (see *Germany v Commission*, *Ibid.*, at para. 151–164). Regarding the incompatibility with criterion 10 of Annex III, the Court applied a four-part analysis (previously applied in *Case T-251/00, Lagardere and Canal + v Commission* [2002] ECR II-4825) consisting of a literal interpretation; a historical interpretation; a contextual interpretation; and a teleological interpretation (*Germany v Commission*, *Ibid.*, at para. 92–150).

68 *Germany v Commission*, *supra*, note 54, at para. 148.

69 Other issues which have come to the fore in the developing jurisprudence of the European Court of Justice regarding the EU ETS are the amendments to NAPs generally: importantly, *Case T-178/05, United Kingdom v Commission* [2005] ECR II-4807. In this case, the Court of First Instance had to decide whether the Commission was entitled to reject amendments to a National Allocation Plan, if these amendments had not previously been included in the provisional NAP that was submitted by a Member State earlier. In order to do so, the Court felt compelled to examine the exact roles and powers of the Commission and the Member States under the Directive. The Court found that in reference to amendments to NAPs, the Commission cannot restrict a Member States’ right to propose amendments but that any proposed amendment must be adopted by the Commission in order to become effective. The Commission may test the amendments in light of the criteria of Annex III of the Directive and Article 10 of the EC Treaty. Also: public consultation duties (in *United Kingdom v Commission*, *infra*, note 69, the Court confirmed that there were two mandatory rounds of public consultation: one before the NAP was completed and one after the Commission has authorized the allocation but before the national decision of allocation); access to the court for companies which form part of

the EU ETS (the current case law indicates that only Member States can appeal against a Commission decision regarding NAPs. Companies are not considered to be “individually concerned”. See for instance: *Case T-387/04, EnBW Energie Baden-Württemberg v Commission* [2007] ECR II-1195 and *Case T-27/07, U.S. Steel Kosice v Commission* [2007] ECR II-128* (Appeal: C-6/08)).

70 Article 11, Directive 2003/87/EC, *supra* note 53.

71 See for instance A. Denny Ellerman and Barbara Buchner, “The European Union Emissions Trading Scheme: Origins, Allocation, and Early Results”, 1 *Review of Environmental Economics and Policy* (2007), 66. Ellerman and Buchner use the level of 2005 Business as Usual (BAU) emissions as a benchmark; for an analysis using economic efficiency, proportionality and the polluter pays principle as benchmarks in order to test cap stringency, see Stefano Clò, “Assessing the European Emissions Trading Scheme Effectiveness in Reaching the Kyoto Target: An Analysis of the Cap Stringency”, *Rotterdam Institute of Law and Economics Working Paper Series*, No. 2008/14.

72 For more information regarding the price developments within the EU ETS, see the report by Point Carbon, *Carbon Market Europe*, 25 May 2007.

73 A. Denny Ellerman and Barbara Buchner, “Over-allocation or Abatement? A Preliminary Analysis of the EU Emissions Trading Scheme based on the 2006 Emissions Data”, 41 *Environmental and Resource Economics* (2008), 457, at 474.

74 Proposal for a Directive COM(2008)30, *supra*, note 1. This Proposal was published as part of the Article 30 review process. Article 30 sets out the review process of the EU ETS, including timelines and report dates. Specifically, Article 30(2) stipulates that review of the ETS should culminate in a report drafted by the Commission and be submitted to the European Council and Parliament by 30 June 2006. Together with this proposal an impact assessment was published. See Accompanying document to the Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the EU greenhouse gas emission allowance trading system, *Impact Assessment*, COM(2008) 16.

al emissions reductions, despite its general success in creating an emission allowances market.⁷⁵ Over-allocation is a politically sensitive issue. The Commission's official position regarding its cause was that the limited availability of verified data made it difficult to estimate the number of allowances correctly.⁷⁶ However, analyses of the approved NAPs for Phase II⁷⁷ indicate that, based on several models of emission projections, these NAPs would also result in an excess of allowances that would lead to a low carbon price and low investment in low-carbon technology⁷⁸, despite improved information availability. Moreover, the continued reliance on historic emission data for the allocation of allowances in Phase II was likely to create perverse incentives for the private sector, since companies would receive more allowances if they have high emissions in the past.⁷⁹ Already in 2006, the Commission recognised these dangers and stated that many of the NAPs fell short of setting standards that would ensure compliance with the Kyoto goals.⁸⁰ Moreover, despite the Commission's right to review the NAPs, much divergence between the

different national approaches remained. At the time of writing, data is available regarding verified and surrendered emissions of 2008, the first year of Phase II.⁸¹ Due to the very recent publication of the 2008 data⁸², there have not yet been any qualitative analyses regarding cap-stringency and efficiency as there have been in relation to Phase I results. It remains to be seen whether the approved NAPs will have been able to induce scarcity within the market or whether national interests led to lower cap stringency.

b. Phase III: A Community-wide Cap

Directive 2009/29/EC therefore replaces the "old" Article 9 with a new article, which stipulates that, from 2013 onwards, a Community-wide quantity of allowances will be issued every year, decreasing by a linear factor of 1,74% compared to the average annual total quantity issued by Member States in their NAPs for the period 2008 to 2012.⁸³ For installations which are unilaterally included by Member States as an addition to the European scheme under article 24(1) of Directive 2003/87/EC and installations carrying out activities under Annex I which are only included from 2013 onwards, the Member States are under the obligation to submit additional data before 30 April 2010.⁸⁴ If this linear decrease in emissions were to be achieved, this would mean a overall reduction of at least 20% below 1990 levels by 2020 – the goal set in the Community's climate change package "20 20 by 2020"⁸⁵. The Commission stated that this shift was necessary since the NAP system, despite the fact that the Commission tested the NAPs with the Annex III criteria, does not guarantee the achievement of emissions reduction targets, nor minimize overall costs of reduction.⁸⁶ Moreover, the overall predictability of the system would be increased through harmonization.⁸⁷

c. Changes in Governance in Light of the Economic theory of Federalism

i. Externalities

Interjurisdictional Externalities

During Phase I and II, the distinction between ETS and non-ETS sectors and the different regimes applicable to them⁸⁸ were able to cause externality problems both within Member States and between

75 Proposal for a Directive COM(2008)30, *supra*, note 1, at 2.

76 *Ibid.*, at 2.

77 See primarily: Neuhoﬀ et al., "Emission Projections 2008–2012 versus National Allocation Plans II", 6 *Climate Policy* (2006), 395; Neuhoﬀ (et al.), "Implications of Announced Phase II National Allocation Plans for the EU ETS", 6 *Climate Policy* (2006), 411.

78 Neuhoﬀ (et al.), "Emission Projections 2008–2012", *Ibid.*, at 403.

79 Neuhoﬀ (et al.), "Implications of Announced Phase II National Allocation Plans", *supra*, note 77, at 420–421.

80 Communication from the Commission on the assessment of national allocation plans for the allocation of greenhouse gas emission allowances in the second period of the EU Emissions Trading Scheme, COM(2006)725.

81 Data file downloads available on the Internet at <ec.europa.eu/environment/climat/emission/citl_en.htm> (last accessed on 19 May 2009), general information regarding the Community Independent Transaction Log available on the Internet at <ec.europa.eu/environment/ets> (last accessed on 19 May 2009).

82 Data regarding 2008 has been published on the 24 April 2009 on the websites, *supra*, note 81.

83 See extensively Article 9 of Directive 2009/29/EC, *supra*, note 3.

84 *Ibid.*, Article 9a (1) and (2).

85 Commission, 20 20 by 2020, *supra*, note 2, also sets goals for the non-ETS sectors, stipulating that the emissions in these sectors should be reduced with 10% compared to 2005 levels. The percentage regarding the ETS sectors may increase depending on the outcome of the ongoing international climate change negotiations, see also preamble 26 of Directive 2009/29/EC, *supra*, note 3.

86 Proposal for a Directive COM(2008)30, *supra*, note 1.

87 *Ibid.*

88 See section III.1.a. above for further detail on the distinction between ETS and non-ETS sectors.

Member States. The marginal abatement costs⁸⁹ (MAC) are typically higher for non-ETS sectors, which is part of the reason why these sectors were excluded from the ETS system in the first place. This means that if a Member State chooses to shelter its ETS sectors from the competitive effects of the EU ETS, by for instance over-allocation, the burden of reduction is shifted to the non-ETS sectors which leads to higher overall costs of reduction for society. Moreover, the competitive position of these national industries relative to other national sectors within the European Community would become stronger, which leads to a suboptimal functioning of the internal market. This competitive position would not only be strengthened by the fact that these industries would not have to abate as much as others but in extreme cases also due to the fact that the excess of allowances would be sold, making an industry net sellers of emissions on the European market.⁹⁰ In the end, the chain of externalizing the costs of the EU ETS would find its way to the final consumer who would have to pay for higher marginal abatement costs in the non-ETS sectors and more expensive products due to weaker competition conditions in their region. The fact that law-making competences in this area have moved to the central level appears to be a positive change in this regard since the European Community has no incentives to protect individual national industries from each other.⁹¹

The centralized cap is also important regarding the *race-to-the-bottom* factor. Those countries that seek to protect their industry by setting sub-optimal reduction standards for the ETS sectors may do so in reaction to, or in anticipation of, other countries' policies, which have done the same. A central cap may prevent this behaviour. On the other hand, there are also those countries (and industries) which have actively lobbied for strict targets due to the competitive advantage this could give certain industries in the long-term. If industries decide to innovate in order to reduce emissions, their competitive position will be strengthened once the price of fossil fuels and EUAs goes up. In this respect, many European Member States, and the European Union as a whole, have been engaged in a *race-to-the-top* in terms of technological innovation. However, though this is true in theory, there has been much discussion as to whether the EU ETS has been able to create enough incentives to lead to actual innovation.⁹²

Externalities of Law-making

The implementation of Directive 2003/87/EC regarding the NAPs shifted a great deal of costs onto the Member States. On the other hand, the Commission did review all NAPs in order to oversee the project, which meant that certain costs remained with the Commission. By removing the NAPs from the implementation phase of the EU ETS, a large amount of the costs have been removed for the Member States.⁹³

ii. Economies of Scale and Scope

The Commission undoubtedly has the highest level of expertise regarding the general system of the EU ETS. However, the individual Member States have more specific knowledge and experience with their respective national situations. It will be costly for the Commission to absorb this knowledge and to function as an overarching expert for the entire Community under the existing budget constraint. Arguably, country specific information is no longer needed for the 2013-2020 period, since the linear factor does not require any decision-making during this period. That said, this linear factor and the cap itself are based on NAPs of 2008-2012, which were

89 The marginal abatement costs are the costs of preventing or reducing the polluting effect of a product or an activity per unit produced or activity performed. These costs can differ substantially per activity, per greenhouse gas and per production method. It is considered economically efficient for the abatement to take place at minimum cost, which means that those sectors that can reduce most cheaply should do so before other more cost-intensive actions are taken.

90 Criterion five of Annex III did allow the Commission to reject NAPs in breach of Articles 87 and 88 EC on State aid but the information necessary to determine such a breach may have been out of reach of the Commission, letting less manifest breaches go unnoticed.

91 The move from NAPs to a central cap also affects the micro-level allocation to installations as set out in the NAPs. This loss of law-making power on the side of the Member States is closely connected to the fact that grandfathering will be replaced by auctioning, which will be discussed in the section III. 2.a. and c.

92 Volker Hoffmann, "EU ETS and Investment Decisions: The Case of the German Electricity Industry", 25 *European Management Journal* (2007), 464, and Joachim Schleich and Regina Betz, "Incentives for Energy Efficiency and Innovation in the European Emission Trading Scheme", 2005, available on the Internet at <www.ceem.unsw.edu.au/content/documents/BetzSchleich.pdf> (last accessed on 21 July 2009).

93 One could argue that the costs of composing NAPs have been replaced by the costs of the auctioning system. As to the exact magnitude of the costs involved in both processes, this will vary per Member State when considering the NAPs and depend on the yet to be adopted Regulation regarding auctioning. This issue will be discussed in more detail in section III.2.b.

composed completely of country specific information. Additionally, this means that the projected marginal abatement costs may be higher or lower for certain sectors for the post-2012 period, which would dictate a different division than the one made for 2008-2012 due to the *heterogeneity of (local) industrial conditions*.

In terms of economies of scope, it appears likely that the Commission will be more equipped to oversee the integration and interaction of the EU ETS with other policies, be they environmental or general. Also, the ETS policies will necessarily interact with other national non-ETS measures, which means that although cap setting has become centralized, one cannot speak of a completely centralized approach; the Member States' non-ETS programs remain very relevant. All this assumes a high level of communication⁹⁴ between the different Directorates General (DGs) and the Commission and the Member States – again a potentially costly activity within the institutional setting of the Commission. Due to the shifts in law-making power, the Commission now has additional tasks in terms of information collection and policy integration, which require a corresponding expansion of the budget. If not, the potential economies of scale and scope of this change will be lost due to the budget constraint of the Commission.

iii. Public Choice Considerations

Prima facie, the centralized cap appears to leave less room for interest groups to be involved in the legislative process. The NAP process had two public consultation rounds, which provided clear moments for involvement and let the NAPs reflect, to a certain degree, possible *heterogeneity of preferences*. On the other hand, many international envi-

ronmental interest groups have a large team of experts which are composing authoritative reports on many aspects of the EU ETS.⁹⁵ Moreover, empirical research done on the influence of industrial interest groups indicates that large carbon emitters, represented by powerful interest groups, have received higher levels of emission allowances, indicating a direct relation between lobby pressure and allowance allocation.⁹⁶ As to any measurable effects of lobbying, also by environmental groups, on cap-setting decisions, specific studies are yet to be undertaken.

2. Allocation of Allowances

a. Phase I & II: Grandfathering

In accordance with articles 10 and 11 of Directive 2003/87/EC, the Member States allocated at least 95% (Phase I) or 90% (Phase II) free of charge; a practice also known as “grandfathering”. Grandfathering has been widely criticized on account of running contrary to the polluter-pays-principle, for providing firms with windfall profits and for failing to give the right incentives to industries to cut down in emissions.⁹⁷ That said, the political reality would have made it nearly impossible to introduce emissions trading within the European Union without initial grandfathering. Allocation criteria commonly used by Member States included the “Business as Usual” (BAU) criterion, historic emissions, projected sector growth or a combination.⁹⁸ The popularity of “grandfathering” with the industry persists and the legislative process for Phase III is under a large amount of pressure to maintain free allocation policies for so-called “carbon leakage sensitive” industries.⁹⁹

94 On the topic (the role of) the problem of communication regarding decision-making within institutions, see, for instance, Raaj Sah and Joseph Stiglitz, “The Architecture of Economic Systems: Hierarchies and Polyarchies”, 76 *The American Economic Review* (1986), 716–727.

95 See, for instance, Anna Pearson and Bryony Worthington, *ETS S.O.S: Why the Flagship “EU Emissions Trading Scheme” Needs Rescuing* (2009), available on the Internet at <www.sandbag.org.uk/node/172> (last accessed on 21 July 2009).

96 Anger, Böhringer and Oberndorfer, “Public Interest vs. Interest Groups”, *supra*, note 39.

97 See, for instance: Jonathan Nash, “Too Much Market? Conflicts between Tradable Pollution Allowances and the ‘Polluter Pays’ Principle”, 24 *Harvard Environmental Law Review* (2000), 465.

For a critique of this paper and other literature on the polluter-pays-principle, see Edwin Woerdman, Alessandra Arcuri and Stefano Cló, “Emissions Trading and the Polluter-Pays Principle: Do Polluters Pay under Grandfathering?”, 25 *International Review of Law and Economics* (2008), 565.

98 The Commission could see whether the allocation criteria applied Member States were in line with the Annex III criteria but could only reject the NAP as a whole. See above section II.1.a.

99 Carbon leakage occurs when companies relocate to other countries which have a less strict environmental regime than the one where they were originally located. Those industries that are “sensitive” to this problem are those that have low relocation costs and are not very dependent on local expertise or resources. See Article 10a (12) of Directive 2009/29/EC, *supra*, note 3.

b. Phase III: Auctioning

In the post-2012 model, auctioning replaces grandfathering as the primary method of allowance allocation.¹⁰⁰ Nevertheless, due to political considerations, the move to auctioning remains incomplete; it will only be in 2027 that full auctioning will be achieved for the non-carbon sensitive areas.¹⁰¹ The amount of allowances, which are to be allocated per Member State, be it by means of auctioning or free allocation, depends on the division of the centralized cap set by the Commission. This division is based on two seemingly contradictory policies: first of all, differentiation between ETS sectors in different Member States was considered unacceptable since this could lead to distortion of the internal market and lessened economic efficiency.¹⁰² Secondly, in light of the Community's solidarity principles it would also be unacceptable to allow the so-called "low GDP per capita" Member States to be affected inequitably by the introduction of auctioning.¹⁰³ These policy aims led to the decision to subdivide the total Community wide number of allowances into three parts¹⁰⁴: 88% of the total quantity of allowances is to be divided among the Member States in shares identical to the share of verified emissions under the ETS for 2005, or the average of the period 2005-2007; 10% of the total quantity will be distributed among Member States for the purpose of solidarity and growth (the low GDP per capita Member States)¹⁰⁵; and 2% of the total quantity will be distributed among Member States whose greenhouse gas emissions in 2005 were at least 20% below their respective Kyoto levels¹⁰⁶ (the so-called "Kyoto bonus").¹⁰⁷ Consequently, it will be the responsibility of the Member States

to auction the allowances allocated to them under Article 10(2) of Directive 2009/29/EC.

The rules regarding auctioning will be harmonized by a regulation that will be published in June 2010. Until that time many uncertainties regarding the future auctioning system remain. Guidance within the Directive itself is limited to the statement that auctions are to be conducted in an "open, transparent, harmonized and non-discriminatory manner"¹⁰⁸, will be open to participants of all nationalities – also from outside the European Community¹⁰⁹ – and small emitters must be guaranteed access¹¹⁰. Additionally, auctions need to be cost-efficient and the same information must be given to all participants.¹¹¹ Provided that these principles are respected, the regulation will probably allow Member States a high level of autonomy regarding the detailed design of the auctions. Member States could, for instance, decide to hold auctions together with other Member States rather than hold purely national auctions or decide to have several auctions for different buyer groups at different times.

The new auctioning system will result in substantial revenues for the individual Member States. The question as to what should happen with these revenues is a politically sensitive issue, both within the Member States and between the Member States and the Commission. The Directive stipulates that 50% of the revenues made by auctioning the allowances of the 88% share referred to in article 10(2)(a) and the total amount of revenues made by auctioning the "solidarity" ten percent stipulated in article 10(2)(b), *should* be spent on the reduction of greenhouse gas emissions, development of renewable energy, avoidance of forestation, carbon cap-

100 The Commission motivated its decision to move to auctioning by stating that "auctioning best ensures the efficiency, transparency and simplicity of the system and creates the greatest incentive for investments in a low carbon economy. It best complies with the 'polluter pays principle' and avoids giving windfall profits to certain sectors". Memo/08/796, available on the Internet at <europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/796&format=HTML&aged=0&language=EN&guiLanguage=en> (last visited 21 July 2009).

101 "The level of auctioning of allowances for non-exposed industry will increase in a linear manner as proposed by the Commission, but rather than reaching 100% by 2020 it will reach 70%, with a view to reaching 100% by 2027", *Ibid.*

102 Proposal for a Directive COM (2008)30, *supra*, note 1, at preamble 17.

103 The Commission used several models to graph the different (auctioning) scenarios and consider the impacts on the different

countries, see Impact Assessment, COM(2008)16, *supra*, note 74, at 32–70. For the GDP data used for the purposes of revision of Directive 2003/87/EC, see Impact Assessment, COM(2008) 16, *infra*, note 103, at 42–45.

104 See Article 10(2) of Proposal for a Directive, COM(2008)30, *supra*, note 1.

105 The division between the low GDP Member States can be found in *ibid.*, Annex IIa.

106 This distribution can be found in *ibid.*, Annex IIb.

107 The division of the total number of allowances can be found in *ibid.*, Article 10.

108 Directive 2009/29/EC, *supra*, note 3, Article 10(4).

109 *Ibid.*, Article 10(4)(a).

110 *Ibid.*, Article 10(4)(d).

111 *Ibid.*, Article 10(4)(b) and (c).

ture, low emission public transport, financial support of low and middle income households and the administrative costs of the EU ETS.¹¹² This provision is not legally binding for the Member States; the use of the words “should be” makes it clear that it is a non-legally binding suggestion, which the Commission will not be able to enforce. That said, Article 10(3) also states that Member States “shall be deemed to have fulfilled the[se] provisions [...] if they have in place and implemented fiscal or financial support policies[...]. Member States shall inform the Commission as to the use of revenues and actions taken pursuant to this paragraph in their reports”.¹¹³ The obligations to report is real and the words “shall be deemed to have fulfilled” suggests that there is a more binding character to Article 10(3) than one would *prima facie* expect. The correct interpretation of these duties will only become clear after the Directive has come into force. The obligation to report may be interpreted as part of the European Parliament’s policy towards greater transparency rather than a legal obligation to adhere to the mentioned subdivision of revenues.

c. Changes in Governance in Light of the Economic Theory of Federalism

i. Externalities

*Interjurisdictional Externalities*¹¹⁴

In Phase I and II of the EU ETS, allowances did not have any monetary value for the Member States. Unlike for the industries, there were no opportunity costs involved in the allocation of allowances, since their allocation¹¹⁵ would not result in any monetary gains for the governments. The introduction of auctioning creates a price for allowances, also for the Member States. This change will have important implications regarding the allocative behaviour of Member States. Whereas before, the only exter-

nality caused by over-allocation would be that of imposing an additional burden on non-ETS sectors and indirectly other Member States’ industries and consumers, the Member State would now be harming itself in failing to obtain the optimal auctioning revenues. In other words, the costs of over-allocation to industry, consumers and competition, which could previously be externalised to a certain extent, has now been internalised and is born by the Member State. This also means that whereas previously, the Member States could over-allocate to certain installations on a micro-level, the costs of which would be externalised to another sector or installation, this prerogative has been removed by the auctioning system, together with the incentive to over-allocate in terms of exportable costs. That said, the opportunity to over-allocate had already been diminished by the shift in overall cap-setting power. In respect of the revenues of auctioning, it is not unthinkable that Member States may use some of these revenues to soften the effects of the introduction of auctioning for their national industries and consumers. Of course any such measures will have to be able to withstand the test of Articles 87 and 88 EC.¹¹⁶ Depending on the specific situation such a redistribution of auctioning profits need not be negative where industries or consumers with certain budget constraints feel the effects of internalisation of costs disproportionately.

Externalities of Law-making

The costs of creating individual (or shared) auctioning systems will be high for the Member States. Although this suggests that the European legislator has thus succeeded in externalising the implementation costs of the auctioning provisions, the revenues of the auctions will also go to the Member States. Since the Member States are also actively involved in law-making when it takes place at the central level¹¹⁷, the (general) cost and benefits of

112 For details, see *Ibid.*, Article 10(3).

113 *Ibid.*

114 In the move from free allocation to auctioning, the changes regarding interjurisdictional externalities are in part attributable to the fact that allowances are no longer “free” rather than the level at which regulation regarding this issue is made. However, the fact that the competences in the new allowance allocation system are distributed over the two levels of governance (European and Member State-level) also influences the way it will function which makes this a relevant change in light of the economic theory of federalism.

115 Allocation may be considered the public sector equivalent of selling allowances.

116 Articles 87 and 88 EC concern the EC provisions on state aid and its relation with anti-competitive behaviour. In principle any aid granted by a Member State which (threatens to) distort(s) competition within the internal market is incompatible with the Treaty provision on the common market. There are certain exceptions to this rule (found in Article 87(2) and (3) EC) and all aid systems of the Member States will be subject to constant control by the Commission, in cooperation with the Member States (Article 88(1) EC).

117 In this regard, the distinction between the central and the “local” level is not absolute. The Member States are the actors which compose the central level, the main difference being that legislation on the central level must be a result of a consensus between various national interests.

instituting an auctioning system in terms of implementation will have been considered.

ii. Race-to-the-bottom & Race-to-the-top

Unlike with the cap-setting element of the EU ETS, the introduction of auctioning does not signify a complete shift towards centralization in terms of legislation. The implementation aspects of the auctioning system remains in the hands of the Member States, which means that they will be able to take their (national) policies into consideration when designing the auctions to certain limit. Depending on the detail included in the forthcoming regulation on auctioning, Member States will be able to determine the shape and form of their auctions and as such make it easier or harder for their national industries to compete in them. For those States with relatively weak national industries, one may expect a more closed format of auctions whereas those with strong national industries may be motivated to have very open auctions in order to stimulate competition and drive up prices. On the one hand, this would represent a *race-to-the bottom* since the true (market) value of EUAs would not be achieved. On the other hand, the fact that auctions are open to industries and actors from any jurisdiction is likely to create a *race-to-the-top* scenario where Member States will try to create an auctioning climate which will attract important players.¹¹⁸ Overall, this system appears to create an optimal combination of local expertise (-building) and mutual learning for the Member States while possible market distortion actions may be kept to a minimum due to the centralized decision-making on overall allowances quantities and minimum auction standards.

iii. Economies of Scale and Scope

The economies of scale regarding auctioning are limited, aside for related benefits such as expert building, mutual learning and information benefits regarding the auctioning system as described in reference to race-to-the-bottom and race-to-the-top aspects. Since the author believes that these mutual learning benefits would outweigh any benefits that could be achieved from full centralization of the auctioning system, this is not necessarily a negative. The centralization of decisions regarding free allocation and the designation of carbon leakage sensitive industries, carbon capture and storage and the auctioning guidelines will create certain econo-

mies of scope, since this will allow for further integration of deeply interrelated policy areas. The designation of carbon leakage sensitive industries determines the number of free allowances which may then be auctioned. Also, the allowances allocated to carbon capture and storage projects will affect the overall auctioning total. Therefore, the fact that the Commission will be involved in the decision-making in all these areas will ensure that decisions made in one of these areas will not undermine the design of, for instance, the auctioning system.

iv. Heterogeneity of Preference and Local Conditions

A possible negative is the loss of discretion regarding the micro-allocation decision for specific installations. At times there can be legitimate economic or environmental reasons to allocate (more) to certain installations depending on local information. The high dependency on the market to allocate these rights optimally assumes that the market functions with low transactions costs and otherwise ideal circumstances such as full information. This is unlikely to be the case in the young EU ETS market. Moreover, the decisions as to what constitutes a “carbon leakage sensitive” industry will also be costly to take on the central level due to a continuing need for local information and the political interests which may make the process very complex in terms of negotiation.

v. Public Choice arguments

When allowance allocation took place through grandfathering, the risk of capture by the industries was considerable. Historic emissions data – information on which benchmarks were based – was, especially before 2005, in the hands of the regulated industries.¹¹⁹ This is likely to have contributed significantly to the over-allocation during Phase I. With the auctioning system, this risk has dimin-

¹¹⁸ It may of course depend on the Member States what they consider to be “desirable parties” in their respective auctions. These players need not be the biggest European players in terms of market shares or revenues. For instance, Member States with relatively small numbers of allowances to auction could also specialise in attracting small to medium businesses. In this respect, the local preferences for auctions are local only to certain types of businesses or size of businesses.

¹¹⁹ This has also been confirmed for the German industry in Anger, Böhringer and Oberndorfer, “Public Interest vs. Interest Groups”, *supra*, note 39.

ished considerably. That said, the presence of large energy companies in the auctions has created a new risk in the form of market domination or distortion. Also, industry representatives will try to influence the auctioning design of the Member States in order to guarantee prime access and information advantages. Since Member States have a vested interest in attracting as many (large) players to their auctions as possible, the risk of capture continues in this area. The position of environmental interest groups will depend on the relative size and resources. It is true that there are certain environmental interest groups such as WWF that have been able to commission or publish studies on several elements of the EU ETS, such as auctioning design¹²⁰ or the general societal impacts of emissions trading, and that some of these large environmental non governmental organisations (NGO) employ economic experts. This will be different for smaller local NGOs or interest groups which cannot rely on an international membership support and related funding. Alongside the rules on auctioning, the harmonized rules on free allocation will be put into place, which is likely to result in much lobbying pressure from both groups also.

IV. Conclusions

Those sceptical of increased European competences regarding the EU ETS have been quick to portray the revised EU ETS Directive as a sudden and complete move towards centralization.¹²¹ There are indeed areas, especially in relation to cap-setting, where the European Commission has gained in influence. Yet, in relation to the allocation of allowances, the Member States retain a large amount of discretion due to the auctioning system which will come into being after 2012 – of course provisional to the eventual design of the auctioning regulation. Therefore, this paper has tried to show that the reality is much more nuanced and that changes in cap-setting and allowance allocation must be evaluated in their own right rather than referring to the whole of the post-2012 ETS as a “centralized system”.

The centralization of the cap-setting decision and the introduction of auctioning, overall, contributes to an improved functioning of the EU ETS in terms of internalizing externalities, achieving higher economies of scope and scale and reducing capture problems. This may be at the expense of certain expertise available at the local level – although this could be recycled to the central level – and the accessibility of the process for interest groups¹²². Does this mean that these changes made in the EU ETS for the Third Phase are justifiable under the economic theory of federalism? The author finds that in order for the economic theory of federalism to present an “external”¹²³ justification for the changes in multi-level EU ETS governance, the benefits created by the new division of competences should outweigh those benefits lost by the changes. Moreover, the optimal level of governance depends on the relative weight one is willing to attribute to each of the factors described above.

An optimally functioning EU ETS would institute measures resulting in the reduction of greenhouse gasses to the point where the threat to our climate is stabilised¹²⁴. These measures would be taken primarily in places with lowest possible MACs in a way that the burden is shared equitably across society¹²⁵. The author submits that if this is the EU ETS’s goal, the net result of the shifts in law-making competences regarding the EU ETS may be considered positive. The benefits created in terms of externalities, economies of scale and scope, race-to-the-top/bottom, heterogeneity of local conditions

120 See for instance, WWF, “Auctioning in the EU ETS”, 11 September 2007, available on the Internet at <www.wwf.de> (last accessed on 21 July 2009).

121 See for instance De Cendra de Larragán, “Too Much Harmonization?”, *supra*, note 9, at 54: “A highly harmonized scheme in which Member States are left with virtually no choices when implementing its crucial elements.”

122 There is currently too little information on the functioning of these interest groups on a national and European level to make a conclusive statement regarding this issue. In this area, additional research by political economist or political scientists will prove to be necessary and useful.

123 “External” meaning a perspective from outside of the European political and constitutional setting.

124 The post-2012 design for the EU ETS seems to have taken account of these needs. Aside for the primary objective of “reduc[ing] greenhouse gas emissions substantially in order to be able to fulfil the commitments of the Community and its Member States under the Kyoto Protocol”, the Community has recognised sub-objective in the application of Directive 2003/87/EC which entail the “maintenance of cost-effective and economically efficient conditions, safeguarding of economic development and employment, preservation of the integrity of the internal market and of conditions of competition.” See *Commission v Germany*, *supra*, note 54.

125 The preferred standards according to science may be found in Rajendra Pachauri and Andy Reisinger (eds.), *Climate Change 2007: Synthesis Report* (Geneva: IPCC, 2007).

and preferences and public choice considerations, improve the working of the EU ETS in terms of abatement burden allocation with sources that have the lowest MAC. Moreover, these changes are expected to influence the problems of over-allocation and a volatile price signal. Naturally, the question whether a more centralized cap-setting and a different method of decentralized allocation will result in improved environmental and economic

effectiveness of the EU ETS is dependent from the practical reality of these legal changes – much will depend on the actual implementation of the Directive and the outcome of some of the comitology processes which are yet to be completed – and will have to be the subject of an empirical study. Nevertheless, the revised allocation of law-making competences appears to have improved conditions in light of the economic theory of federalism.

Table 1: Deadlines for Decision Making in the EU ETS¹

NB: For the remaining provisions, the national implementation provisions must be ready by 31 December 2012.²

Overview of implementation and further decision making concerning Legislative resolution of 17 December 2008 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community, COM(2008)0016 – C6-0043/2008 – 2008/0013(COD).

Deadline	Subject	Action
31/12/2009 (and every five years thereafter)	Determination of sectors exposed to carbon leakage	Comitology (Article 23(3) of Directive 2003/87: regulatory procedure with scrutiny)
30/6/2010	Publication of 2013 cap	COM publication requirement
30/6/2010	Regulation on auctioning	Comitology (Article 23(3) of Directive 2003/87: regulatory procedure with scrutiny)
30/6/2010	Report and proposal on carbon leakage	Report and legislative proposal
30/9/2010	Publication of 2013 cap adjusted by installations included only from 2008 and new sectors and gasses	COM publication requirement
31/10/2010	Harmonized rules for the application of the definition of new entrants	Comitology
31/12/2010	Publication of estimated amount to be auctioned	COM publication requirement
31/10/2010	Adoption of Community-wide measures for free allocation (benchmarks)	Comitology (Article 23(3) of Directive 2003/87: regulatory procedure with scrutiny)
31/12/2010	Examination whether market is protected from insider dealing and market manipulation	Further COM action
31/3/2011	Proposal to offset distributional effects from free allocation, if appropriate	Legislative proposal
From 30/9/2011	Consideration and potential rejection of national implementation measures	Commission decision
31/12/2011	Inclusion of maritime emissions in the ETS	Legislative proposal
Before 1/12/2013	Setting CDM limits: specification of exact percentages	Comitology (Article 23(3) of Directive 2003/87: regulatory procedure with scrutiny)
Before 2012	Setting CDM quality	Comitology
From 2013	Opting out small installations	Commission decision
Article 10 a (8)	Criteria for the selection of CCS projects	Comitology (Article 23(3) of Directive 2003/87: regulatory procedure with scrutiny)

¹ The relevant EU ETS comitology provisions can be found in Article 23 of Directive 2003/87/EC. This Article also refers to Article 8 of Council Decision 93/389/EEC and Articles 5,7 and 8 of Council Decision 1999/468/EC.

² Information obtained from the EC website, published 17 December 2008, available on the Internet at: <europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/796&format=HTML&aged=0&language=EN&guiLanguage=en> (last accessed 6 June 2009).