

# The European Union's Energy using Products – EuP – Directive 2005/32 EC

## Taking Transnational Eco – Product Design Regulation One Step Further

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The time for the national implementation of the European Union's ("EU") framework directive promoting the eco-design of energy-using products ("EuP"), which became law in 2005, has just run out. The Member States were required to transpose it into national law by August 11, 2007.<sup>1</sup> Consequently, the United Kingdom enacted Statutory Instrument 2007 No. 2037<sup>2</sup> and Germany implemented the *Energiebetriebene Produkte Gesetz* – EBPG – (Energy Using Products Act).<sup>3</sup>

Since the scope of the Energy using Products Directive ("EuP Directive") is widely drawn and targets almost any product that uses an external energy source, including household equipment and computers,<sup>4</sup> it should have a great regulatory effect both within and outside of the EU. For a better understanding of its implications, the author gives a structural legal analysis of the Directive in the first part of the essay, including references to the relevant provisions dealing with the

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<sup>1</sup> Council Directive 2005/32/EC, art. 25, 2005 O.J. (L.191) 29.

<sup>2</sup> The Ecodesign for Energy Using Products Regulation, 2007 (Eng.), available at [http://www.opsi.gov.uk/si/si2007/uksi\\_20072037\\_en\\_1](http://www.opsi.gov.uk/si/si2007/uksi_20072037_en_1).

<sup>3</sup> FEDERAL MINISTRY OF ECONOMICS AND TECHNOLOGY, EUP DIRECTIVE (DIRECTIVE ON THE ECO-DESIGN OF ENERGY-USING PRODUCTS) 1, available at <http://www.bmwi.de/English/Redaktion/Pdf/eup-directive-new.property=pdf,bereich=bmwi,sprache=en,rwb=true.pdf>. (last visited April 1, 2008)

<sup>4</sup> RSJ Technical Consulting, What is EuP?, <http://www.rsjtechnical.com/WhatisEuP.htm> (last visited April 1, 2008) [hereinafter What is EuP?].

new regulatory style of implementing measures and self regulations. The second part addresses macro-economic questions and draws connections between the Directive and international competitiveness, the “race to the top”, and the legality of international environmental regulation.

#### INTRODUCTION

In the last years the EU has been particularly busy with EU-wide environmental regulation. As part of its “New Approach” and “Global Approach”, which are codified in the “Blue Book”, the EU has restricted its focus to the core issue of product regulation for product groups.<sup>5</sup> Already classic examples are the “Directive on End of Life Vehicles” (“ELV Directive”), the “Waste of Electronic and Electric Equipment Directive” (“WEEE Directive”) and the “Restriction on certain Hazardous Substances Directive” (“RoHS Directive”), which currently have major effects on product manufacturing around the world.<sup>6</sup> Furthermore, the effect of the WEEE and RoHS regulations has extended beyond the EU’s boundaries.<sup>7</sup> Due to the increased importation of electronic waste,<sup>8</sup> the Chinese government has already adopted a mandatory “China RoHS”.<sup>9</sup> Additionally, Japan has introduced the voluntary JGPSSI (2003) and JEITA (2005) Guidelines<sup>10</sup> whereas California has enacted the “Electronic Waste Recycling Act of 2003”<sup>11</sup>, commonly referred to as “California RoHS”, which prohibits the in-state sale of any electronic product that would be prohibited from sale in the EU, because of excessive heavy metals levels since January 2007.<sup>12</sup>

The EuP Directive, formally signed by the European Parliament and Council in July 2005,<sup>13</sup> extends the regulation of energy using products even further.<sup>14</sup> For the

<sup>5</sup> EUROPEAN COMMISSION, GUIDE TO THE IMPLEMENTATION OF DIRECTIVES BASED ON THE NEW APPROACH AND THE GLOBAL APPROACH 3-4 (2000), [http://www.icomia.com/technical-info/docs/Blue%20Book%201999\\_1282\\_en.pdf](http://www.icomia.com/technical-info/docs/Blue%20Book%201999_1282_en.pdf) [hereinafter Blue Book].

<sup>6</sup> Sameer Kumar & Julie Fullenkamp, *Analysis of European Union environmental directives and producer responsibility requirements*, 1 INT’L J. SERV. & STANDARDS 379 (2005).

<sup>7</sup> See, e.g., RSJ Technical Consulting, What is China RoHS?, <http://www.rsjtechnical.com/WhatisChinaRoHS.htm> (last visited Feb. 1, 2007) (translating and summarizing China’s Order #39: Final Measures for the Administration of the Pollution Control of Electronic Information Products, issued Feb. 29, 2006) (Hereinafter China RoHS).

<sup>8</sup> Catherine K. Lin, Linan Yan, & Andrew N. Davis, *Globalization, Extended Producer Responsibility and the Problem of Discarded Computers in China: An Exploratory Proposal for Environmental Protection*, 14 GEO. INT’L ENVTL. L. REV. 525, 528 (2002) (“China is one of the favored destinations for [e-waste] . . . because of its low labor costs.”).

<sup>9</sup> China RoHS, *supra* note 7.

<sup>10</sup> JAPAN ELECTRONICS AND INFORMATION TECHNOLOGY INDUSTRIES ASSOCIATION, ENVIRONMENTAL INITIATIVES IN THE ELECTRONICS AND INFORMATION TECHNOLOGIES INDUSTRIES (2007), available at [http://www.jeita.or.jp/english/about/environment\\_en.pdf](http://www.jeita.or.jp/english/about/environment_en.pdf).

<sup>11</sup> Danielle M. Bergner, *The Electronic Waste Recycling Act of 2003: California’s Response to the Electronic Waste Crisis*, 88 MARQ L. REV. 377, 379 (2004); see also Betsy M. Billingham, Comment, *E-Waste: A Comparative Analysis of Current and Contemplated Management Efforts by the European Union and the United States*, 16 COLO. J. INT’L. ENVTL. L. & POL’Y 399, 403 (2005) (discussing the act and its fee collection system).

<sup>12</sup> California Department of Toxic Substances Control, Restrictions on the Use of of Certain Hazardous Substances (RoHS) in Electronic Devices (2007), available at <http://www.dtsc.ca.gov/HazardousWaste/RoHS.cfm>

<sup>13</sup> What is EuP?, *supra* note 4.

<sup>14</sup> See Council Directive 2005/32, 2005 O.J. (L 191) 29, 31 (EC). The EU already made an attempt to influence eco-design of products when adopting the WEEE and RoHS Directives in early 2003.

sake of effective climate protection, the reduction of health risks and the equalisation of rules within the EU, which is expected to positively influence trade, the Directive's subject matter is widely drawn to apply to almost all products that require energy usage.<sup>15</sup> Comparably, the Directive, as part of the Commission's Integrated Product Policy ("IPP"),<sup>16</sup> covers a wide temporal span of application.<sup>17</sup> Because approximately 80 % of an energy using product's eco-friendliness is already determined in the design stages,<sup>18</sup> the EuP Directive, contrary to the WEEE and RoHS Directives, includes regularising measures which, as part of a preventive approach, range from the first stroke of a product's design to the its recycling (cradle to grave principle).<sup>19</sup> Thus, the Directive does not limit compliance to contemporary environmental standards, but extends its eco-design regulations towards the assessment of a product's complete life-cycle.<sup>20</sup> It also leaves the door open for EU member states to create additional legal provisions to require a showing of a quantifiable improvement in the environmental impact of energy using products from one generation to the next.<sup>21</sup>

Although the adoption of the EuP Directive has not yet led to great public awareness, it very likely will have a similar (or even greater) practical impact as the WEEE and RoHS Directives.<sup>22</sup> Hence, this essay intends to contribute to a better understanding of the Directive by giving an in depth analysis of its provisions. It starts with an illustration of the new regulatory systematic of the Directive that specifies its general provisions with the help of implementing measures. Thereafter, the emphasis will shift to the EuP Directive's subject matter *ratione materiae* and *ratione personae*. Due to its practical relevance, the obligations imposed on manufacturers, importers and third parties subsequently will be discussed. The article concludes with a focus on the trans-boundary economic effect of the EuP Directive. Particular relevance will be given to the question of whether the Directive

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However, many Member States felt that a breach of the design requirements should not be sanctioned. Furthermore, it has turned out that a general prohibition of certain substances seems to have major negative effects on the design process of products. Consequently the EU decided to adopt a separate directive, which exclusively deals with the problem.

<sup>15</sup> *Id.*

<sup>16</sup> What is Integrated Public Policy?, <http://ec.europa.eu/environment/ipp/integratedpp.htm> (last visited Feb. 27, 2008).

<sup>17</sup> What is EuP?, *supra* note 4.

<sup>18</sup> EUROPEAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY, THE ECO-DESIGN DIRECTIVE FOR ENERGY USING PRODUCTS 1 (June 2006), available at [www.eceee.org/european\\_directives/Eco\\_design/eceeeBrief\\_Eco\\_design.pdf](http://www.eceee.org/european_directives/Eco_design/eceeeBrief_Eco_design.pdf). [hereinafter ECO-DESIGN DIRECTIVE]; DEPARTMENT OF TRADE AND ENERGY, ENERGY-ITS IMPACT ON THE ENVIRONMENT AND SOCIETY (July 2002), available at <http://www.berr.gov.uk/files/file32296.pdf>.

<sup>19</sup> What is EuP?, *supra* note 4.

<sup>20</sup> Council Directive 2005/32, art. 15, 2005 O.J. (L.191) 29 (EC); see also *Plasa Highlights Impact of EU "Energy-using Products" Directive*, LEDS MAG. July 4, 2006, available at <http://www.ledsmagazine.com/news/3/7/6> ("The 'ecodesign' parameters for an EuP's life cycle will include raw materials; manufacturing; packaging, transport and distribution; installation and maintenance; use; and final disposal.").

<sup>21</sup> Council Directive 2005/32, art. 9, 2005 O.J. (L.191) 38 (EC)

<sup>22</sup> See Paul Hagen, Product-Based Environmental Regulations: Europe Sets the Pace, 37 No. 3 A.B.A. TRENDS 8, 8-9 (Jan./Feb. 2006) (the legislation will require "[c]onformity with future implementing measures and standards will be required as a condition to market access for covered energy-using products. The legislation has the potential to regulate a wide range of energy-using products marketed in Europe and contemplates new environmental performance and produce design requirements.").

will be viewed as an illegal barrier to trade.

RELATIONSHIP BETWEEN THE EUP DIRECTIVE AND IMPLEMENTING MEASURES / SELF  
REGULATION PROVISIONS

The legal composition of the EuP Directive's subject matter is rather complicated and illustrates a new style of EU Law adoption procedure, which, from a legal point of view, is not without ambiguity. In order to determine whether a particular product falls into the scope of the Directive a two step test must be applied.

First, the general provisions found in the Directive's language must be fulfilled.<sup>23</sup> These requirements, like the labelling of products with eco-labels,<sup>24</sup> apply to almost all energy using products.

Second, if the product is included in the general scope of the Directive's regulations, it must be tested to determine whether it is also affected by substantiated regulations for product groups.<sup>25</sup> Such regulations are codified in so called "implementing measures" or "self regulations."<sup>26</sup> "Implementing measures," drafted and adopted by the Commission, are substantiated regulations, for one or several product groups, that represent mandatory rules imposed on an industry.<sup>27</sup> "Self regulations" are voluntary (concerning its applicability) and binding (concerning its specific rules) regulations for product groups that are proposed by an industry itself.<sup>28</sup> Whether a substantiated regulation should be executed through an implementing measure or a self regulation is dependent upon the question, whether the latter is "expected to achieve the policy objectives more quickly or at lesser expense than mandatory requirements."<sup>29</sup>

Due to the legal connection between the EuP Directive and the respective implementing measures or self regulations, it is necessary to distinguish between EuP Directive regulations that refer to the Directive itself, and Directive regulations that refer to the subject matter of implementing measures or self regulations. This distinction is important as both levels of regulations are closely inter-connected. As will be seen, there are virtually no obligations for manufacturers that arise solely out of an EuP Directive regulation itself, but instead arise and reach practical effect from the corresponding substantiated implementing measure.<sup>30</sup> For example, Article 8(1) of the EuP Directive states that:

Before placing an EuP covered by implementing measures on the market and/or putting such an EuP into service, the manufacturer ... shall ensure that an assessment of the EuP's conformity with all the relevant requirements of the applicable implementing measure is carried out.<sup>31</sup>

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<sup>23</sup> *E.g.*, Council Directive 2005/32, art. 3, 2005 O.J. (L 191) 29, 35-36 (EC), Council Directive 2005/32, art. 5(1), 2005 O.J. (L 191) 29, 36 (EC).

<sup>24</sup> Council Directive 2005/32, art. 5(1), 2005 O.J. (L 191) 29, 36 (EC).

<sup>25</sup> Council Directive 2005/32, art. 15(2), 2005 O.J. (L 191) 29, 39 (EC).

<sup>26</sup> Council Directive 2005/32, art. 15(1), 2005 O.J. (L 191) 29, 39 (EC).

<sup>27</sup> Council Directive 2005/32, art. 2(3), 2005 O.J. (L 191) 29, 34 (EC).

<sup>28</sup> Council Directive 2005/32, art. 17, 2005 O.J. (L 191) 29, 41 (EC).

<sup>29</sup> Council Directive 2005/32, art. 15(3)(b), 2005 O.J. (L 191) 29, 39 (EC).

<sup>30</sup> MARKET TRANSFORMATION PROGRAMME, SUSTAINABLE PRODUCTS 2006: POLICY ANALYSIS AND PROJECTIONS 16-17 (June 2006), [http://www.mtprog.com/ReferenceLibrary/MTP\\_SP06\\_web.pdf](http://www.mtprog.com/ReferenceLibrary/MTP_SP06_web.pdf).

<sup>31</sup> Council Directive 2005/32, art. 8(1), 2005 O.J. (L 191) 29, 37 (EC).

Understanding the formal distinctive character of both levels is important as it represents the overall regulatory systematic of the EuP Directive; and the specification and formal detachment between both levels is comprehensible. On the one hand, in order to achieve generally accepted standardization schemes of energy using products and reduce trade restraints within the EU, general valid regulations have to exist. On the other hand, it is practicably impossible to draft general regulatory requirements that include a wide range of product groups, yet are precise enough at the same time. A workable and concise provision that (1) includes almost all energy using products, such as fluorescent tubes, personal computers, radiators and cookers, and (2) cumulatively sets specific standards, such as weight, form and shape for each of those product groups, cannot be drafted. Hence, the EU legislature has split its regulations into a general part (regulations relating to the EuP Directive itself) and a specific part (regulations referring to implementing measures and the provisions of [already existing as well as upcoming] implementing measures), which will be checked and updated frequently by the Commission.<sup>32</sup>

The specific process of adopting an implementing measure is rather legally complicated. Yet, as a general rule, the Commission considers the adoption of implementing measures with the assistance of a regulatory committee and in coordination with various groups, such as the consultation forum,<sup>33</sup> which was scheduled to meet for the first time on June 22, 2007.<sup>34</sup>

Implementing measures must comply with the requirements codified in Article 15(5) of the EuP Directive.<sup>35</sup> This means that (1) there shall be no significant impact on the functionality of the product, from the perspective of the user, (2) health, safety and environment shall not be adversely affected, (3) there shall be no significant negative impact on the industry's competitiveness, (4) in principle the setting of an eco-design requirement shall not have the consequence of imposing proprietary technology of manufacturers and (5) no excessive administrative burden shall be imposed on manufacturers.<sup>36</sup>

Recapitulating, implementing measures fulfil three tasks. First, they clarify whether a specific product group falls under the regulations of the EuP Directive.<sup>37</sup> Second, they determine the eco-design requirements for the applicable product group (like setting minimum energy performance standards).<sup>38</sup> Finally, they determine how eco-design requirements shall be assessed.<sup>39</sup> The last point is no less important than the former ones, because an effective regulation of product groups is impossible if a harmonized standard for technical evaluation does not exist. However, this issue shall not be discussed here due to its wide-ranging technical complexity.

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<sup>32</sup> Compare Council Directive 2005/32, 2005 O.J. (L 191) 29 (EC), with Council Directive 92/42, 1992 O.J. (L 167) 17 (EC).

<sup>33</sup> Council Directive 2005/32, art. 19, 2005 O.J. (L 191) 29, 31 (EC).

<sup>34</sup> European Commission, Energy Efficiency: Eco-Design of Energy-Using Products, [http://ec.europa.eu/energy/demand/legislation/eco\\_design\\_en.htm#consultation\\_forum](http://ec.europa.eu/energy/demand/legislation/eco_design_en.htm#consultation_forum) (last visited April 1, 2008) (providing a draft agenda of the Forum, as well as its draft rules of procedure and a working document on potential eco-design requirements).

<sup>35</sup> Council Directive 2005/32, art. 15(5), 2005 O.J. (L 191) 29, 39 (EC).

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

Nevertheless it should be mentioned that the EuP Directive is concerned with the development of harmonized standards.<sup>40</sup> In this regard, the Commission works together with the European Standardization Body and has given a mandate to the Technical Committee, TC 111 X, of the CENELEC for the development of such harmonized standards.<sup>41</sup> If the manufacturer uses the proposed assessment standards, it can create the presumption that the product conforms with the regulations of the EuP Directive (and any applicable implementing measure).<sup>42</sup>

#### SUBJECT MATTER

Regarding the subject matter of the EuP Directive and the respective implementing measure or self regulation, one must distinguish between subject matter *ratione materiae*<sup>43</sup> and *ratione personae*.<sup>44</sup> Regarding the former, a further distinction shall be made between the subject matter *ratione materiae* of the EuP Directive and the respective implementing measure or self regulation.<sup>45</sup>

##### 1. Subject matter *ratione materiae* of the EuP Directive

The subject matter *ratione materiae* of the EuP Directive is specified in Article 1.<sup>46</sup> Accordingly, “This directive establishes a framework for the setting of Community ecodesign requirements for energy-using products.”<sup>47</sup>

As can be seen, the general scope of the directive is exceptionally broad and covers all products that use energy.<sup>48</sup> However, because it was believed that there are already sufficient regulatory rules for motor vehicles that are used for means of transport of goods or persons, such products are generally excluded from the directive.<sup>49</sup> Thus, cars are not covered by the eco-design regulations of the EuP Directive. The notion of EuP is legally defined in Article 2 of the EuP Directive as:

a product, which, once placed on the market and/or put into service, is dependent on energy input (electricity, fossil fuels, and renewable energy sources) to work as intended, or a product for the generation, transfer and measurement of such energy, including parts dependent on energy input and intended to be incorporated into an EuP covered by this Directive which are placed on the market and/or put

<sup>40</sup> Council Directive 2005/32, art. 10, 2005 O.J. (L 191) 29, 31 (EC).

<sup>41</sup> E.g., CENELEC, MANDATE M/341 – PROGRAMMING OF STANDARDISATION WORK IN THE FIELD OF ECO-DESIGN OF ENERGY-USING PRODUCTS (EuP) (2006), available at [http://ec.europa.eu/enterprise/eco\\_design/standardisation/tc111x\\_report.pdf](http://ec.europa.eu/enterprise/eco_design/standardisation/tc111x_report.pdf). CENELEC, along with CEN (for the standardization of other technology) and ETSI (for telecommunication), is one of the three big European Standard Organisations. <http://www.cenelec.org>. (last visited April 1, 2008). CENELEC is responsible for the standardization of electro-technology. *Id.*

<sup>42</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 37-38 (EC); Council Directive 2005/32, art. 9, ¶2, 2005 O.J. (L 191) 29, 38 (EC).

<sup>43</sup> Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC)

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> Council Directive 2005/32, art. 1, ¶3, 2005 O.J. (L 191) 29, 33 (EC) (“This Directive shall not apply to means of transport for persons or goods”); *Regulatory Watch: Environmental Protection*, BUS. EUR., Apr. 16, 2005, at 9.

into service as individual parts for end users and of which the environment performance can be assessed independently.”<sup>50</sup>

This definition, which is one of the most important definitions of the EuP Directive because it determines which products are covered under the Directive, seems to be complicated and difficult to interpret at first sight. For greater clarity, the definition of “EuP” shall be simplified to the following two points: An “EuP” in the sense of the Directive exists if (1) there is a product which requires energy (electricity, fossil fuels, and renewable energy sources), or alternatively (2) there is a product, which generates transfers or measures energy for a product which fulfils the requirements under (1) and is intended to be incorporated into such a product.<sup>51</sup>

Additionally, an EuP must fulfil a chronological requirement to be considered as such: before feeding the product with energy it has to be placed on the EU market and/or put into service.<sup>52</sup> When looking at the latter specification from a legally dogmatic perspective, it seems rather strange that the definition of a product is made dependent upon a required action. Or in other words: Is generally a cooling system defined in terms of what it is or what someone does with it? Applying the systematics of the Directive, a cooling system would not be a EuP cooling system as long as someone has not put it on the market and/or into service. However, when taking a look at what the Directive wants to achieve, does it make any sense to allow the development and storage of non-compliant EuPs, particularly when considering that the Directive is concerned with the life cycle assessment of the product and calls for compliance even in the design stages? It is predictable that especially the chronological requirement of having to put the item on the market and/or into service will create further discomfort with the idea that regulation should start at the design stages right away.

However, because the EU decided on this system, one has to deal with the definition that is given. Therefore, a product has to be placed on the market and/or put into service in order to be an EuP in the sense of the Directive.<sup>53</sup> According to Article 2 of EuP Directive, “placed on the market” means:

making an EuP available to for the first time on the Community market with a view to its distribution or use within the Community whether for reward or free of charge irrespective of selling technique.<sup>54</sup>

Also, according to Article 2 of the EuP Directive, “put into service” means “the first use of an EuP for its intended purpose by an end-user in the Community.”<sup>55</sup>

If the product in question fulfils these requirements, it falls under the subject matter *ratione materiae* of the EuP Directive.<sup>56</sup> Yet, as can be seen by experiences made with the application and transformation of the WEEE and RoHS Directives, which include the very similar requirements for certain hazardous electronic equipment, it should be clear that analogous interpretative problems are likely to occur. The published “Blue Book” and the – regularly updated – FAQs on the RoHS

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<sup>50</sup> Council Directive 2005/32, art. 2(1), 2005 O.J. (L 191) 29, 34 (EC).

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

<sup>54</sup> Council Directive 2005/32, art. 2(4), 2005 O.J. (L 191) 29, 34 (EC).

<sup>55</sup> Council Directive 2005/32, art. 2(5), 2005 O.J. (L 191) 29, 34 (EC).

<sup>56</sup> Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC).

and WEEE Directives by the Commission<sup>57</sup> might give a first orientation. However, it is still unclear whether the WEEE and RoHS FAQ's shall be analogously applicable to the EuP Directive in this regard. Yet, at least on the national level some specifications of what is meant by "placed on the market or put into service" have been published by the relevant authorities.<sup>58</sup> Ultimately, the ECJ must interpret the relevant EU law because Commission does not have any interpretative authority. Hence, the FAQ specifications declare themselves to be not legally binding. The fact that some EU member states, particularly regarding the aforementioned requirements for RoHS and WEEE, hold different formal positions of how "placed on the market" or "put into service" shall be interpreted, doesn't make the issue less complicated.<sup>59</sup>

## 2. Subject matter *rationae materiae* of implementing measures or self regulation

Once the product in question is considered as an "EuP", the next thing to determine is whether the EuP is also affected by substantiated regulations codified in implementing measures or self regulations. According to Article 2 of the EuP Directive, "implementing measure" means "measures adopted pursuant to this directive laying down ecodesign requirements for defined EuPs or for environmental aspects thereof."<sup>60</sup> Alternatively, Council Decision 1999/468 EC and Article 81 EC of the 16<sup>th</sup> Rules of Procedure of the European Parliament declare that implementing measures are an "application of essential provisions of basic instruments" which will be enacted after adoptions of framework directives by the Commission.<sup>61</sup>

Unfortunately though, the authority quoted does not clarify the legal nature of such implementing measures. In a strictly legal sense, the definition chosen in the EuP Directive cannot even be called a legal "definition" in the traditional sense because contrary to civil law interpretation it misses one of the two fundamental requirements.

Based on general understanding, a legal definition is made up of an umbrella term that is classified as being one stage above the definition of the term in question, and a term (or terms) which substantiates and differentiates the definition from others that exist on an equal stage. For example, in German contract law, a "sales contract" in terms of § 433 BGB<sup>62</sup> is a legal transaction (umbrella term), which is grounded on two synallagmatic declarations of intent of offer and acceptance which include (at least) the required concretions of item and price (specifications).<sup>63</sup> On the contrary, a loan for example, is a legal transaction as well, which however is grounded on two

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<sup>57</sup> Environment – Waste Electrical and Electronic Equipment, [http://ec.europa.eu/environment/waste/weee/legis\\_en.htm](http://ec.europa.eu/environment/waste/weee/legis_en.htm) (last visited April 1, 2008).

<sup>58</sup> See DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS, GUIDANCE NOTES ON THE ECO-DESIGN FOR ENERGY-USING PRODUCTS REGULATION 2007 § 5.1 (2007), available at <http://www.defra.gov.uk/environment/consumerprod/pdf/energy-products-regs-guide.pdf>. (defining placed on the market as the „initial act of making a product available for the first time on the Community Market“).

<sup>59</sup> E.g., FAQs, RoHS, Working with EEE Producers to Deliver Compliance with RoHS in the UK, <http://www.rohs.gov.uk/FAQs.aspx#8>. (last visited April 1, 2008).

<sup>60</sup> Council Directive 2005/32, art. 2(3), 2005 O.J. (L 191) 29, 34 (EC).

<sup>61</sup> See Council Directive 1999/468, art. 1, 1999 O.J. (L 184) 17 (EC) (laying down the procedures for the exercise of implementing powers on the Commission).

<sup>62</sup> Bürgerliches Gesetzbuch [BGB] [Civil Code] 2 January 2002., BGBI. I, 42 cor. 2909 and BGBI. I 2003, 738 195, § 433.

<sup>63</sup> *Id.*

bilateral (but not synallagmatic)<sup>64</sup> declarations of intent of offer and acceptance which include (at least) the gratuitous allocation of an item for a limited period of time.

When applying the standard mentioned above to the EuP Directive, one might ask why “implementing measures” have been defined as “measures”. This is tautological, disregards the required hierarchical structure in legal definition and thus has led to uncertainty about the legal nature of such implementing measures. Is it a substantiated EU Directive, some sort of an EU administrative regulation, or something like an EU Law Ordinance? Consequently, national laws transforming the EuP Directive – *i.e.* § 3 of the German EBPG – allow for direct the effect of respective EU implementing measures should this measure have the status of an ordinance, and set requirements for transformation, should the implementing measure have the status of a directive.

On the contrary, the adoption procedure of implementing measures on EU member states is clear.<sup>65</sup> They are enacted by the Commission as part of their implementing authority<sup>66</sup> with the help of a committee, which is, according to Article 5 of Council Decision 1999/468 EC made up of representatives of EU member states.<sup>67</sup> If the Commission chooses to enact an implementing measure *via* the help of a directive, there is no direct legal effect on the population of EU member states upon entering into force.<sup>68</sup> Like all EU directives, and according to Article 249 EC, they have to be transposed into national law by each member state to become effective.<sup>69</sup> Additionally, the EuP Directive itself sets a limit for the scope of the freedom of transposition by member states. Since the EuP Directive is an Article 95 EC directive – and thus contrary to Article 175 EC directives<sup>70</sup> – member states, for the good of adjustment of the Single European Market, are prohibited from adopting stricter rules than the ones that are given in implementing measures directives but instead have to adopt the regulations set forth.<sup>71</sup> If for example there is a requirement that a certain product shall not contain more than 0,78 weight percentage of cadmium per product, a member state cannot regulate that the maximum weight percentage should be no more than 0,50 but instead has to adopt the 0,78 weight percentage limit. This makes sense, since Article 95 Directives are concerned with the adjustment and equalization of the Single European Market.<sup>72</sup>

When an implementing measure is enacted for product groups, the following

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<sup>64</sup> This is because under German contract law for a loan to be effective only the lender has the obligation to gratuitously allocate the item, whereas the borrower, at the time when the loan becomes effective, does not have any obligations. Yet when the agreed period of time has run out the borrower is required to return the item to the lender (so called “imperfect bilateral contract”).

<sup>65</sup> See, *e.g.*, Council Directive 2005/32, art. 15, 2005 O.J. (L 191) 29, 39-40 (EC), See Peter L. Strauss, *Rulemaking in the Ages of Globalization and Information: What America can Learn from Europe, and Vice Versa*, 12 COLUM. J. EUR. L. 645, 653-54 (2006) (describing EU implementing measures).

<sup>66</sup> *Id.* at 651.

<sup>67</sup> Council Directive 1999/468, art. 5, 1999 O.J. (L 184) 23, 25 (EU).

<sup>68</sup> Consolidated Version of the Treaty Establishing the European Community art. 249, Dec. 24, 2002, O.J. (C 325) 33, 132.

<sup>69</sup> *Id.*

<sup>70</sup> Consolidated Version of the Treaty Establishing the European Community art. 175, Dec. 24, 2002, O.J. (C 325) 33, 108-09.

<sup>71</sup> Consolidated Version of the Treaty Establishing the European Community art. 195, Dec. 24, 2002, O.J. (C 325) 33, 115-16.

<sup>72</sup> *Id.*

requirements must be fulfilled for an EuP to be included into its scope. First, the Energy using Product must be subsumable under a relevant product group specified in an implementing measure.<sup>73</sup> Secondly, the EuP must fulfil the criteria set forth in Article 15 of the EuP Directive.<sup>74</sup>

*(a) Relevant product groups*

Pursuant to the first requirement mentioned above, Article 21 EuP Directive already declares three existing directives to be implementing measures.<sup>75</sup> These include Directive 92/42/EEC which relates to the efficiency requirements for hot water boilers fired with liquid or gaseous fuels (“Boiler directive”)<sup>76</sup>, Directive 96/57/EC on energy efficiency requirements for household electric refrigerators, freezers and combinations thereof,<sup>77</sup> and Directive 2000/55/EC on energy efficiency requirements for ballasts for fluorescent lightning.<sup>78</sup> Because these directives already contain efficiency requirements for certain product groups, the Commission has decided to include them into the EuP Directive framework.<sup>79</sup> The UK, by enacting the EuP Statutory Instrument 2007 on 11 August 2007, has transposed these implementing measures into national law as well.<sup>80</sup> Its schedule 2 to regulation 3 sets specific maximum and minimum values for the products in question.<sup>81</sup>

Aside such directives mentioned, there are various implementing measures “in the pipeline.”<sup>82</sup> Article 16 of the EuP Directive required the Commission to establish a publicly available working plan by no later than July 6, 2007: “The working plan shall set out the following three years an indicative list of product groups which will be considered as priorities for the adoption of implementing measures.”<sup>83</sup> For this purpose, the Commission ordered the compilation of various preliminary studies expected to have a processing time of nine to eighteen months.<sup>84</sup> Studies for the following fourteen product groups have been launched in 2006: (1) battery chargers and external power supplies, (2) public street lighting, (3) personal computers (desktops & laptops) and computer monitors, (4) consumer electronics and televisions, (5) office lighting, (6) standby and off-mode losses of EuPs, (7) boilers and combi-boilers (gas/oil/electric), (8) water heaters (gas/oil/electric), (9) imaging equipment, including copiers, faxes, printers, scanners, multifunctional devices, (10) general standby and off-mode losses, (11) residential room conditioning appliances

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<sup>73</sup> Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC).

<sup>74</sup> Council Directive 2005/32, art. 15(2), 2005 O.J. (L 191) 29, 39-40 (EC).

<sup>75</sup> Council Directive 2005/32, art. 21, 2005 O.J. (L 191) 29, 42 (EC).

<sup>76</sup> Council Directive 92/42, 1992 O.J. (L 167) 17 (EC).

<sup>77</sup> Directive 96/57, 1994 O.J. (L 236) 36 (EU).

<sup>78</sup> Directive 2000/55, 2000 O.J. (L 279) 33 (EU).

<sup>79</sup> Council Directive 2005/32, art. 21, 2005 O.J. (L 191) 29, 42 (EC).

<sup>80</sup> Ecodesign for Energy-Using Products Regulations, Schedule 5 Declaration of Conformity, 2007, S.I. 2007/2037, ¶ 4 (U.K.).

<sup>81</sup> Ecodesign for Energy-Using Products Regulations, Schedule 2 Product Requirements, 2007, S.I. 2007/2037 (U.K.).

<sup>82</sup> Council Directive 2005/32, art. 16, 2005 O.J. (L 191) 29, 41 (EC).

<sup>83</sup> *Id.*

<sup>84</sup> See generally European Commission, Directorate-General for Energy and Transport, Eco-design of Energy-Using Products, [http://ec.europa.eu/energy/demand/legislation/eco\\_design\\_en.htm#studies](http://ec.europa.eu/energy/demand/legislation/eco_design_en.htm#studies) (last visited Feb. 6, 2008) (“The first step in considering whether and which eco-design requirements should be set for a particular product is a preparatory study recommending ways to improve the environmental performance of the product.”).

(air conditioning and ventilation), (12) electric motors between 1 and 150 kW, water pumps (commercial buildings, drinking water, food, agriculture), circulators in buildings, and ventilation fans (nonresidential), (13) commercial refrigerators and freezers, including chillers, display cabinets and vending machines, and (14) domestic dishwashers and washing machines.<sup>85</sup> Moreover, the Commission has issued a call for the following five preparatory studies in January 2007: (15) solid fuel small combustion installations, (16) laundry driers, (17) vacuum cleaners, (18) set-top boxes and (19) domestic lighting.<sup>86</sup>

Some of the studies – like the one about battery chargers – already are complete.<sup>87</sup> Others are in the final stages.<sup>88</sup> The current status of all studies can be found at the website of the EU Commission Directorate General for Energy and Transportation.<sup>89</sup> Additionally, the Commission has assigned a Methodology Report (MEEuP), which has been available since November 2005.<sup>90</sup> The Evaluation methodology has exemplarily been tested on the product groups heating systems, hot water generators, electrical engines, lighting, “white product items” (refrigerator, dishwasher, etc.), small electronic household appliances, office machines (copiers), personal computers, laptops, ventilators and air conditioners.<sup>91</sup>

Finally, the Commission had reserved the right, if necessary, to enact implementing measures even before July 6, 2007, but it chose not to do so.<sup>92</sup> What specific action the Commission will take, and in particular, what specific regulatory measures for the respective product group will be adopted, is still not absolutely clear. Yet, as can be deduced from the type of studies which have been launched, early candidates are likely to be heating and lighting equipment and products which have a potential for substantial energy savings of stand-by energy loss.

*(b) Fulfilment of the criteria set forth in Article 15(2) of the EuP Directive*

Not every Energy using Product, which falls under an implementing measure's product group category is covered by the EuP Directive.<sup>93</sup> Rather, the EuP needs to fulfil the additional criteria set forth in Article 15 of the EuP Directive.<sup>94</sup> The following are required:

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<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> European Commission, Directorate-General for Energy and Transport, Bio Intelligence Service, *Preparatory Studies for Eco-design Requirements of EuPs, Lot 7: Battery chargers and external power supplies* (Jan. 23, 2007), available at [http://www.ecocharger.org/docs/BIOconsortium\\_EuP\\_Lot\\_7\\_Final\\_Report.pdf](http://www.ecocharger.org/docs/BIOconsortium_EuP_Lot_7_Final_Report.pdf).

<sup>88</sup> *Id.*

<sup>89</sup> European Commission, Directorate-General for Energy and Transport, Eco-design of Energy-Using Products, [http://ec.europa.eu/energy/demand/legislation/eco\\_design\\_en.htm#studies](http://ec.europa.eu/energy/demand/legislation/eco_design_en.htm#studies) (last April 1, 2008).

<sup>90</sup> European Commission, Directorate-General for Energy and Transport, Van Holsteijn en Kemna BV, *MEEuP Methodology Report* (Nov. 28, 2005), available at [http://ec.europa.eu/energy/demand/legislation/doc/2005\\_11\\_28\\_finalreport1\\_en.pdf](http://ec.europa.eu/energy/demand/legislation/doc/2005_11_28_finalreport1_en.pdf).

<sup>91</sup> See European Commission, Directorate-General for Energy and Transport, Van Holsteijn en Kemna BV, *MEEuP Product Cases Report* (Nov. 28, 2005), available at [http://ec.europa.eu/enterprise/eco\\_design/finalreport2.pdf](http://ec.europa.eu/enterprise/eco_design/finalreport2.pdf) (applies the methodology to EuP product cases).

<sup>92</sup> Council Directive 2005/32, art. 16, 2005 O.J. (L 191) 29, 41 (EC).

<sup>93</sup> Council Directive 2005/32, art. 15, 2005 O.J. (L 191) 29, 39-40 (EC).

<sup>94</sup> *Id.*

- The EuPs represents a significant volume of sales and trade, indicatively more than 200,000 units a year within the community according to the most recently available figures,
- The EuPs, taking into account the quantities placed on the market and/or put into service, have a significant environmental impact within the Community, and
- The EuP represents a significant potential for improvement in terms of its environmental impact without entailing excessive costs, specifically taking into account the absence of other Community legislation or failure of market forces to address the issue properly, as well as a wide disparity in the environmental performance of EuPs available on the market with equivalent functionality.<sup>95</sup>

Unfortunately, Article 15 leaves many questions unanswered. The wording of the Directive indicates that all requirements have to be fulfilled cumulatively.<sup>96</sup> Otherwise the phrase in Article 15, paragraph 1 stating “when an EuP meets the criteria listed under paragraph 2 it shall be covered by an implementing measure or by a self-regulation measure” would become meaningless.<sup>97</sup>

Furthermore, the Directive requires the EuP to represent a significant volume of sales and trade.<sup>98</sup> The indicator is a trade or sale of 200,000 units per year within the Community.<sup>99</sup> Clearly, the directive is targeted towards the regulation of mass products and leaves many B2B items, which do not reach this number but are not less environmentally hazardous outside of the scope of the Directive. However, the numerical requirement is unclear. On the one hand, it could specify the minimum output of units by a single manufacturer. On the other hand, it could refer to the total minimum output of units within the Community. The major advantage of the first option is its feasibility. The amount of items sold can easily be ascertained from the books of each manufacturer. In this regard, the regulations of the EuP Directive could be enforced more effectively. However, the latter interpretation is more in line with the general goals of the EuP Directive. As consideration 2 of EuP Directive indicates, the Directive is targeted towards the “overall environmental impact of those products.”<sup>100</sup> Also, does it make any sense to exclude a respectively comparable product which reaches an output of millions of units each year because the production is fragmented in such a way that each manufacturer by himself does not produce more than 200,000 units? If that was so, the environmental hazard’s scope would not be dependent upon the general circulation within the Community but instead upon the infrastructure of businesses and division of markets. Yet one fact cannot be denied: Whereas the latter interpretation is more in line with the general principles of the directive, which, when it comes to the interpretation of EU law, has a significant standing, it is unclear how to coordinate and enforce the EuP regulations in this case.

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<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

<sup>97</sup> *See id.* (stating that an EuP must meet the criteria outlined in paragraph 2).

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> Council Directive 2005/32, consideration 2, 2005 O.J. (L 191) 29, 29 (EC).

Finally, there is the risk for major misconduct. Article 15 of the EuP Directive refers to the EuP as the specific product and not product groups.<sup>101</sup> Since it is required that the product exceeds a trading volume of 200.000 units it is unclear what to do with products which are “look-a-likes” but still, due to minor differences in design or function, or diverse branding, are not the same. If Article 15 EuP Directive requires that all products need to be *unisono* there is a clear danger of evasion. Yet the wording of the Directive somewhat indicates this requirement. Whereas in Article 15(2)(a) the term EuP is used, Article 15(2)(c) talks about “wide disparities ... of EuPs available on the market.”<sup>102</sup> Accordingly, the EuP Directive seems to equate the term “EuP” with *unisono* product and “EuPs” with diversity of products.

### 3. Subject matter *rationae materiae* of self regulations

One of the battlegrounds when drafting the EuP Directive was whether voluntary agreements would be an acceptable alternative to implementing measures; however, after considerable debate the drafters decided to include such a possibility.<sup>103</sup> Thus, other than implementing measures, satisfaction of the general EuP regulations can alternatively take place via voluntary, but binding self regulations which are proposed by the industry.<sup>104</sup> Hence, respective industry sections are able to directly affect the legal applicability of provisions by which they are affected.

In order for an EuP to be included by such an arrangement, the self regulation has to be effective and fulfil the requirements set forth in Article 15 of the EuP Directive.<sup>105</sup> Whether a self regulation is considered effective mainly depends on the criteria codified in Annexes VII and VIII of the EuP Directive.<sup>106</sup> This means that the regulation has to be “open” toward third state parties (so called “openness of participation”), it must exceed “business as usual” proposals (so called “added value”), it must be representative for a large majority of the relevant economic sector (so called “representativeness”), and it must include an obligation towards monitoring and reporting.<sup>107</sup>

If the requirements are met, the self-regulatory measure can be an alternative to the implementing measure. Article 15 of the EuP Directive explains which measure should be used in a particular context.<sup>108</sup> Primarily, self-regulations should be used if the measure is “expected to achieve the policy objectives more quickly or at lesser expense than mandatory requirements”.<sup>109</sup> The European Parliament elaborated on this issue in the second reading of the EuP Directive:

Self, regulation, including voluntary agreements offered as unilateral commitments by industry, can provide for quick progress due to rapid and cost-effective implementation, and allows for

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<sup>101</sup> Council Directive 2005/32, art. 15, 2005 O.J. (L 191) 29, 39-40 (EC).

<sup>102</sup> *Id.*

<sup>103</sup> *E.g.*, Council Directive 2005/32, consideration 17, 2005 O.J. (L 191) 29, 31 (EC).

<sup>104</sup> *Id.*

<sup>105</sup> Council Directive 2005/32, art. 15(2), 2005 O.J. (L 191) 29, 39 (EC).

<sup>106</sup> Council Directive 2005/32, annex VII, 2005 O.J. (L 191) 29, 56 (EC); Council Directive 2005/32, annex VIII, 2005 O.J. (L 191) 29, 57-58(EC).

<sup>107</sup> Council Directive 2005/32, annex VIII, 2005 O.J. (L 191) 29, 57-58(EC).

<sup>108</sup> Council Directive 2005/32, art. 15, 2005 O.J. (L 191) 29, 40 (EC).

<sup>109</sup> *Id.*

flexible and appropriate adaptation to technological options and market sensitivities.<sup>110</sup>

However, “legislative measures may be needed where market forces fail to evolve in the right direction or at an acceptable speed.”<sup>111</sup> Hence, the question of which measure should be adopted is answered on a case-by-case basis after a consideration of the respective facts.

#### 4. Subject Matter *ratione personae* (of the EuP Directive, Implementing Measures and Self Regulations)

Additionally, the person dealing with the EuP has to fall within the scope of the Directive in order to be addressee of EuP Directive obligations.<sup>112</sup> Primarily, the Directive aims to regulate manufacturer activities.<sup>113</sup> The term “manufacturer” is defined as the natural or legal person who manufactures EuPs covered by this Directive and is responsible for their conformity with this Directive in view of their being placed on the market and/or put into service under the manufacturer’s own name or trademark or for the manufacturer’s own use.<sup>114</sup>

According to consideration 20 of the EuP Directive, “this Directive should also encourage the integration of ecodesign in ... SMEs and very small firms.”<sup>115</sup> Therefore, medium, small, and very small manufacturing enterprises, (which place EuPs on the market and/or put them into service) can also be affected by the Directive. If the manufacturer is not established in the Community, and has not instructed an authorized representative<sup>116</sup>, the subject matter *ratione personae* of the EuP Directive includes the importer of EuPs.<sup>117</sup> The EUP Directive defines an importer as “any natural or legal person established in the Community who places a product from a third country on the Community market in the course of his business.”<sup>118</sup> *A contrario* a person, who “imports” EuPs within the Community would not be considered as an importer in the sense of the EuP Directive.

Furthermore, the EuP Directive establishes a subsidiary term of “manufacturer of EuP products.”<sup>119</sup> If neither a manufacturer nor an importer under the definitions given above fall into the scope of the directive, “any natural or legal person who places on the market and/or puts into service EuPs covered by this directive shall be considered a manufacturer.”<sup>120</sup> Also, the manufacturer of components and sub-

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<sup>110</sup> EU EP, P6\_TA(2005)0123, “Ecodesign requirements for energy-using products\*\*\*II”, Consideration 17.

<sup>111</sup> *Id.*, Consideration 16.

<sup>112</sup> Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 31 (EC).

<sup>113</sup> See Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC). (stating that the Directive aims to ensure the free movement of products and provides requirements for placing an EuP on the market).

<sup>114</sup> Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 34 (EC).

<sup>115</sup> Council Directive 2005/32, consideration 20, 2005 O.J. (L 191) 29, 31 (EC).

<sup>116</sup> The term “authorized representative” is defined as “any natural or legal person established in the Community who has received a written mandate from the manufacturer to perform on his behalf all or part of the obligations and formalities connected with this Directive.” Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 31 (EC).

<sup>117</sup> Council Directive 2005/32, art. 4, 2005 O.J. (L 191) 29, 31 (EC).

<sup>118</sup> Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 31 (EC).

<sup>119</sup> *Id.*

<sup>120</sup> *Id.*

assemblies<sup>121</sup> can be the addressee of certain obligations.<sup>122</sup>

As far as the legal foreseeability of the EuP Directive is concerned, problems exist in the interpretation due to the imprecise definition of the term manufacturer. Because “manufacturer” is defined as “the natural or legal person who manufactures EuPs”<sup>123</sup> it is not predictable how to handle situations, where the manufacturing process includes separated steps which are executed by different “manufacturers”.<sup>124</sup> The definition of EuP adds confusion since according to the Directive, an “Energy using Product’ or ‘EuP’ is a product.”<sup>125</sup>

However, because the definition of the EuP requires that it be placed on the market or put into service, one may argue that only end products, or at least products sold to the consumer separately, are included in the manufacturing process.<sup>126</sup> Thus, the producers of OEMs would not fall into the scope of the EuP Directive as long as they do not get involved into badge engineering but restrict their activities to the sole production for the final manufacturer.

Nevertheless, this opinion is anything but established interpretation. Similar to an analogous problem concerning the applicability of the RoHS and WEEE Directives, there are diverse views, which have yet to be settled by the Commission and/or the ECJ. In addition, even though from a legal point of view OEMs may not be directly within the scope, from a practical point of view they fall within the scope because a manufacturer, who has to be concerned with the fulfilment of EuP Directive obligations, will refuse to buy OEM products not in line with the regulations. Thus, countries like China with a large amount of subcontractors are under a *de facto* obligation to rearrange their OEM product regulations because they cannot afford to ignore a EU market maintaining the strength of 400 million potential consumers.

#### OBLIGATIONS

The applicability of the EuP Directive's subject matter might create obligations for manufacturers of products, manufacturers of components and assembly parts, importers, or anyone else who might fall into the scope of the Directive. Yet, it should be made clear that the EuP Directive does not create immediate obligations for individuals or legal entities since EU Directives are directed towards member states and need to be implemented into national legislation.<sup>127</sup> With the exception of the three Directives, which Article 21 of the EuP Directive declared as implementing measures and which have been subsequently transposed into national EU law, concrete obligations for individuals are not yet totally predictable because the Commission has yet not taken substantiated action.<sup>128</sup> As discussed, implementing measures or self-regulations by the industry must be implemented into national

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<sup>121</sup> *Id.* “‘Components and sub-assemblies’ means parts intended to be incorporated into EuPs, and which are not placed on the market and/or put into service as individual parts for end users or the environmental performance of which cannot be assessed independently.” *Id.*

<sup>122</sup> Council Directive 2005/32, art. 11, 2005 O.J. (L 191) 29, 31 (EC).

<sup>123</sup> Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 34 (EC).

<sup>124</sup> Council Directive 2005/32, consideration 20, 2005 O.J. (L 191) 29, 31 (EC).

<sup>125</sup> Council Directive 2005/32, art. 2, 2005 O.J. (L 191) 29, 31 (EC).

<sup>126</sup> *Id.*

<sup>127</sup> Council Directive 2005/32, art. 21, 2005 O.J. (L 191) 29, 42 (EC).

<sup>128</sup> Council Directive 2005/32, art. 25, 2005 O.J. (L 191) 29, 43 (EC).

legislation as well, if not enacted *via* an ordinance.<sup>129</sup>

Nevertheless, once the EuP Directive and the respective implementing measure or self regulations have been transformed into the national laws of the Member States, the regulations will greatly influence the scope of obligations for manufacturers. As part of the IPP initiative of the EU, the Directive declares manufactures not just liable for their products but also for the environmental effects on the society.<sup>130</sup> In other words, the manufacturer is not merely a classical producer; but is also a representative for environment protection and thus has to fulfil its “green” obligations.<sup>131</sup> Therefore, the cost for waste recycling and disposal is imposed on the manufacturer of products.<sup>132</sup> This approach greatly departs from U.S. understanding, where, for example, in the case of car recycling, the last car holder (and not as in the case of the EU ELV Directive, the manufacturer<sup>133</sup>) bears the cost of recycling and disposal.<sup>134</sup>

Yet, the EuP Directive has already established general obligations which will apply to any product group substantiated in an implementing measure or self regulation<sup>135</sup> In order to legally place a product on the market and/or put it into service, the manufacturer needs to comply with the following three fundamental obligations beforehand:

- the assessment of the conformity of the product with all standards set forth in the respective implementing measure (so called “obligation for assessment of conformity”),<sup>136</sup>
- the declaration of the conformity of the product with all standards set forth in the respective implementing measure (so called “obligation for declaration of conformity”),<sup>137</sup> and
- the labelling of the product with the “CE label” (so called “obligation for labelling”).<sup>138</sup>

#### 1. Obligation for assessment of conformity

As part of their obligations, the manufacturer needs to comply with the obligation for conformity assessment.<sup>139</sup> This means that the manufacturer must assure that the EuP is assessed and is in line with the relevant requirements of the respective implementing measure; and is thus eco-friendly.<sup>140</sup> In respect thereof, the manufacturer must comply with documentation, examination and verification

<sup>129</sup> *Id.*

<sup>130</sup> *E.g.*, Council Directive 2005/32, art. 15, 2005 O.J. (L 191) 29, 39-40 (EC).

<sup>131</sup> Council Directive 2005/32, annex V, 2005 O.J. (L 191) 29, 52 (EC).

<sup>132</sup> Kumar & Fullenkamp, *supra* note 6.

<sup>133</sup> *See* Council Directive 2000/53, Consideration 7, 2000 O.J. (L 269) 34 (EC). “Member States should ensure that the last holder and/or owner can deliver the end-of life vehicle to an authorised treatment facility without any cost as a result of the vehicle having no or a negative, market value.” *Id.*

<sup>134</sup> Kumar & Fullenkamp, *supra* note 6.

<sup>135</sup> Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC).

<sup>136</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 37 (EC).

<sup>137</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>138</sup> *Id.*

<sup>139</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 37-38 (EC); Council Directive 2005/32, Annex V, 2005 O.J. (L 191) 29, 52-54 (EC).

<sup>140</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 37-38 (EC).

requirements.<sup>141</sup> To comply, the manufacturer can optionally revert to an internal design control, which is discussed in Annex IV of the Directive, or a Management System, discussed in Annex V.<sup>142</sup>

*(a) Internal Design Control*

If the manufacturer decides to use the internal design control he must compile: “a technical documentation file making possible an assessment for the conformity of the EuP with the requirements of the applicable implementing measure”<sup>143</sup> The technical documentation file includes descriptions of the ecological profile and ecological aspects of the product, results of environmental assessment studies carried out by the manufacturer, and the results of measurements carried out, amongst other things.<sup>144</sup>

*(b) Management System*

Alternatively, the manufacturer may choose to use a management system to prove appropriate conformity assessment.<sup>145</sup> This system must include various ecological components such as extensive documentation obligations and the obligation to develop a framework for an ecologically oriented product performance policy.<sup>146</sup> Furthermore, the planning, execution and checking of the product must be eco-friendly.<sup>147</sup> Additionally, the manufacturer must remedy any defects.<sup>148</sup> Regarding the checking and undertaking of corrective actions, the manufacturer is obliged to develop and check the production process in such a way that the product permanently complies with the requirements of the applicable implementing measure.<sup>149</sup> This includes an audit, which has to be repeated at least every three years.<sup>150</sup>

The obligation for assessment of conformity is one of the major obligations which the manufacturer has to fulfil. At least one commentator has assumed that assessment and documentation requirements have been introduced by the EU to collect information with the goal of justifying the broad application of the “precautionary principle.”<sup>151</sup> Whether this accusation is justified will be discussed later.<sup>152</sup> The EU understandably has grounded the obligation of assessment of

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<sup>141</sup> *Id.*

<sup>142</sup> Council Directive 2005/32/EC, art. 8, 2005 O.J. (L 191) 29, 37-38; Council Directive 2005/32/EC, annex IV, 2005 O.J. (L 191) 29, 51, Council Directive 2005/32/EC, annex V, 2005 O.J. (L 191) 29, 52-54.

<sup>143</sup> Council Directive 2005/32, Annex IV, 2005 O.J. (L 191) 29, 51 (EC).

<sup>144</sup> *Id.*

<sup>145</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 38 (EC).

<sup>146</sup> Council Directive 2005/32, Annex V, 2005 O.J. (L 191) 29, 52-53 (EC).

<sup>147</sup> *Id.*

<sup>148</sup> *Id.* at 54.

<sup>149</sup> Council Directive 2005/32, Annex IV, 2005 O.J. (L 191) 29, 51 (EC).

<sup>150</sup> Council Directive 2005/32, Annex V, 2005 O.J. (L 191) 29, 54 (EC).

<sup>151</sup> Helle Tegner Anker, *The Precautionary Principle and Nature Conservation Law: EU and Danish Experiences*, in IMPLEMENTING THE PRECAUTIONARY PRINCIPLE: APPROACHES FROM THE NORDIC COUNTRIES, EU, AND UNITED STATES 272, 272 (Nicolas de Sadeleer ed. 2007).

<sup>152</sup> See *infra* Part H.

conformity on other considerations.<sup>153</sup> According to the European Parliament, the setting of mandatory measures requires proper consultation of the parties involved. Such consultation may highlight the need for a phased introduction or transitional measures.<sup>154</sup>

Hence, the assessment of conformity, in the end, is not just for the good of the environment, but also for the good of the manufacturers themselves because it gives them a share in the participation process and supports the discovery of hidden cost savings.<sup>155</sup> The argument whereby the method of assessment represents a disadvantage because its life-cycle assessment is speculative and not grounded on scientific facts cannot succeed. Commentators have showed that it is possible to lay down specific rules on life cycle planning methodology.<sup>156</sup>

## 2. Obligation for declaration of conformity

On the basis of the assessment of conformity, the manufacturer is obliged to correctly declare and assure that the product is in conformity with the regulations of the EuP Directive and the applicable implementing measure.<sup>157</sup> The declaration of conformity must include the specifications set forth in Annex IV of the EuP Directive, including a reference to the applicable implementing measure.<sup>158</sup> Further practical guidance can be found in Annex VI of the EuP Directive.<sup>159</sup> The data must be written in one of the official languages of the EU, which include English, French, Spanish and German.<sup>160</sup>

## 3. Obligation of storage of assessment and declaration of conformity

The manufacturer is required to store the relevant assessment and declaration of conformity data for 10 years, starting from the date of production of the last exemplar of the specific type of the product in order to allow competent agencies of

<sup>153</sup> See, e.g., Council Directive 2005/32, consideration 15, 2005 O.J. (L 191) 29, 30-31 (EC). (setting the level of ecodesign requirements "on the basis of technical, economic, and environmental analysis").

<sup>154</sup> EU EP, P6\_TA(2005)0123, "Ecodesign requirements for energy-using products\*\*\*II", Consideration 15.

<sup>155</sup> *Id.* at 31.

<sup>156</sup> Hideki Kobayashi, *Strategic evolution of eco-products: a product life cycle planning methodology*, Research in Engineering Design, 1 *et seq* (2005); Gerald Rebitzer, *Enhancing the application efficiency of life cycle assessment for industrial uses*, École Polytechnique Fédérale de Lausanne, (Lausanne 2005).

<sup>157</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>158</sup> *Id.*; Council Directive 2005/32, annex IV, 2005 O.J. (L 191) 29, 51 (EC), Council Directive 2005/32, Annex 6, 2005 O.J. (L 191) 29, 55 (EC).

<sup>159</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

"The EC declaration of conformity must contain the following elements:

1. The name and address of the manufacturer or its authorized representative;
2. a description of the model sufficient for unambiguous identification;
3. where appropriate, the references of the harmonized standards applied;
4. where appropriate, the other technical standards and specifications used;
5. where appropriate, the reference to other Community legislation providing for the affixing of the CE mark that is applied;
6. identification and signature of the person empowered to bind the manufacturer or its authorized representative."

*Id.*

<sup>160</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC); Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 38 (EC). See also Treaty Establishing the European Community, art. 314, 2006 O.J. (C 321 E) 180 (where all the official languages of the EU are mentioned).

member states to inspect the documents.<sup>161</sup> If such an agency demands data, it must be sent within 10 days from the receipt of the request.<sup>162</sup>

#### 4. Obligation for labelling

The product must also be labelled with the conformity marking “CE.”<sup>163</sup> A sample can be found in Annex III of the EuP Directive.<sup>164</sup> The “CE” marking must be affixed to the EuP.<sup>165</sup> Where this is not possible it must be affixed to the packaging and to the accompanying documents.<sup>166</sup>

However labelling is prohibited, if “the affixing of markings on the EuP [...] are likely to mislead users as to the meaning or form of the CE marking.”<sup>167</sup> The Directive does not specify what should be done in this case.<sup>168</sup> Most likely Council Decision 93/465 of the 22 July 1993 will give detailed guidance as to the affixing of CE markings in this situation.<sup>169</sup>

If the “CE” label is affixed to the product, the product is presumed to be in conformity with regulations of the EuP Directive and the applicable implementing measure.<sup>170</sup> Consequently, it is not necessary to prove the product's conformity over and over again in order to comply with the EuP regulations.<sup>171</sup> A product can be considered to be in conformity with the regulations if the product is labelled with:

- The EU Eco Label which is shown in Annex III of the EU Regulation 1980/2000 [see sample on the right hand side],<sup>172</sup> or
- A national Eco Label, which fulfils the requirements of the applicable implementing measure.<sup>173</sup>



In contrast to many European countries where national eco label schemes exist, the UK has committed itself to the EU Eco label.<sup>174</sup> In fact, the UK was the first country in Europe to issue the Flower symbol for a product and has already invested

<sup>161</sup> Council Directive 2005/32, art.8, 2005 O.J. (L 191) 29, 38 (EC); Council Directive 2005/32, Annex IV, 2005 O.J. (L 191) 29, 51 (EC); Council Directive 2005/32, Annex V, 2005 O.J. (L 191) 29, 52 (EC).

<sup>162</sup> Council Directive 2005/32, art. 8, 2005 O.J. (L 191) 29, 38 (EC).

<sup>163</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>164</sup> Council Directive 2005/32, Annex III, 2005 O.J. (L 191) 29, 50 (EC).

<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

<sup>167</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>168</sup> *Id.*

<sup>169</sup> Council Directive 93/465, 1993 O.J. (L 220) 23-39 (EC).

<sup>170</sup> Council Directive 2005/32, art. 9, 2005 O.J. (L 191) 29, 38 (EC).

<sup>171</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Ökodesign von Produkten, München p. 4. (Eco-design of products – design orders for more environmental protection and innovation), in German *available at* <http://www.umweltbundesamt.de/ptv/dokumente/oekodesign.pdf>. (last visited April 1, 2008) [hereinafter Bundesministerium für Umwelt].

<sup>172</sup> Commission Regulation 1980/2000, Annex III, 2000 O.J. (L237) 10.

<sup>173</sup> *Id.*

<sup>174</sup> *E.g.*, Defra, UK - Environmental Protection –Consumer Products and the Environment: The European Ecolabel – FAQs, <http://www.defra.gov.uk/Environment/consumerprod/ecolabel/faq.htm>. (last visited April 1, 2008).

over £ 5 million in running and promoting the scheme.<sup>175</sup> In other countries, such as Germany, national eco labels such as the “Blaue Engel” (blue angel) are widely recognized whereas the EU Eco label is rather unknown.<sup>176</sup> In such cases it is more practical to rely on a well established label instead of introducing a new one. The German Ministry for Environmental Protection (BMU) is of the opinion that the German “Blaue Engel” label fulfils the requirements set forth in the EuP Directive, so it should evoke a presumption of conformity.<sup>177</sup> The conformity of Eco labels which are not mentioned in the EU Regulation 1980/2000 is recognized by the Commission.<sup>178</sup>

Simply because a product is labelled with the Eco Label or a comparable national label does not mean that the “CE” marking would be superfluous. Article 5 of the EuP Directive, which deals with the labelling of EuPs, does not mention that a “substitute label” like the EU Eco label or the “Blaue Engel” is a replacement for the obligation for “CE” labelling.<sup>179</sup> “Green dot”<sup>180</sup> labelling does not denote anything about a product’s eco-friendliness. This label is not an “Eco Label;” instead, it represents a label for waste disposal, which shows proof that the manufacturer has paid the compulsory packaging fee for the product.<sup>181</sup>

##### 5. Duty of disclosure towards the customer

The manufacturer is also required, at a minimum, to disclose the following aspects to a customer who buys or uses EuPs:

- the role which customers are able to play when it comes to the sustainable EuP usage, and
- the ecological profile of the product and the advantages of eco-design (if required by the applicable implementing measure)<sup>182</sup>

Additionally, EU member states can require manufacturers to include information which is specified in Annex I of the EuP Directive<sup>183</sup> when the product is handed

<sup>175</sup> *Id.*

<sup>176</sup> *See, e.g.,* Bundesministerium für Umwelt, *supra* note 171, at p. 5.

<sup>177</sup> *Id.*

<sup>178</sup> Council Directive 2005/32, art. 9, 2005 O.J. (L 191) 29, 38 (EC).

<sup>179</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>180</sup> Green dot, <https://www.valpak.co.uk/greendot/>. (last visited April 1, 2008).

<sup>181</sup> *Id.*

<sup>182</sup> Council Directive 2005/32, art. 14, 2005 O.J. (L 191) 29, 39 (EC).

<sup>183</sup> Council Directive 2005/32, Annex I, 2005 O.J. (L 191) 29, 46 (EC). “Implementing measures may require information to be supplied by the manufacturer that may influence the way the EuP is handled, used or recycled by the parties other than the manufacturer. This information may include, where applicable:

- information from the designer relating to the manufacturing process;
- information for consumers on the significant environmental characteristics and performance of a product, accompanying the product where it is placed on the market to allow consumers to compare these aspects of the products;
- information for consumers on how to install, use and maintain the product in order to minimize its impact on the environment and to ensure optional life expectancy, as well as how to return the product at end-of-life, and, where appropriate, information on the period of availability of spare parts and the possibilities of upgrading products

over to the end user.<sup>184</sup> However, the disclosure must be proportionate and must allow for the legitimate necessity for confidentiality in the supply of commercially sensitive information.<sup>185</sup>

#### 6. Obligation for contribution and involvement of drafting of requirements, which are specified by the Commission via implementing measures

If the implementing measure requires it, the manufacturer may also be obliged to support the Commission with the ascertainment of eco-design parameters of the respective product.<sup>186</sup> Essentially, the manufacturer must give particulars which could influence the use, handling or the recycling by external centres.<sup>187</sup>

#### 7. Obligation for remedy

According to Article 7(1) of the EuP Directive, the manufacturer shall be obliged “to make the EuP comply with the provisions of the applicable implementing measure and/or with the CE marking and to end the infringement under conditions imposed by the Member State”. If a Member State realizes that a product, which bears a “CE” marking does not comply with the regulations of the applicable implementing measure.<sup>188</sup>

Finally there are obligations for manufacturers of components and assembly parts, and for importers as well.<sup>189</sup> However, such obligations only arise if such persons fall into the Directive's subject matter.<sup>190</sup> In line with the legal systematic of the EuP Directive, specific obligations arise from the provisions that are substantiated in the applicable implementing measure.<sup>191</sup>

Article 11 provides that manufacturers of components and assembly parts may need to disclose relevant information on the material composition and the consumption of energy, materials and/or resources of the components or sub-assemblies, given that such a requirement is found in the applicable implementing measure.<sup>192</sup> Similar to the manufacturer's obligation of disclosure of EuPs towards customers, the disclosure must be proportionate and allow for confidentiality regarding the supply of commercially sensitive information.<sup>193</sup>

### SANCTIONS

If the Directive's subject matter is applicable and a breach of duty has occurred,

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- information for treatment facilities concerning disassembly, recycling, or disposal at end-of-life . . . .”

*Id.*

<sup>184</sup> Council Directive 2005/32, art. 5, 2005 O.J. (L 191) 29, 36 (EC).

<sup>185</sup> Council Directive 2005/32, art. 24, 2005 O.J. (L 191) 29, 42 (EC).

<sup>186</sup> Council Directive 2005/32, art. 15(6), 2005 O.J. (L 191) 29, 56 (EC); Council Directive 2005/32, annex VII, 2005 O.J. (L 191) 29, 56 (EC); Council Directive 2005/32, annex I, 2005 O.J. (L 191) 29, 44 (EC).

<sup>187</sup> Council Directive 2005/32, annex I, 2005 O.J. (L 191) 29, 44 (EC).

<sup>188</sup> Council Directive 2005/32, art. 7(1), 2005 O.J. (L 191) 29, 37 (EC).

<sup>189</sup> Council Directive 2005/32, art. 11, 2005 O.J. (L 191) 29, 39 (EC).

<sup>190</sup> Council Directive 2005/32, art. 1, 2005 O.J. (L 191) 29, 33 (EC).

<sup>191</sup> Council Directive 2005/32, art. 4, 2005 O.J. (L 191) 29, 36 (EC).

<sup>192</sup> Council Directive 2005/32, art. 11, 2005 O.J. (L 191) 29, 39 (EC).

<sup>193</sup> Council Directive 2005/32, art. 24, 2005 O.J. (L 191) 29, 42 (EC).

the manufacturer, importer, or anyone else who places an EuP on the market and/or puts one into service, may face serious legal consequences.<sup>194</sup> Article 20 of the EuP Directive requires Member States to adopt penalties.<sup>195</sup> The following blanket clause, which is included in the EuP Directive and which serves as guide, requires that, “[t]he penalties shall be effective, proportionate and dissuasive, taking into account the extent of non-compliance and the number of units of non-complying products placed on the Community Market”.<sup>196</sup>

When Member States implement the EuP Directive, the nation must draft specific legal consequences into national law.<sup>197</sup> Article 7 of the EuP Directive sets the relevant standard:

Where there is sufficient evidence that an EuP might be non-compliant, the Member States shall take the necessary measures which, depending on the gravity of non-compliance, can go as far as the prohibition of the placing on the market of the EuP until compliance is established.

Where non compliance continues, the Member State shall take a decision restricting or prohibiting the placing on the market and/or putting into service of the EuP in question to ensure that it is withdrawn from the market.<sup>198</sup>

Under UK legislation, the maximum fine to be charged *per* violation is currently £ 5000.<sup>199</sup>

#### PROVISIONAL RÉSUMÉ

As shown, the EuP Directive on the one hand covers a wide range of products, and on the other hand, sets a high standard of compliance where the case of refusal might lead to drastic sanctions.<sup>200</sup> Thus, the directive could have a major effect on the market. However, the question remains, in *what* sort of way will the regulations of the EuP Directive have such an impact? Or more particularly, will EuP Directive regulations be “good” or “bad” for the EU and/or worldwide economic competitiveness?

#### THE EUP DIRECTIVE AS A LEGAL TOOL FOR REGULATING ECONOMIC INDUSTRIAL COMPETITIVENESS?

The general understanding of environmental regulation on the economy has taken

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<sup>194</sup> See, e.g., Council Directive 2005/32, art. 20, 2005 O.J. (L 191) 29, 41 (EC) (discussing penalties applicable to breaches of national provisions adopted pursuant to the Directive).

<sup>195</sup> *Id.*

<sup>196</sup> *Id.*

<sup>197</sup> See Council Directive 2005/32, art. 7, 2005 O.J. (L 191) 29, 37 (EC) (enabling Commission to initiate procedure for harmonization).

<sup>198</sup> *Id.*

<sup>199</sup> DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS, GUIDANCE NOTES ON THE ECO-DESIGN FOR ENERGY USING PRODUCTS REGULATIONS 2007 § 4.5 (2007), available at <http://www.defra.gov.uk/environment/consumerprod/pdf/energy-products-regs-guide.pdf>. (last visited April 1, 2008).

<sup>200</sup> Council Directive 2005/32, art. 20, 2005 O.J. (L 191) 29, 41 (EC).

a sharp drift within the last twenty years.<sup>201</sup> Regulation in this sense can be defined as

to include the full range of legal instruments by which governing institutions, at all levels of government, impose obligations or constraints on private sector behaviour. Constitutions, parliamentary laws, subordinate legislation, decrees, orders, norms, licenses, plans, codes and even some forms of administrative guidance can all be considered as regulation.<sup>202</sup>

Environmental regulation is divided into a sectoral approach regulating particular sectors of the environment (e.g. UNCLOS for marine pollution or the Basel Convention for the movement of Waste), and a product approach regulating particular pollutants.<sup>203</sup> The latter is further subdivided into “product regulation” and “process regulation”.<sup>204</sup> The EuP Directive as part of the “product approach” sets rules in both fields.<sup>205</sup> In particular, by requiring the manufacturer to provide documentation about how the product is manufactured, the EuP Directive does not limit its regulatory approach to the end product, but includes regulation concerning the whole process of production (life cycle analysis).<sup>206</sup>

### 1. Neoclassical vs. ‘Porter Spirit’ Approaches and its relation to the EU’s New Approach

From a neo-classical point of view, a belief subsisted that environmental regulation and profit maximization are antagonists because strict regulation has negative effects on productivity and competitiveness, leading to higher expenses by businesses and imposes constraints on industry behaviour.<sup>207</sup> Yet environmental regulation was necessary in those areas where the market was not able to police itself. In order to prevent serious environmental harm, regulations forced firms to internalize external costs they would otherwise impose on society.<sup>208</sup> Thus, the relationship between environmental goals and industrial competitiveness was thought of as a trade-off between social benefits and private costs.<sup>209</sup>

Michael Porter and Claas van der Linde challenged this view by claiming that properly structured environmental regulation does not only raise benefits for the environment and the society as a whole, but also for the regulated industries

<sup>201</sup> E.g., RHYS OWENS JENKINS, ET AL., ENVIRONMENTAL REGULATION IN THE NEW GLOBAL ECONOMY: THE IMPACT ON INDUSTRY AND COMPETITIVENESS 5 (2002).

<sup>202</sup> Norman Lee, REFORMING ENVIRONMENTAL REGULATION IN OECD COUNTRIES 9 (1997).

<sup>203</sup> Compare, e.g., Convention on the Law of the Sea art. 94, Dec. 10, 1982, 21 I.L.M. (1982); Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, May 5, 1992, 32 I.L.M. 276 (1992), with, e.g., Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2043 (1993).

<sup>204</sup> *Id.*

<sup>205</sup> E.g., Council Directive 2005/32, art. 20, 2005 O.J. (L 191) 29, 41 (EC).

<sup>206</sup> E.g., Council Directive 2005/32, annex IV, 2005 O.J. (L 191) 29, 51 (EC).

<sup>207</sup> Thomas Bernauer et al., *Explaining Green Innovation. Ten years after the Porter’s Win-Win Proposition: How to Study the Effects of Regulation on Corporate Environmental Regulation* 4 (Center for Comparative and International Studies, Working Paper No. 17, 2006); SATISH JOSHI ET AL., ESTIMATING THE HIDDEN COSTS OF ENVIRONMENTAL REGULATION 5-10 (n.d.), available at <http://papers.ssrn.com>. (last visited April 1, 2008).

<sup>208</sup> JOSHI ET AL., *supra* note 207.

<sup>209</sup> Michael Porter & Claas van der Linde, *Toward a New Conception of the Environment-Competitiveness Relationship*, 9 J. ECON. PERSPECTIVE 97, 97-118 (1995).

themselves.<sup>210</sup> This is because “pollution is often coincident with improving the productivity with which resources are used.”<sup>211</sup> In other words, pollution can be equated with unproductive resource utilization creating an “analogy between environmental protection and product quality measured by defects.”<sup>212</sup>

If, for example, a regulatory rule prohibits a manufacturer from using certain substances to reduce energy consumption, it will need to create products which are not only more eco-friendly but also cheaper and more competitive. The manufacturer will start to think about actions which simplify the product and production process, in turn leading to a more efficient use of resources (e.g. less waste of raw materials), lower disposal costs (e.g. by using less hazardous substances), marketing advantages (e.g. advertising the product as being “green”), and increased international competitiveness (e.g. the “early-mover advantage” in international markets).<sup>213</sup> The market has not developed such innovations by itself due to the following reasons. First, the market is highly uninformed about the opportunities.<sup>214</sup> Second, the market is satisfied “with the way it is” and fears fundamental change (e.g. using hybrid engines instead of regular fuel engines).<sup>215</sup> Third, the market fears the high cost of adapting the products.<sup>216</sup>

Porter and van der Linde reply that many reports which rely on this line of argument are biased because they are self reported by opposing industry lobbyists.<sup>217</sup> Because such reports don’t take into account the advantages of environmental regulation mentioned above (so called “innovation offsets”), they are “static” and thus not very reliable.<sup>218</sup> Furthermore, Porter and van der Linde give examples where strict environment regulation has led to innovation, which in turn has led to profit maximization.<sup>219</sup> However, Porter and van der Linde don’t believe that regulation *eo ipso* is able to achieve such results.<sup>220</sup> In order to be effective, environmental regulation must be based on the following principles:

1. Regulation must create maximum opportunity for

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<sup>210</sup> *Id.*

<sup>211</sup> *Id.* at 97-98.

<sup>212</sup> *Id.* at 97, 107.

<sup>213</sup> In particular Porter and van der Linde stress 6 major points that environmental regulation is able to achieve for the good of profit gain: (1) regulation signals inefficiencies and potential improvements; (2) regulation gathers information; (3) regulation thus reduces uncertainty about certain eco-manufacturing processes and products; (4) regulation creates pressure that motivates innovation; (5) regulation levels the playing field so that everyone can be a “potential winner”; and (6) regulation improves the environmental quality; for the latter proposition. *Id.*; see also Maia David & Bernard Sinclair-Desgagné, *Environmental Regulation and the Eco-Industry* (Fondazione Eni Enrico Mattei, Working Paper No. 56.05, 2005), available at <http://papers.ssrn.com>.

<sup>214</sup> E.g., Porter and van der Linde, *supra* note 209, at 114.

<sup>215</sup> *Id.* at 115.

<sup>216</sup> *Id.* at 107.

<sup>217</sup> *Id.* at 107.

<sup>218</sup> *Id.* (“Early estimates of compliance ... tend to be exaggerated because they assume no innovation. Early cost estimates for dealing with regulations concerning emission of volatile compounds released during paint application held everything else constant, assuming only the addition of a good to capture the fumes from paint lines. Innovation that improved the paint’s transfer efficiency subsequently allowed not only the reduction of fumes but also paint usage.” *Id.*)

<sup>219</sup> *Id.* at 102.

<sup>220</sup> *Id.* at 110.

innovation,<sup>221</sup>

2. Regulation must foster continuous improvement, rather than locking in any particular technology,<sup>222</sup> and

3. Regulation should leave as little room as possible for uncertainty at every stage.<sup>223</sup>

The EU shares the “Porter spirit” and has transferred many fundamental thoughts into the EuP Directive.<sup>224</sup> For example, the implemented cradle to grave principle is grounded on the idea, that manufacturers create their products with the intention to reduce environmental impacts during a product’s entire life cycle, which in turn provides them with the above mentioned advantages.<sup>225</sup> It is not a surprise that product innovation, next to process innovation, is one of the two supporting pillars of Porter’s concept of “innovation offset.”<sup>226</sup> Furthermore, the basic principles of the New Approach of the EU, which are the basis of the EuP Directive, are similar *Porter* principles mentioned above.<sup>227</sup> According to the Blue Book,

1. Legislative harmonization is limited to ‘essential requirements’ that products placed on the Community market must meet if they are to benefit from free movement within the Community;<sup>228</sup>

2. The technical specifications of products meeting the essential requirements set out in the directives are laid down in harmonized standards;<sup>229</sup>

3. Application of harmonized or other standards remains voluntary, and the manufacturer may always apply other technical specifications to meet the requirements;<sup>230</sup>

4. Products manufactured in compliance with harmonized standards benefit from a presumption of conformity with the corresponding essential requirements.<sup>231</sup>

The first principle of the Blue Book embodies the spirit of *Porter*’s first principle.<sup>232</sup> By restricting the environmental regulation to essential requirements it is intended to create maximum opportunity for innovation.<sup>233</sup> The requirement for a

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<sup>221</sup> *Id.*

<sup>222</sup> *Id.*

<sup>223</sup> *Id.*

<sup>224</sup> EUROPEAN LIASON GROUP OF THE MECHANICAL, ELECTRICAL AND ELECTRONIC AND METALWORKING INDUSTRIES, ORGALIME BACKGROUND PAPER ON THE PROPOSAL ESTABLISHING A FRAMEWORK FOR THE SETTING OF ECO DESIGN REQUIREMENTS FOR ENERGY USING PRODUCTS (2004), available at: [https://www.zvei.org/fileadmin/user\\_upload/Technik\\_Umwelt/Produktbezogener\\_Umweltschutz/EUP/OL\\_EUP\\_background\\_final\\_20041119.pdf](https://www.zvei.org/fileadmin/user_upload/Technik_Umwelt/Produktbezogener_Umweltschutz/EUP/OL_EUP_background_final_20041119.pdf)

<sup>225</sup> *E.g.*, PRINCIPLES OF EUROPEAN ENVIRONMENTAL LAW 97 (Richard Macrovoy et al. eds., 2004).

<sup>226</sup> Porter & van der Linde, *supra* note 209, at 101.

<sup>227</sup> Compare *id.* at 110, with Blue Book, *supra* note 5, at 7.

<sup>228</sup> Blue Book, *supra* note 5, at 7.

<sup>229</sup> *Id.*

<sup>230</sup> *Id.*

<sup>231</sup> *Id.*

<sup>232</sup> Compare *id.*, with Porter & van der Linde, *supra* note 209, at 110.

<sup>233</sup> Blue Book, *supra* note 5, at 7.

harmonized standard – the second New Approach principle – is grounded on *Porter's* third principle; as little as possible should be left uncertain at every stage.<sup>234</sup> The New Approach's third principle is based on *Porter's* second principle by providing manufacturers with discretion on how to reach the requirements set forth, it is not intended block any particular innovation.<sup>235</sup> The last principle of the New Approach clarifies the onus of proof and thus tracks *Porter's* third principle as well.<sup>236</sup>

However it is unclear, whether the *Porter* propositions are reflected by economic reality.<sup>237</sup> Bernauer, et al. concluded that “[t]he Porter hypothesis has spurred a substantial amount of research on the influence of environmental regulation . . . , but the results have so far remained inconclusive.”<sup>238</sup>

This however does not mean that environmental regulation is not a success if fails to lead to economic growth. If it appears that regulation has neither fundamentally positive nor negative economic results, it will remain a success insofar as it decreased potential pollution haven activity and contributed to the preservation of the environment and the health and safety for the society as a whole.

## 2. Races to the Bottom and Race to the Top

Furthermore, contrary to international tax policy<sup>239</sup>, environmental regulation has not resulted into a “race to the bottom”<sup>240</sup> but instead a “race to the top”; an outcome which has also been called the “California effect”.<sup>241</sup> As David Vogel, the inventor of this term,<sup>242</sup> has pointed out, a race to the bottom has not been taking place in the field of environmental regulation because of four major reasons.<sup>243</sup> First, environmental regulation has been modest, and its cost for companies, compared to other costs, has been relatively low, forestalling a sufficient drive for relocation or outsourcing.<sup>244</sup> Second, environmental regulation does not have a negative effect on all companies.<sup>245</sup> Rather, it is a give-and-take where some companies profit from regulation while others experience losses.<sup>246</sup> Third, the compliance to environmental regulation can be used by companies for marketing purposes, which might also

<sup>234</sup> Compare Blue Book, *supra* note 5, at 7, with Porter & van der Linde, *supra* note 209, at 110.

<sup>235</sup> *Id.*

<sup>236</sup> *Id.*

<sup>237</sup> Bernauer et al., *supra* note 207, at 2; see also Stewart, *supra* note 203, at 2105.

<sup>238</sup> *Id.*

<sup>239</sup> See Bernhard Kuschnik, *Fiscal Impacts of Tax Havens on Non Haven African Countries*, 36 INTERTAX, 168, 169 (2008).

<sup>240</sup> See MILES KAHLER, MODELING RACES TO THE BOTTOM 7, <http://irps.ucsd.edu/assets/014/6739.pdf>. (last visited April 1, 2008).

<sup>241</sup> David Vogel, *Environmental Regulation and Economic Integration*, 3 J. INT'L ECON. L. 265, 269 (2000); See also Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the Race to the Bottom Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, (1996), Richard L. Revesz, *The Race to the Bottom and Federal Environmental Regulation: A Response to the Critics*, 82 MINN. L. REV. 535 (1997).

<sup>242</sup> DAVID VOGEL, TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A GLOBAL ECONOMY 6-7 (1995).

<sup>243</sup> *Id.*

<sup>244</sup> *Id.*

<sup>245</sup> *Id.*

<sup>246</sup> *Id.*

persuade the customer.<sup>247</sup> And forth, environmental regulation produces public benefits which in turn can have positive effects on companies.<sup>248</sup>

However, answering why a race to the bottom has not occurred does not explain why environmental regulation, at least in certain fields and areas, has led to a race to the top. A huge, unofficial driving force has been the protection of domestic markets, which has gone hand in hand with the creation of political pressure.<sup>249</sup> Additionally, stricter domestic regulations can create market opportunities for the export of pollution-control equipment.<sup>250</sup>

The "California effect" can be explained by using a simple example. Suppose we have a state A (e.g. California) and a state B (e.g. Texas) in country C (USA). State A raises the mandatory environmental standard in its territory; for example, A prohibits electronic equipment from containing more than 1 % lead, calculated on the product's total weight. Further, assume a company called "Eagle-Tec," which is based in state A, manufactures products that fulfil this requirement. As a consequence, Eagle-Tec can sell their products to state B. On the other hand, companies located in state B cannot sell their products in state A because they are not forced to produce products which fulfil the higher standard of A. As a result, the consumption market for Eagle-Tec products in state A is protected from state B company products, while at the same time Eagle-Tec can sell their products to State B. To compete with State A, State B subsequently enacts environmental regulation which conform with the regulations of A. This in turn leads to even stricter environmental regulation from state A, producing a "race to the top".

Of course, one must note that the "California effect" does not work in every field of environmental regulation.<sup>251</sup> To be effective, regulation must relate to products which are manufactured in large quantities.<sup>252</sup> There must also be a considerable drift in environmental standards and markets for a product must be openly accessible when this standard is reached.<sup>253</sup>

As can be seen in the field of electronic equipment, the "California effect" has already had major implications on global environmental regulation.<sup>254</sup> It can also explain the "Harrington paradox," stating why companies comply with environmental regulation to a much higher degree and do not limit their compliance

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<sup>247</sup> Adriana Vlachou, *Environmental Regulation, A Value-Theoretic and Class-Based Analysis*, 29 CAMBRIDGE J. ECON. 577, 579 (2005).

<sup>248</sup> *Id.* When increased pollution and scarcity become part of the conditions of production of regulating capitals in a particular sector, they increase the price of production of the commodity produced, given the average economy wide profit rate, and the change of structure of differential rents, *ceteris paribus*. *Id.* Changes in prices and differentials in rents, affect, in turn, profits, wages and other class payments. *Id.* See also Richard L. Revesz & Laura J. Lowenstein, *Anti-Regulation Under the Guise of Rational Regulation: The Bush Administration's Approaches to Valuing Human Lives in Environmental Cost Benefit Analysis* (N.Y.U. L. & Econ. Research, Working Paper No. 04-014, 2004), available at <http://papers.ssrn.com>.

<sup>249</sup> MICHAEL E. PORTER, *THE COMPETITIVE ADVANTAGE OF NATIONS* 585 (1990).

<sup>250</sup> *Id.*

<sup>251</sup> Peter P. Swire, *The Race to Laxity and the Race to Undesirability: Expanding Failures in Competition Among Jurisdictions in Environmental Law*, 16 YALE L. & POL'Y REV. 67, 108 (1996).

<sup>252</sup> This might be one of the reasons why the EuP Directive makes the adoption of implementing measures dependent upon the sale and/or trade of at least 200,000 units per year.

<sup>253</sup> Swire, *supra* note 251, at 108.

<sup>254</sup> KARINE NYBORG & KJETILE TELLE, *A DISSOLVING PARADOX: FIRM'S COMPLIANCE TO ENVIRONMENTAL REGULATION* (2004), available at <http://papers.ssrn.com>.

to the degree of the expected penalty of violation in relation to the compliance cost.<sup>255</sup> It is very likely that the EuP Directive will evoke similar effects.

### 3. The EuP Directive as an illegal foreign trade barrier or a justified legal tool of regulation?

The new regulatory proceedings of the EU, which are based on the New Approach and Global Approach, have been criticized by Non EU Members as being non-compliant with WTO law.<sup>256</sup> In particular, some claim that the EU does not limit its regulation to technical details of standardization but rather extends it to broad public safety requirements.<sup>257</sup> This is insofar problematic as at least two WTO agreements – the SPS Agreement<sup>258</sup> and the TBT Agreement<sup>259</sup> – were designed to prevent countries from enacting technical regulations and/or standards that constitute unnecessary obstacles to international trade.<sup>260</sup> If a state or a supra national organization like the EU act contrary to these agreements, their measures might constitute disguised (and illegal) non tariff foreign trade barriers.<sup>261</sup> For example, the EU's eco-labelling program, which also has been implemented into the EuP Directive, is based on a 'life – cycle analysis', a measure which explicitly covers the way imported products are made.<sup>262</sup> As at least one commentator claims,

European eco-labelling standards have pressured Brazil, a major exporter of shoes, to change the way its leather goods are produced. This in turn has affected processing standards for hides in Argentina and Uruguay, for whom Brazil is a major export market. Likewise, a number of non-European firms have 'voluntarily' adopted ISO 14,000 in order to maintain their access to European markets.<sup>263</sup>

The EU refutes that their broad regulatory approach is in line with the above mentioned agreements and is not in breach with international law, citing the "precautionary principle" as a defence.<sup>264</sup> The idea at the heart of the precautionary principle is that when human activities may have dramatic damaging effects, decision-makers should not wait for full scientific proof before adopting appropriate protective measures.<sup>265</sup> Yet, the sole reliance on the "precautionary principle" seems to be somewhat shaky. Surely it is undeniable that the principle exists in international law.<sup>266</sup> For example, WTO agreements appear to allow the use of environmental product standards to prevent environmental damage associated with

<sup>255</sup> *Id.*

<sup>256</sup> Lawrence A. Kogan, *Unscientific Precaution: Europe's Campaign to Erect New Foreign Trade Barriers*, WASH. LEGAL FOUND., Working Paper No. 118, 2003 available at <http://www.itssd.org/White%20Papers/WLFKoganArticle2.pdf>.

<sup>257</sup> *Id.*

<sup>258</sup> Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, 1867 U.N.T.S. 493.

<sup>259</sup> Agreement on Technical Barriers to Trade, U.S. -World Trade Org., Apr. 15, 1994.

<sup>260</sup> Kogan, *supra* note 256, at 3.

<sup>261</sup> Vogel, *supra* note 241, at 271.

<sup>262</sup> *Id.*

<sup>263</sup> *Id.*

<sup>264</sup> E.g., Lila Antonopoulou & Philip van Meurs, *The Precautionary Principle Within European Union Public Health Policy: The Implementation of the Principle Under Conditions of Supranationality and Citizenship*, 66 HEALTH POLICY 179, 179 (2003).

<sup>265</sup> Kogan, *supra* note 256, at 3.

<sup>266</sup> See, e.g., Yu-Bong Lai, *Interest Groups, Trade Liberalization and Environmental Standards*, 34 ENVIRO. & RESOURCE ECON 269, 270 (2006).

consumption activities.<sup>267</sup>

However, one could argue that the WTO permissions and the application of the “precautionary principle” are the exception rather than the rule and have not reached the status of customary international law due to its economic consequences.<sup>268</sup> If the precautionary principle had evolved into a generally accepted practice, the outcome would be dramatic for world trade interaction because every state would have the right to enact protectionist (and discriminatory) regulations every time environmental, health and consumer protection is involved.<sup>269</sup> Hence, there is a preference by some to use the word “approach” rather than principle; such an interpretation can be found in Article 6 of the Agreement for the Implementation of the Provisions of the UNCLOS Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of December 4 1995, which obliges state parties to apply the “precautionary approach.”<sup>270</sup>

Nevertheless, precautionary measures, which are grounded on environmental regulations, have received much academic support in the last years.<sup>271</sup> Hence, the question is not whether the precautionary principle is a legal instrument of international law, but rather how it shall be specified and limited. As stated by Laing:

Even as questioning the acceptability of the precautionary notion diminishes, challenges increase regarding such specifics as: the wide potential ambit of its coverage; the clarity of operational criteria; the monetary costs of environmental regulation; possible public health risks associated with the very remedies improvised to avoid risk; diversity and vagueness of articulations of the notion; uncertainties about attendant obligations, and the imprecision and subjectivity of a value-laden notion.<sup>272</sup>

Nevertheless, D’Amato and Engel state that the notion has been “broadly accepted for international action, even if the consequence of its application in a

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<sup>267</sup> *Id.*

<sup>268</sup> See, e.g., David Freestone & Ellen Hey, *Implementing the Precautionary Principle: Challenges and Opportunities*, in *THE PRECAUTIONARY PRINCIPLE AND INTERNATIONAL LAW: THE CHALLENGE OF IMPLEMENTATION*, 31 ENVTL. LAW AND POL. SERIES 249, 249 (David Freestone & Ellen Hey eds., 1996) (stating the precautionary principle is here to stay, however its status as customary international law is still a matter for debate).

<sup>269</sup> SHEARER, IVAN A., SOUTHERN BLUEFIN TUNA CASES (NEW ZEALAND V. JAPAN, AUSTRALIA V. JAPAN), SEPARATE OPINION OF JUDGE AD HOC SHEARER, *reprinted in* INTERNATIONAL BUSINESS LAW—TEXT, CASES AND READINGS, at 106 (Ray A. August, Prentice Hall, 4th ed. 2004) (1999) [Hereinafter BLUEFIN CASES]. “There is a considerable literature devoted to the emergence of the precautionary principle in international law generally, but whether that principle can of itself be a mandate for action, or provide definitive answers to all questions of environmental policy, must be doubted.” *Id.*

<sup>270</sup> Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement), art. 6, Dec. 4, 1995 *available at* [www.un.org/Depts/los/convention\\_agreements/convention\\_20years/1995FishStockAgreement\\_ATahindro.pdf](http://www.un.org/Depts/los/convention_agreements/convention_20years/1995FishStockAgreement_ATahindro.pdf).

<sup>271</sup> See, e.g., Freestone & Hey, *supra* note 268 (the precautionary principle is now a major part of environmental policy and is here to stay).

<sup>272</sup> SOUTHERN BLUEFIN TUNA CASES (NEW ZEALAND V. JAPAN, AUSTRALIA V. JAPAN), SEPARATE OPINION OF JUDGE LAING, *reprinted in* 117 INTERNATIONAL LAW REPORTS, at 174 (Elihu Lauterpacht et al., eds., Cambridge Univ. Press 2000) (1999).

given situation remains open to interpretation.”<sup>273</sup>

However, this interpretation of eco-standards raises fundamental problems. In addition to the EU, China, Switzerland, parts of the US have already implemented regulatory measures to ban products that consist of certain hazardous substances.<sup>274</sup> Even though the China RoHS has greatly been influenced by EU legislation, it still departs from the EU RoHS Directive and requires even stricter compliance.<sup>275</sup> The California RoHS on the other hand is less strict than the EU RoHS Directive.<sup>276</sup> Because a global approach has not evolved despite the precautionary principle being generally adopted, the risk exists that manufacturers will have major problems staying in compliance with the regulations in every country.<sup>277</sup>

Additionally, manufacturers who have incurred the expense and time of complying with the RoHS provisions can use their compliance as a competitive advantage against less green competitors by filing a claim to provoke an EU audit of another’s company system.<sup>278</sup> It seems likely that once a competitor in the market blows the whistle, a “war of the worlds” scenario develops where each company in the market accuses the other of not being RoHS compliant.<sup>279</sup>

Furthermore, different approaches on the WEEE Directive are very likely to create major complications even within a country. In the USA, the desire to ban certain hazardous substances in electric and electronic equipment has lead to dozens of different regulations among the respective US states.<sup>280</sup> As Paul Tallentire, president of Newark inOne,<sup>281</sup> points out, “There are now as many flavours of RoHS being proposed as you find in an ice cream shop.”<sup>282</sup> Just as the multitude of RoHS regulations may well become a major problem over the next few years, one can be assume that similar globally uncoordinated actions will also be problematic in the field of eco design.

However, it should be pointed out that the application of the “precautionary principle” is not limited to EU practice. For Example, thirteen American States authorize the use of unilateral sanctions to force American’s trading partners into adopting American environmental production standards; all of which involve efforts to protect animals and marine life outside the legal jurisdiction of the United States.<sup>283</sup> Recycling requirements enacted by Denmark and the Canadian province of Ontario have both disadvantaged foreign producers while improving environmental

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<sup>273</sup> *Id.* (Quoting ANTHONY D’AMATO & KIRSTEN ENGLES, INTERNATIONAL LAW ANTHOLOGY 22 (1996)).

<sup>274</sup> *E.g.*, China RoHS, *supra* note 7 (unofficial translation of China’s RoHS); Kumar & Fullenkamp, *supra* note 6 (analysis of EU environmental directives, including RoHS); Bergner, *supra* note 11 (discussiong California’s RoHS).

<sup>275</sup> China RoHS, *supra* note 7 (unofficial translation of China’s RoHS).

<sup>276</sup> *See generally*, Bergner, *supra* note 11 (For example, the California RoHS does not prohibit the use of PBB and PBDE).

<sup>277</sup> Barbara Jorgensen, *There Oughta be a (Single) Law*, 32 FRONT ROW BUS. 7, Jul. 2006, at 16; *see also* Margery Conner, *The Greening of Global Markets*, EDN, Jul. 20, 2006, at 38, 38 (‘Manufacturers may standardize on the most stringent “Green” Directive’).

<sup>278</sup> Conner, *supra* note 277, at 40.

<sup>279</sup> *Id.*

<sup>280</sup> *See generally* Jorgensen, *supra* note 277 (advocating a single law for RoHS compliance).

<sup>281</sup> *See* Newark InOne, [www.newark.com/jsp/bspoke/bspoke1.jsp?bspokepage=newark/en\\_US/inside/press/20040625.jsp](http://www.newark.com/jsp/bspoke/bspoke1.jsp?bspokepage=newark/en_US/inside/press/20040625.jsp) (last visited April 1, 2008) (press release referring to Paul Tallentire as president).

<sup>282</sup> Jorgensen, *supra* note 277, at 16.

<sup>283</sup> Vogel, *supra* note 241, at 272; Stewart, *supra* note 203, at 2040.

quality.<sup>284</sup> As shown, environmental regulation is not restricted to EU approaches but is grounded on a worldwide practice. The accusation that the EU should stop the usages of the precautionary principle due to alleged WTO law legislation does not solve the problem, nor is it sufficiently profound.

#### CONCLUSION

Understandably, the EU has chosen a “forward-looking” approach in the field environmental regulation due to the considerable current resistance and reluctance to implement effective environmental policies.<sup>285</sup> For example, environmentalists have criticized the Kyoto protocol, part of the UNFCCC, on the one side not being far reaching enough, while on the other side industry lobbyists consider it as being too far reaching due to its alleged negative effects on the economy.<sup>286</sup> By virtue of such economic implications, the USA (a prime global contaminator, producing over 5400 million metric tons of CO<sub>2</sub> emissions per year<sup>287</sup>) has ratified neither the Kyoto Protocol nor the Basel Convention.<sup>288</sup>

Therefore, unsurprisingly, the Commission in the field of eco-design likely will give priority to the regulation of products, which seriously contribute to the levels of greenhouse gas emissions (e.g. CO<sub>2</sub>).<sup>289</sup> If China follows the EU in the field of eco-design regulation just as it has in the case of RoHS, it is likely that the EuP Directive will (at least in part) become a Kyoto protocol substitute, which could have a major

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<sup>284</sup> Vogel, *supra* note 241 at 268.

<sup>285</sup> See, e.g., BLUEFIN CASES, *supra* note 272, at 110 (Statement of U.S. President George Bush) (“The Kyoto Protocol was fatally flawed in fundamental ways. [...] The world’s second largest emitter of greenhouse gases is China. Yet, China was entirely exempted from the requirements of the Kyoto Protocol. India and Germany are among the top emitters. Yet, India was also exempt from Kyoto. These and other developing countries that are experiencing rapid growth face challenges in reducing their emissions without harming their economies. [...] Kyoto is, in many ways unrealistic. Many countries cannot meet their Kyoto targets. The targets themselves were arbitrary and not based upon science. For America, complying with those mandates would have a negative economic impact, with layoffs of workers and price increases for consumers. And when you evaluate all these flaws, most reasonable people will understand that it’s not sound public policy. That’s why 95 members of the United States Senate [out of 100] expressed a reluctance to endorse such an approach”).

<sup>286</sup> *Id.*

<sup>287</sup> See, e.g., BBC News, The Politics of Climate Change, [http://news.bbc.co.uk/1/hi/english/static/in\\_depth/sci\\_tech/2001/climate\\_change/usafacts.stm](http://news.bbc.co.uk/1/hi/english/static/in_depth/sci_tech/2001/climate_change/usafacts.stm) (last visited April 1, 2008) (chart detailing CO<sub>2</sub> emissions of the “major polluters”).

<sup>288</sup> Kimberly K. Gregory, *The Basel Convention and the International Trade of Hazardous Waste: The Road to the Destruction of Public Health is paved with Good Intentions*, X CURRENTS: INT’L TRADE L.J. 80, 82-88 (Winter 2001); Mark E. Allen, *Slowing Europe’s Hazardous Waste Trade: Implementing the Basel Convention into European Union Law*, 6 COLO J. INT’L ENVTL. L. & POL’Y 164, 167 (Winter 1995); A. O. Akinnusi, *The Bamako and Basel Conventions on the Transboundary Movement and Disposal of Hazardous Waste: A Comparative and Critical Analysis*, 12 STELLENBOSCH L. REV., 306, 306-316 (2001); Daniel Jaffe, *The International Effort to Control the Transboundary Movement of Hazardous Waste: The Basel and Bamako Conventions*, 2 ILSA J. INT’L & COMP. L. 123, 123-137 (1995); Basel Action Network, *Running from Basel: Post-treaty Revisionism Threatens Landmark Treaty*, BAN (BRIEFING PAPER 8), Oct. 2004, at 2 (“Basel Convention’s legal obligations are too contentious and “impractical”).

<sup>289</sup> ECO-DESIGN DIRECTIVE, *supra* note 18, at 3. “Electrical appliances are the fastest growing source of greenhouse gas emissions after cars in OECD countries. Residential electrical appliances account for 30 % of electricity consumption and 12 % of greenhouse gas emissions. Based on existing appliances policy, demand is projected to grow 13 % by 2010 and 25 % by 2025 (IEA 2003).” *Id.*

impact on US regulation as well.<sup>290</sup> Such measures, if not a direct attempt at protectionism, are a perfectly legal practice. As Article 4 of UNFCCC states, Annex I countries<sup>291</sup> have an *obligation* to adopt climate change policies and measures with the “aim” of returning their greenhouse gas emissions to 1990 levels.<sup>292</sup>

Furthermore, it should be clear that environmental pollution and climate protection are problems associated with globalization which cannot effectively be dealt with on a national level.<sup>293</sup> Therefore, an application of the “precautionary principle” which restricts itself to exemption scenarios and/or national borders would not seem sensible because environmental damage is difficult, if not impossible, to repair (the so called “global tragedy of the commons”).<sup>294</sup> Taking this into account, a less restrictive approach in the application of “precautionary principle” seems to be justified. It is clear that in any case, the wait for global scientific approval is not the correct assessment factor.<sup>295</sup>

In order to achieve effective climate protection, serious measures have to be taken; or as the Federal Administrative Court of Germany (BVerwG) notes:

Apart from this, it is in the nature of things, that such goals (the global climate protection) are only then enforceable, if at least in one such area someone has started to take serious actions.<sup>296</sup>

The EuP Directive has great potential to produce remarkable energy savings. According to a communication from the EP, the Directive could prevent nearly 200 million tonnes of CO<sub>2</sub> from entering the atmosphere – an amount equivalent to the total emissions of the Netherlands.<sup>297</sup> Whether that goal will be achieved will mainly depend on the effectiveness of the implementing measures.

By enacting the EuP Directive, the overriding priority of the EU, however, is to

<sup>290</sup> See, e.g., U.S. Commercial Service of the U.S. Department of Commerce, EU Energy-Using Products Update: The European Union's (EU) Energy Using Products (EuP) Directive, <http://www.buyusa.gov/boise/eueup.html> (last visited April 1, 2008) (explain the possible impact of the EuP on U.S. firms).

<sup>291</sup> BLUEFIN CASES, *supra* note 272, at 109. “The Convention [referring to the UNFCCC] divides its member countries into two main groups. Developed countries-currently 40 are members-are known as Annex I countries (because they are listed in the convention's Annex I). Other member countries are known as non-Annex I countries.” *Id.*

<sup>292</sup> See also World Charter for Nature, G.A. Res. 35/7, U.N. GAOR, 35th Sess., 48th plen. Mtg. at 3, U.N. Doc. A/RES/37/7 (Oct. 28, 1982) available at <http://www.un.org/documents/ga/res/37/a37r007.htm> (which declares states need to establish procedures to control activities which might have an impact on nature).

<sup>293</sup> Edith Brown Weiss, *Environmentally Sustainable Competitiveness: A Comment*, 102 Yale L.J. 2123, 2123 (1992) (referencing the Rio Declaration).

<sup>294</sup> See, e.g., John Hikman & Sarah Bartlett, *Global Tragedy of the Commons at COP 6*, SYNTHESES REGNERATION: A MAGAZINE FOR GREEN SOCIAL THOUGHT, Winter 2001, available at <http://www.greens.org/s-r/24/24-26.html> (explaining the global tragedy of the commons through reference to the Climate Control Convention of 2000).

<sup>295</sup> *Id.* “Unless action is taken, the world can expect severe flooding of low-lying coastal areas because of increasingly violent storms and rising sea levels, and the disruption of agriculture and ecosystems across continents which will result in famine, migration, and species loss.” *Id.*

<sup>296</sup> See Becker, „Die Ökonomisierung und Globalisierung des Umweltrechts vor dem Bundesverwaltungsgericht“, NVwZ 2006, 785 „Abgesehen davon liegt es in der Natur der Sache begründet, dass solche Ziele [meaning the global protection of the climate] nur dann durchsetzbar sind, wenn zumindest an einer Stelle damit ernsthaft begonnen wird.“ (translation from German by the author).

<sup>297</sup> ECO-DESIGN DIRECTIVE, *supra* note 18, at 5.

create a single economic market allowing free movement of goods and services.<sup>298</sup> The Commission therefore aims to eliminate disparities between the laws of the Member States which can create barriers to free trade, distort competition and to encourage the development of a common legal framework.<sup>299</sup> Thus, coherent EU wide rules for eco-design are intended to ensure that disparities among national legislations do not become obstacles to EU trade.<sup>300</sup>

Of course, it is more desirable if environmental preservation is not played off against economical interests. Yet, as shown, environmental regulation and global economical interests are *eo ipso* not contradictory. If such a scenario evolves nevertheless, a case by case analysis has to clarify whether environmental aspects prevail over economical ones.

In this regard, an assessment is likely to be fair when taking into account the abstract and concrete risk for the environment in relation to the abstract and concrete risk for economical interests. The more hazardous a certain practice might be – on an abstract as well as a concrete level – and the more scientific evidence is available which leads to the assumed conclusions, the more is it justified to restrict economical activity.<sup>301</sup>

In the end, a general re-thinking process must take place. Green production must be seen as an economic opportunity rather than a threat. Even if such a win-win correlation does not exist for particular groups of companies, “[w]hat ultimately matters is the broad overall performance of the economy, including the environmental and health benefits generated by governmental programs for environmental protection.”<sup>302</sup>

The global village can decide to reach a policy convergence that will produce such opportunities. However, due to the “California effect” and different national interests, a similar eco-design standard will most likely not be adopted globally.<sup>303</sup> Although the regulatory differences between countries remain foreseeable, only a discussion among the states will ensure that the minimum environmental standards will be raised.

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<sup>298</sup> Council Directive 2005/32, art. 1(1), 2005 O.J. (L 191) 29, 33 (EC).

<sup>299</sup> See, e.g., National Forum on Europe, *The European Union: What it Does*, <http://www.forumoneurope.ie/index.asp?locID=113&docID=1045> (last visited April 1, 2008). (describing the activities of the European Union).

<sup>300</sup> ECO-DESIGN DIRECTIVE, *supra* note 18, at 2; see also DEPARTMENT OF TRADE AND ENERGY, *supra* note 18, at ¶ 2.25. “These [EuP] standards will apply across the EU and we in the UK will press for ambitious standards to be delivered under this directive.” *Id.*

<sup>301</sup> See also Stewart, *supra* note 203, at 2098 “In sum competitiveness concerns alone do not justify and will not lead to agreement on uniform national standards for all significant environmental problems. Efforts at international harmonization should focus on those areas **such as product standards**, where most nations may benefit economically from common standards, or on environmental problems that create especially serious externalities.” *Id.*

<sup>302</sup> *Id.* at 2041.

<sup>303</sup> *Id.* at 2097.