

The rise of complex decision-making in the European Union: boards of appeal as a mechanism to mitigate challenges of scientific uncertainty

The cases of the European Chemicals Agency and the Agency for the Cooperation of Energy Regulators

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Abstract

This article explores the use of expertise by the boards of appeal (BoAs) within EU agencies to mitigate challenges of scientific uncertainty that arise from specialized decision-making. BoAs have been established as an internal control mechanism with significant potential to substantively address challenges of scientific uncertainty. They are composed of both legal and technical experts in the field of the agency. This article focuses on two specific agencies: the European Union Agency for the Cooperation of Energy Regulators (ACER) and the European Chemicals Agency (ECHA). Recent judgments from the EU courts have heightened expectations for the intensity of review that BoAs should apply on agency decisions, given their expertise. This article introduces the degrees of known, unknown and unknowable uncertainties as a tool to decide the extent to which the BoAs may substantively assess the technical and scientific considerations by the agency. These degrees illustrate that the more consensus on a topic exists, the more stringent the review by the BoAs can be. Conversely, in the case of more uncertainty, the more appreciation may be granted to the agency, although the BoAs should still use their expertise to draw the boundaries of scientific uncertainty.

I. Introduction

As the European administrative state has grown increasingly complex over the last couple of decades, more specialized competences have been conferred upon European Union (EU) agencies. As a result, some agencies can take individual binding decisions in highly technical and scientific fields. Scientific uncertainty may arise in this context. Scientific uncertainty in decision-making entails the choice the agency has made for the scientific standard it will use as its justification, while there might still be other theories out there. It is characterized by the inconclusiveness of scientific evidence on particular issues and potential risks in which the agency has decided to use a specific paradigm.

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The EU courts cannot address these issues because of the institutional balance that is key within the EU. Technical expertise of agencies justifies a limited judicial review over the substance of the contested decisions; the courts solely check whether the contested decisions do not exceed the bounds of powers that have been conferred upon the agencies, and check whether the contested decisions are vitiated by manifest errors of assessment.¹ This means that there may be a review gap in the current controls system: while there is judicial review, there is no serious substantial review to address the challenges of scientific uncertainty. Within agencies that avail of decision-making powers, boards of appeal (BoAs) have been set up as an internal control mechanism that does have the potential to mitigate challenges of scientific uncertainty. These BoAs are part of the institutional organization of the agencies and have the expertise that the EU courts lack; they are composed of both legal and technical experts in the particular field of the agency. The role of BoAs is to make an independent judgment on whether the agency has applied the rules correctly within the scope of the tasks that have been delegated to it and the responsibilities assigned to it.²

This article aims to explore how the expertise of BoAs currently is and can be used to mitigate the challenges of scientific uncertainty that arise from specialized decision-making. This article will hypothesize that the more consensus on a topic exist, the more stringent the review by the BoAs can be; the more uncertainty, the more appreciation may be granted to the agency, although the

¹ Case C-579/19 *The Queen, on the application of: Association of Independent Meat Suppliers and Cleveland Meat Company Ltd v Food Standards Agency* [2010] ECLI:EU:C:2021:665 (*Independent Meat Suppliers*), paras 88-93; See, amongst others, Case C-12/03 P *Commission v Tetra Laval* [2005] ECLI:EU:C:2005:87, para 39; Case T-96/10 *Rütger Germany et al v ECHA* [2013] ECLI:EU:T:2013:109, paras 99-100; Case C-91/19, *Fédération bancaire française (FBF) v Autorité de contrôle prudentiel et de résolution (ACPR)* [2021] ECLI:EU:C:2021:599, paras 75-79, 83-84, 122-123, 125-129; M Gargantini and M Scholten, 'The past is the past. The future is all that's worth discussing' (Lord Baelish, *The Game of Thrones*). Some reflections on the non-delegation doctrine and its impact on the ESAs powers after the CJEU decision on the FBF case, EU Law Enforcement Blog 30 September 2021 <<https://eulawenforcement.com/?p=8077>>.

² Commission, 'The operating framework for the European Regulatory Agencies' COM (2002) 718 final, 10; Commission, 'Draft Interinstitutional Agreement on the operating framework for the European regulatory agencies' COM (2005) 59 final, 17; 'Joint Statement of the European Parliament, the Council of the EU and the European Commission on decentralized agency', (2012) 7; Although not discussed in this article, the development of Article 58a into the CJEU Statute has implications on the task division between the BoAs, the GC and the ECJ. Only in exceptional cases will an appeal be allowed at the ECJ. This probably will not affect the intensity of review conducted by the BoAs. See for further discussion on this topic, amongst others: L de Lucia, 'The shifting state of rights protection vis-à-vis EU agencies: a look at article 58a of the Statute of the Court of Justice of the European Union' (2019) 44 *European Law Review* 809; L De Lucia, 'The Boards of Appeal as Hybrid Adjudicators: One Some Shortcomings of Article 58a of the Statute of the Court of Justice of the European Union', in M Chamon, A Volpato and M Eliantonio (eds), *Boards of Appeal of EU Agencies: Towards Judicialization of Administrative Review?* (Oxford University Press 2022).

BoAs should still use their expertise to draw the boundaries of scientific uncertainty.³

Scientific uncertainty can be found to an extent in most decision-making agencies. This article focuses on two specific examples: the European Union Agency for the Cooperation of Energy Regulators (ACER) and the European Chemicals Agency (ECHA). These agencies are very comparable in nature; they both take technically complex decisions and have complex decision-making procedures. The latter is characterized by the involvement in individual cases of other parties, such as Member States or National Regulatory Authorities. Moreover, both BoAs have an extensive decision-making practice which has recently been reviewed by the General Court (GC) and the European Court of Justice (ECJ) in three landmark cases.

First, the ECHA and ACER BoAs are introduced and their decision-making practice prior to the landmark judgments are discussed (section 2). Secondly, these landmark judgments and subsequent decision-making by the BoAs are analyzed (section 3). Then, a new benchmark is introduced which may be helpful for the BoAs to define their level of scrutiny over their agencies' decisions when confronted with issues of scientific uncertainty (section 4). This article ends with a conclusion (section 5).

2. Navigating scientific uncertainty: the BoAs' review before the Courts' guidance

This section explores the institutional positioning of expertise within ECHA and ACER and how their respective BoAs have used this in their decision-making practice up to the landmark cases by the EU courts.

2.1. European Chemicals Agency

ECHA was established in 2006 by the REACH Regulation to 'ensure a high level of protection of human health and the environment' and the promotion of alternative methods for the assessment of hazard of sub-

³ While the EU courts use 'margin of discretion' and 'margin of appraisal' interchangeable, this paper solely uses the term 'margin of appreciation' as this refers to the technical discretion that is left to the agencies for the complex nature of their assessments, cf. RJGM Widdershoven, 'The European Court of Justice and the Standard of Judicial Review' in J de Poorter, E Hirsch Balling and S Lavrijssen (eds), *Judicial Review of Administrative Discretion in the Administrative State* (Springer 2019); and also comparable see M Prek and S Lefèvre, 'Administrative Discretion, Power of Appraisal, and Margin of Appraisal in Judicial Review Proceedings before the General Court' (2019) 56 *Common Market Law Review* 339.

stances.⁴ ECHA does not only cover the implementation and application of the REACH Regulation, but also related Regulations on chemicals such as the Waste Framework Directive and the Biocidal Products Regulations. The appealable individual decisions taken by ECHA are, under the REACH Regulation, decisions on the registration of chemicals and the exemptions of registration, data sharing, dossier evaluation, and substance evaluation. Under the Biocidal Products Regulation, decisions on fees, data sharing, and technical equivalence can be appealed.⁵

The decisions, such as the substance evaluations and compliance checks, give rise to challenges of uncertainties. Following the REACH Regulation, chemical producers must register their dossiers at ECHA to show their safe use of these substances. The possible uncertainties lay in the underlying studies of the dossiers due to conflicting scientific findings, unclear data and/or uncertain research methodologies.⁶ An example is whether the applicant should conduct a toxicity test on the substance when registering at ECHA; exceptions may be made when the new substance is comparable to an already registered substance. The level of comparability between these two substances may be subject to differing scientific studies and/or opinions.

2.1.1. ECHA Board of Appeal: organization

The REACH Regulation and Biocidal Product Regulation state that the BoA is set up ‘to guarantee processing of appeals for any natural or legal person affected by decisions taken by the Agency’.⁷ The BoA consists of a chairman and two other members. The Chairman must be legally qualified, and one of the members should be a legally qualified member with a degree and experience in EU law, and the other should be a technical qualified member with a degree and experience in hazard assessment, exposure assessment or

⁴ Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC [2006] OJ L396/1 (REACH Regulation), recital 1.

⁵ E Mullier and R Cano, ‘The ECHA Board of Appeal and the Court of Justice: Comparing and Contrasting Chemicals Litigation’ (2018) 3 International Chemical Regulatory and Law Review 105, 107.

⁶ ‘Administrative Review: Cheaper, Quicker and More Thorough’ in M Krajewski, *Relative Authority of Judicial and Extra-Judicial Review: EU Courts, Boards of Appeal, Ombudsman* (Hart Publishing 2021).

⁷ REACH Regulation, recital 106; Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products [2012] OJ L167/1, recital 65.

risk management of chemical substances.⁸ Following from Article 93(3) of the REACH Regulation, the ECHA BoA can exercise the same powers as ECHA. This provision also implies that the ECHA BoA ‘has all the legal power that any one part of the ECHA itself has been afforded’.⁹ Since the BoA has the same powers as ECHA, it can annul, partially or in whole, ECHA decisions and substitute it with its own decision or may remit the case to the competent body of ECHA, which has often been the case.¹⁰

2.1.2. ECHA Board of Appeal: intensity of review

Article 93(3) of the REACH Regulation confers broad powers onto the ECHA BoA since they can exercise the same powers as the agency. Because of this provision, the ECHA BoA has explicitly differentiated its approach from that of the EU courts.

In its earlier decisions *Honeywell*, *Akzo Nobel Industrial Chemical GmbH*, *Lanxess* and *EPZ*, the ECHA BoA, referring to Article 93(3) of the REACH Regulation and the concept ‘functional continuity’ as defined by the EU courts, stated that it ‘can carry out a new, full examination as to the merits of the appeal, in terms of both law and fact’.¹¹ It concluded that it may consider ‘all circumstances and facts applicable during the administrative procedure that led to the adoption of the contested decision’, and is ‘not limited to the arguments of facts and law raised by the parties’.¹² This implies not only that the ECHA BoA considers itself to not be bound by the grounds brought forward by the party but also that not only legal grounds can be brought forward but also technical grounds. Essentially, in these cases, the ECHA BoA states that it can fully reconsider or conduct a *de novo* review of the entire dispute, meaning that it can act like ECHA would itself.¹³ Moreover, it also implies that the ECHA BoA would have a more investigative role within the appeal procedure, being able to raise pleas or grounds *ex officio*. This investigative line was also followed by the ECHA

⁸ Commission Regulation (EC) No 1238/2007 of 23 October 2007 on laying down rules on the qualifications of the members of the Board of Appeal of the European Chemicals Agency [2007] OJ L280/10, art 1.

⁹ M Navin-Jones, ‘A Legal Review of EU Boards of Appeal in Particular the European Chemicals Agency Board of Appeal’ (2015) 21 European Public Law 143, 148.

¹⁰ Mullier and Cano (n 6) 109.

¹¹ Mullier and Cano (n 6) 110; ECHA BoA A-001-2010, *N.V. Elektriciteits – Produktiemaatschappij Zuid-Nederland EPZ v ECHA* [2011] para 36; ECHA BoA A-004-2012, *Lanxess Deutschland GmbH v ECHA* [2013]; ECHA BoA A-005-2014, *Akzo Nobel Industrial Chemicals and Others v ECHA* [2015].

¹² ECHA BoA A-001-2010, *N.V. Elektriciteits – Produktiemaatschappij Zuid-Nederland EPZ v ECHA* [2011] para 37.

¹³ Navin-Jones (n 10) 153; G Ligugnana, ‘Dispute Resolution in European Agencies: the ECHA Board of Appeal’, in A Cassatella, G Ligugnana and B Marchetti, *Administrative remedies in the European Union : The emergence of a quasi-judicial administration* (G Giappichelli 2017) 93.

BoA in *Honeywell*, in which it went much further than merely annulling the contested decision in favor of the appellant.¹⁴ This approach has been regarded as highly contentious by several authors; firstly, this approach would defeat the adversarial nature before the ECHA BoA, and secondly, it would undermine the complex initial decision-making procedure in which multiple parties have to reach a unanimous decision. An inquisitorial approach would, therefore, not be in line with the REACH Regulation.¹⁵ In more recent decisions, the ECHA BoA also seems to have resorted to a more limited scope of review and refrained itself from conducting a *de novo* review.¹⁶

Similarly, in the same earlier decisions, the ECHA BoA also differentiated itself from a limited intensity of review as used by the EU courts. It argued that because it consists of both legally and technically qualified members and has the same powers as ECHA, it should be able to conduct technical assessment that is not limited to ‘manifest’ errors of assessment.¹⁷ In these decisions, the ECHA BoA has also taken account of economic, technical and scientific considerations as well as legal considerations.¹⁸ In *CINIC Chemical Europe SárI* and *Altair Chimica SpA and Others*, the ECHA BoA, for the first time, acknowledged that ECHA ‘has a wide margin of discretion’ but at the same time also observed that this does not ‘prevent the Board of Appeal from examining whether the Agency [...] took into consideration all the relevant factors and circumstances of the situation the act was intended to regulate’.¹⁹ In its *Dow* decision, the ECHA BoA further built upon a deferential review in which, again, was stated that ECHA ‘must be recognized as enjoying broad discretion’.²⁰ The ECHA BoA then continued that its role was limited to solely reviewing whether ECHA ‘misused its margin of discretion’, referring to case law of the EU courts endorsing this view.²¹ This approach was also followed in other decisions by the ECHA BoA, seemingly showing a shift in the BoAs understanding of its role in reviewing the contested decisions. Krajewski observes that only in so-called ‘hard’ cases does the ECHA BoA use the process-oriented review as employed by the

¹⁴ *ibid* 156; ECHA BoA A-005-2011, *Honeywell Belgium N.V. v ECHA* [2013].

¹⁵ L. Bolzonello, ‘Independent Administrative Review Within the Structure of Remedies under Treaties: The Case of the Board of Appeal of the European Chemicals Agency’ (2016) 22 *European Public Law* 569, 576-577.

¹⁶ A Volpato and E Mullier, ‘The Board of Appeal of the European Chemicals Agency at a Crossroads’ in M Chamon, A Volpato and M Eliantonio (eds) *Boards of Appeal of EU Agencies: Towards Judicialization of Administrative Review?* (Oxford University Press 2022) 96.

¹⁷ Mullier and Cano (n 17) 110; ECHA BoA A-005-2011, *Honeywell Belgium N.V. v ECHA* [2013] para 117; ECHA BoA A-005-2014, *Akzo Nobel Industrial Chemicals and Others v ECHA* [2015] para 54; Ligunana (n 14), 93.

¹⁸ Mullier and Cano (n 17), 110.

¹⁹ Ligunana (n 14) 94; ECHA BoA A-001-2014, *CINIC Chemical Europe SárI v ECHA* [2015] para 74.

²⁰ ECHA BoA A-001-2012, *Dow Benelux B.V. v ECHA* [2013] para 109.

²¹ *ibid* para 110.

EU courts, ‘namely the verification of the accuracy, reliability, consistency and comprehensiveness of relevant evidence, which should be capable of substantiating the conclusions drawn from it’.²² In cases of uncertainty due to the lack of well-established and commonly agreed upon scientific methodologies, the ECHA BoA is more deferential in its assessment and solely checks whether the appellant’s arguments have been appropriately considered and addressed by the Agency in the initial decision-making process.²³ In the other cases, Krajewski notes, the ECHA BoA does appear to review the assessments more thorough than the EU courts by delving into the design of scientific tests or methodological issues of available chemical studies.²⁴

2.2. European Union Agency for the Cooperation of Energy Regulators

ACER was established in 2011 as part of the Third Energy Package legislation.²⁵ One of its aims is to foster the cooperation and coordination among Member States, and in particular the national regulatory authorities.²⁶ ACER has been created as an independent body within this cooperation to fill the regulatory gap regarding the European internal energy market for electricity and natural gas.²⁷ Under its founding Regulation, ACER is granted individual decision-making powers in situations concerning more than one Member State regarding technical issues within the regulatory regime for cross-border electricity and natural gas infrastructures.²⁸ These powers have been expanded in 2019 and currently ACER has a wide array of individual decision-making powers such as setting the minimum and maximum prices for the EU day-ahead and intraday electricity and gas markets, approving and amending methodologies to adopt common technical rules or network codes to harmonize the EU-wide electricity and gas market, reviewing bidding zones in these fields, deciding on exemptions from specific regulatory requirements, and taking other decisions related to wholesale market integrity and transparency.²⁹

²² M Krajewski, ‘Judicial and Extra-Judicial Review: The Quest of Epistemic Certainty’ in M Chamon, A. Volpato and M Eliantonio (eds) *Boards of Appeal of EU Agencies: Towards Judicialization of Administrative Review?* (Oxford University Press 2022), 290.

²³ *ibid* 292.

²⁴ *ibid* 291.

²⁵ ACER ‘Consolidated Annual Activity Report – Year 2018 – Agency for the Cooperation of Energy Regulators, 14 June 2019, p. 6; Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators [2009] OJ L211/1 (2009 ACER Regulation).

²⁶ 2009 ACER Regulation, recital 5.

²⁷ 2009 ACER Regulation, recital 5; 2019 ACER Regulation, recital 4.

²⁸ 2009 ACER Regulation, recital 10; arts 7(1), 8(1) and 9(1).

²⁹ 2019 ACER Regulation, art 2(d).

Scientific uncertainty in ACER's decision-making may be found in the approval and amendment of methodologies on the pricing of the energy market in the EU, which may require considerations of technical and economic issues.³⁰

2.2.1. ACER Board of Appeal: organization

The founding Regulation of ACER states that 'for reasons of procedural economy', the affected parties should be granted a right of appeal to a BoA where the agency has decision-making powers.³¹ The BoA consists of six members and six alternates that are selected from the current or former senior staff of the national regulatory authorities or from other national or EU institutions with relevant experience in the energy sector.³² Neither the Regulation nor the Rules of Procedure provide for a distinction between legal and technical members, solely that they should have relevant experience in the energy sector. In practice, the majority of the members and alternates appear to have a technical background rather than a legal background.³³ Initially, under the Regulation of 2009, the BoA was able 'to exercise any power which lies within the competence of [ACER] or it may remit the case'.³⁴ Comparable to ECHA, this means that initially that the BoA could exercise the same powers as ACER. This Regulation was recast in 2019, which currently states that the BoA can only confirm or remit the contested decision; this would still be binding on the agency.³⁵

2.2.2. ACER Board of Appeal: intensity of review

The ACER BoA, to reiterate, has experienced a substantial change in its powers after the 2019 recast of the ACER Regulation. Instead of being able to exercise the same powers as ACER, the BoA can now only confirm the decision or remit the case back to the agency.³⁶ While the initial powers, similarly to ECHA, might have implied a wide scope of review, the ACER BoA has consistently been hesitant towards taking such an approach. While the ACER BoA has never explicitly discussed its scope of review, their decisions

³⁰ Krajewski (n 23) 295.

³¹ 2009 ACER Regulation, recital 19; 2019 ACER Regulation, recital 34.

³² 2009 ACER Regulation, art 18(1); 2019 ACER Regulation, art 25(2).

³³ See the CV of the members on the website of ACER: (ACER, 'Board of Appeal Members' (ACER) <<https://www.acer.europa.eu/the-agency/organisation-and-bodies/board-of-appeal/boa-members>>) accessed 11 September 2023.

³⁴ 2009 ACER Regulation, art 19(5).

³⁵ 2019 ACER Regulation, art 28(5).

³⁶ 2019 ACER Regulation, art 28(5).

seem to hint at a limited one; it considers itself to be bound to the ground brought forward by the parties.³⁷

From the outset, even before the 2019 recast, the ACER BoA has relied on the case law by the EU courts to justify its deferential stance in the appeal proceedings, saying that ‘when complex economic and technical issues are involved, the appraisal of facts is subject to more limited judicial review’.³⁸ Moreover, the ACER BoA argued that the appeal procedure is based on ‘reasons of procedural economy’ in which it has a limited timeframe to decide on the contested decision.³⁹ Therefore, the ACER BoA has limited itself to solely reviewing whether ACER made a manifest error of assessment, thereby leaving a considerable margin of appreciation for ACER as a ‘complex assessment [leaves] discretionary power to the Agency’.⁴⁰ This has resulted in that the ACER BoA does not ‘carry out its own complete assessment’ or repeat ACER’s analysis.⁴¹

After the 2019 recast, the ACER BoA further elaborated on its deferential review. First of all, the ACER Regulation does not establish the BoA as an independent judicial body, the ACER BoA argues, but rather as an independent administrative body within ACER.⁴² The ACER BoA then reiterated that because of the ‘quasi-judicial characteristics of the appeal procedure, the limitation of its decision-making powers, the procedural economy and the principle of effectiveness [...], the BoA cannot and should not attempt to exercise the same level of analysis as has been carried out by the Agency before’.⁴³ Furthermore, the ACER BoA argued that because the members of the BoA, although being technical experts, only function on a part-time basis and thus do not have the time ‘to replicate the in-depth assessment of highly complex technical issues’.⁴⁴

³⁷ ACER BoA Decision A-001-2017 *Energy Control Austria et al. v ACER* [2017] para 111.

³⁸ *ibid* at [107]; ACER BoA Decision A-001-2018 *AQUIND Limited v ACER* [2018] para 51; ACER BoA Decision A-001-2019 *Amprion GmbH & Transnet BW GmbH v ACER* [2019] para 75; and the therein cited case-law of the CJEU.

³⁹ ACER BoA Decision A-001-2018 *AQUIND Limited v ACER* [2018] para 43; ACER BoA Decision A-002-2018 *PRISMA European Capacity Platform GmbH v ACER* [2019] para 63; ACER BoA Decision A-001-2019 *Amprion GmbH & Transnet BW GmbH v ACER* [2019] para 76; ACER BoA Decision A-006-2019 *GAZ-SYSTEM S.A. v ACER* [2020] para 52.

⁴⁰ ACER BoA Decision A-001-2017 *Energy Control Austria et al. v ACER* [2017] para 108; ACER BoA Decision A-001-2018 *AQUIND Limited v ACER* [2018] paras 47 and 52; ACER BoA Decision A-002-2018 *PRISMA European Capacity Platform GmbH v ACER* [2019] para 63; ACER BoA Decision A-001-2019 *Amprion GmbH & Transnet BW GmbH v ACER* [2019] para 76.

⁴¹ ACER BoA Decision A-001-2018 *AQUIND Limited v ACER* [2018] para 52; ACER BoA Decision A-002-2018 *PRISMA European Capacity Platform GmbH v ACER* [2019] para 63; ACER BoA Decision A-001-2019 *Amprion GmbH & Transnet BW GmbH v ACER* [2019] para 76; ACER BoA Decision A-004-2019 *Hungarian Energy and Public Utility Regulatory Authority et al. v ACER* [2019] para 255; ACER BoA Decision A-006-2019 *GAZ-SYSTEM S.A. v ACER* [2020] para 51.

⁴² ACER BoA Decision A-006-2019 *GAZ-SYSTEM S.A. v ACER* [2020] para 52.

⁴³ *ibid*.

⁴⁴ *ibid* para 53.

Interestingly, the ACER BoA did no longer refer to the case law of the EU courts to justify this but rather to its own case law. However, simultaneously, it does appear to be willing conduct a more intense review of ACER's decisions, especially when grounded on the principle of proportionality.⁴⁵ All in all, however, the ACER BoA clearly applies a deferential judicial attitude towards assessing the contested decision.

While the ECHA BoA initially took a quite intense stance, stating that it could conduct a *de novo* review of the contested decision and also fully re-examine the technical and/or scientific issues, it experienced a shift to a more deferential understanding of its role vis-à-vis the agency. The ACER BoA had already always adopted a deferential role in assessing the contested decision. Recently, the EU courts have shed some light on the intended intensity of review.

3. Recent developments: the EU courts' take on the BoAs

While the contested decisions may be confronted with challenges of uncertainty in their scientific or technical assessments, the ECHA and ACER BoAs seem to have been struggling in formulating their role vis-à-vis the agencies but also vis-à-vis the other parties involved in the decision-making procedure. This is very understandable as the EU legislature has been far from clear in defining the mandates of these specific BoAs and the BoAs in general, which have left the BoAs on their own to detail their scope and intensity of review in complex regulatory fields filled with (scientific) uncertainty. The EU courts have attempted to clarify the relationship between the BoAs and the EU courts in terms of their intensity of review, and thus to clarify further how these two BoAs should define their scope and intensity of review within their respective regulatory fields. Before delving into the new standards set out for the functioning of the BoAs, the EU courts' intensity of review over scientific uncertainty is discussed first.

3.1. The EU Courts and Scientific Uncertainty

ACER and ECHA, thus, take decisions in highly contentious fields in which scientific expertise is of vital importance. As previously stated, the CJEU usually grants agencies a margin of appreciation when decisions concern technical considerations. However, there are some developments in this area which should be addressed.

⁴⁵ Krajewski (n 23) 296.

The CJEU's standard of review has, arguably, become more proactive since *Technische Universität München* and further confirmed by *Tetra Laval*, which introduced the process-oriented review.⁴⁶ The process-oriented review focuses on the fact-finding activities of the institution and whether the institution has adequately stated reasons for its decisions.⁴⁷ This review consists of principles such as the duty of care, the duty to state comprehensive reasons, the duty to impartial and objective investigation of facts, and the principle of proportionality.⁴⁸ In these cases, where the EU courts acknowledge there is a margin of appraisal, they verify whether the administration has accurately stated and assessed the empirical factors.⁴⁹ Via procedural safeguards, the EU courts assess whether 'a scientific risk assessment [is] carried out as thoroughly as possible on the basis of scientific advice founded on the principles of excellence, transparency and independence'.⁵⁰ The EU courts heavily rely on appellants to provide evidence on this aspect.⁵¹ While the judicial deference on the substance is compensated to some extent by this strict review on the reasons of the decisions, the EU courts acknowledged, nonetheless, that they cannot substitute their assessment of scientific and technical facts for that of the agencies or institutions since they have better scientific and technical expertise.⁵²

Uncertainty in decision-making can also give rise to the EU courts invoking the precautionary principle. In these cases, they state that 'where there is uncertainty as to the existence or extent of risks to human health, the institutions may take protective measures without having to wait until the reality and seriousness of those risk become apparent'.⁵³ The precautionary principle justifies an even more limited review by the EU courts as it is to the institutions or bodies to assess whether there is a risk; this usually involves a complex assessment of scientific data and the societal or policy preference on the other. These

⁴⁶ E Vos, 'The European Court of Justice in the face of scientific uncertainty and complexity' in M Dawson, B De Witte and E Muir (eds) *Judicial Activism at the European Court of Justice* (EE 2013) 151-152; Case C-269/90 *Technische Universität München v Hauptzollamt München-Mitte* [1991] ECLI:EU:C:1991:438; Case C-12/03 P *Tetra Laval* [2005] ECLI:EU:C:2005:87.

⁴⁷ RJGM. Widdershoven, 'The European Court of Justice and the Standard of Judicial Review' in J de Poorter, E Hirsch Balling and S Lavrijssen (eds), *Judicial Review of Administrative Discretion in the Administrative State* (Springer 2019) 55.

⁴⁸ Krajewski (n 23) 278.

⁴⁹ *ibid* 284.

⁵⁰ *ibid*; and see amongst others Case T-79/99 *Alpharma Inc v Council* [2002] ECLI:EU:T:2002:210, para 183.

⁵¹ *ibid*; Case T-584-13 *BASF v Commission* [2018] ECLI:EU:T:2018:279, paras 92-96; Case C-269/90 *Technische Universität München v Hauptzollamt München-Mitte* [1991] ECLI:EU:C:1991:438, para 14.

⁵² *ibid*; Case T-584-13 *BASF v Commission* [2018] ECLI:EU:T:2018:279, paras 92-96.

⁵³ 'Precautionary Principle' in P Craig, *EU Administrative Law* (Oxford University Press 2012); Case C-180/96 *UK v Commission* [1998] ECR I-2265, para 99, which has been repeated in subsequent case law on the precautionary principle.

are difficult for the EU courts to review.⁵⁴ By granting a broad administrative discretion, the EU courts cannot review the quality or soundness of the underlying scientific evidence nor substitute the scientific evaluations.⁵⁵ In these cases, the EU courts assess whether (1) there is a risk, and (2) the EU institution or body has made a comprehensive assessment of the risk based on the most reliable and recent objective scientific data and research available.⁵⁶ The risk cannot be based on purely hypothetical situations, there must be a ‘serious threat’.⁵⁷ While the EU courts limit themselves to a substantially deferential test, it does also carry out a procedural review.

The EU courts follow this deferential approach in most of its cases, only in a few recent cases do they seem to overstep its boundaries by making technical assessments close to substituting that of the agency.⁵⁸ It remains unclear whether these cases signal a shift in the review conducted by the EU courts; nevertheless, they have been (rightfully) criticized for appearing to infringe upon the wide discretion that should be vested in the EU administration.⁵⁹ Especially because the EU courts do not have the necessary expertise to make such judgments.⁶⁰ Recently, the EU courts have also set out a new standard intensifying the BoAs’ review over the agency’s decisions. A further clarification of the standard of review conducted by the BoAs may also further clarify the appropriate standard of review for the EU courts which respects the discretionary

⁵⁴ K De Smedt and E Vos, ‘The Application of the Precautionary Principle in the EU’ in HA Mieg (ed) *The Responsibility of Science* (Springer 2022) 180.

⁵⁵ GC Leonelli, ‘Judicial Review of Compliance with the Precautionary Principle from Paraquat to Blaise: “Quantitative Thresholds,” Risk Assessment, and the Gap Between Regulation and Regulatory Implementation’ (2021) 22 *German Law Journal* 184, 192.

⁵⁶ *ibid*; also see Commission, ‘Communication from the Commission on the precautionary principle’ COM (2000) 0001.

⁵⁷ ‘The Precautionary Principle in EC Law’ in JL da Cruz Vilaça, *EU Law and Integration: Twenty Years of Judicial Application of EU Law* (Hart Publishing 2014); Case T-13/99 *Pfizer Animal Health v Council* [2002] ECLI:EU:T:2002:209, para 341.

⁵⁸ M Weimer and M Morvillo, ‘Op-Ed: “Out of balance – Why the CJEU ‘modern’ approach to reviewing EU agency science has gone too far (CWS Powder, joined cases T-279/20, T-288/20 and T-283/20)”’ (*EU Law Live*, 31 January 2023) < <https://eulawlive.com/op-ed-out-of-balance-why-the-cjeu-modern-approach-to-reviewing-eu-agency-science-has-gone-too-far-cws-powder-joined-cases-t-279-20-t-288-20-and-t-283-20/> > accessed 11 September 2023; and the therein discussed case law: Joined Cases T-279/20, T-283/20, T-288/20 *CWS Powder Coatings v Commission* [2022] ECLI:EU:T:2022:725; M Morvillo and M Weimer, ‘Op-Ed: “(No) Alternative? Chemical risks, the European Parliament, and the power of the Court as the final arbiter: an unusual departure from procedural review in EU risk regulation in Case C-144/21 *Parliament v Commission*”’ (*EU Law Live*, 15 June 2023) < <https://eulawlive.com/op-ed-no-alternative-chemical-risks-the-european-parliament-and-the-power-of-the-court-as-the-final-arbiter-an-unusual-departure-from-procedural-review-in-eu-risk-regulation-in-case-c/> > accessed 11 September 2023; and the therein cited case law: Case C-144/21 *Parliament v Commission* (*Autorisation d’une substance extrêmement préoccupante*) [2023] ECLI:EU:C:2023:302.

⁵⁹ Weimer and Morvillo; Morvillo and Weimer.

⁶⁰ *ibid*.

space of the agencies as a more intensive and substantive review has already been conducted.

3.2. Intensifying the BoAs' review

The EU courts, in three landmark cases on ECHA and ACER, observed that based on the expertise of the BoA members that 'the legislature intended to provide [...] the necessary expertise to allow it to itself carry out assessments of highly complex scientific facts'.⁶¹ While the EU courts hold that the BoAs must assess scientific facts, their scope of review is not unlimited. These appeal procedures are of an adversarial nature because of the *inter partes* hearing between the appellant on the one hand and the Agency on the other.⁶² As the dispute is between the two or more parties, the scope of the appeal procedure should, therefore, be determined by the pleas and grounds brought forward by the appellant. The burden of proof, therefore, is on the appellant to sufficiently substantiate that the agency erred in its decision-making. First, the two GC judgments on the ECHA BoA are further explored; subsequently, the GC and ECJ judgments on the ACER BoA are discussed, which built upon those on ECHA.

The GC has discussed the intensity of review of the ECHA BoA in two landmark cases: *BASF v ECHA* and *Germany v ECHA*.⁶³ In these cases, the two appellants argued opposing views on the intensity of review. BASF argued that the ECHA BoA should conduct a *de novo* assessment, thus including a technical review, while Germany argued that the review by the ECHA BoA should only be limited to procedural aspects. The GC found a middle ground between these two opposing views. In both cases, the GC observed that the ECHA BoA does not only consist of legal experts but also of technical qualified members. Therefore, the ECHA BoA 'has the necessary expertise at its disposal in order to itself carry out assessments of scientific evidence' and, thus, can conduct 'a balanced assessment of both legal and technical aspects'.⁶⁴ Because of this combined composition, the GC notes that the review by the BoA 'is not limited to verifying the existence of manifest errors'. The ECHA BoA should rely on the legal and scientific competences of the member to examine whether the arguments brought forward of the appellant demonstrates that the considera-

⁶¹ Case T-125/17 *BASF Grenzach GmbH v ECHA* [2019] ECLI:EU:T:2019:638, para 88.

⁶² *ibid* paras 61-64; Case T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 77.

⁶³ Case T-125/17 *BASF Grenzach GmbH v ECHA* [2019] ECLI:EU:T:2019:638; Case T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647; see for a full analysis of these two judgments the case note: M Chamon and A Volpato, 'Sketching Out the Role and Function of the ECHA Board of Appeal: *Germany v ECHA* and *BASF v ECHA*' (2020) 45 *European Law Review* 840.

⁶⁴ Case T-125/17 *BASF Grenzach GmbH v ECHA* [2019] ECLI:EU:T:2019:638, para 88-89; Case T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647, para 51.

tions of the ECHA decisions are vitiated in error.⁶⁵ This leads to a more intense review than is carried out by the EU courts because of its assessment of highly complex scientific and technical facts.⁶⁶ This more intense review cannot be derived from the provision that the ECHA BoA can exercise the same powers as ECHA itself; the GC observes that ‘it does not govern the review carried out by that [BoA] in relation to the merits of an action before it’.⁶⁷ The GC also notes, however, that it is not desirable for the ECHA BoA to ‘systematically conduct itself a new review of the assessment of scientific and technical facts’ as this would not sufficiently consider the objectives of the decision-making procedure in which the Member States play a significant role.⁶⁸

Building upon these cases, a similar reasoning can be found in *Aquind v ACER* which was brought before the GC and subsequently appealed before the ECJ. Both EU courts quashed the limited review the ACER BoA had previously exercised. The ECJ, following the GC judgment and the opinion of Advocate General Campos Sánchez-Bordona of 15 September 2022, found that a more thorough review can be expected from ACER’s BoA. Both EU courts focused on several aspects to come to this conclusion. This conclusion is primarily based on the composition of the ACER BoA. Similar to the ECHA BoA, the ACER BoA consists of both legal and technical experts. Therefore, ‘[the] EU legislature thus intended to provide the [ACER BoA] with the necessary expertise to allow itself to carry out assessments of complex technical and economic facts relating to energy’.⁶⁹ The AG, in his opinion, observed that it would make ‘little sense [...] in having within the agency concerned a board of appeal not actually able to assess the technical and economic aspects of the decisions adopted by that agency’ and that they ‘cannot be regarded as comparable’ to the EU courts because otherwise they would be ‘redundant’.⁷⁰ He then pleads that the BoA ‘meets the requirements necessary to enable it to carry out a full and unlimited review of decisions adopted by ACER’.⁷¹ The ECJ follows this line of reasoning and also concludes that the composition of the ACER BoA ‘meets the requirements necessary to enable it to conduct a full review’ of the ACER decisions.⁷² Aside from the composition, an infringement of EU legislation is not a prerequisite for the admissibility of an appeal, which means that the BoA has the

⁶⁵ Case T-125/17 *BASF Grenzach GmbH v ECHA* [2019] ECLI:EU:T:2019:638, para 89; Case T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647, para 52.

⁶⁶ Case T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647, para 53.

⁶⁷ *ibid* para 66.

⁶⁸ Case T-125/17 *BASF Grenzach GmbH v ECHA* [2019] ECLI:EU:T:2019:638, paras 116 and 129.

⁶⁹ Case T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 54; Case C-46/2 P *ACER v Aquind* [2023] ECLI:EU:C:2023:182, para 64.

⁷⁰ Case C-46/21 P *ACER v Aquind* [2022] ECLI:EU:C:2022:695, opinion of AG Sánchez-Bordona, paras 46 and 48.

⁷¹ *ibid* para 52.

⁷² Case C-46/2 P *ACER v Aquind* [2023] ECLI:EU:C:2023:182, para 63.

jurisdiction to base its decision solely on technical and economic considerations.⁷³ The EU courts explicitly refer to the previous case law on the ECHA BoA and finds that these show similarities in composition and powers. Therefore, as is also held for the ECHA BoA, the intensity of review of the ACER BoA must be greater than that of the EU judiciary.⁷⁴ The GC concluded that the ACER BoA ‘must examine whether the arguments put forward by the appellant are capable of demonstrating that the considerations on which that decision of ACER is based are vitiated by error’.⁷⁵ This phrasing is not repeated by the ECJ in its judgment.

Another interesting point made by the GC in *Germany v ECHA* and *Aquind v ACER* is moving the review of these BoAs into the realm of Article 47 of the Charter of Fundamental Rights, which refers to the right to an effective remedy and a fair trial. In *Germany v ECHA*, the GC finds that a limited review by the ECHA BoA ‘would have the result that that board could not fully perform its function, which is to limit litigation before the EU courts, whilst guaranteeing a right to an effective remedy’.⁷⁶ Moreover, the GC states that if the BoA would not be competent to ‘examine pleas which seek to demonstrate the existence of substantive errors’, implying a more intense test than simply verifying the existence of manifest errors of assessment, then it is ‘not capable of ensuring an effective remedy for the purposes of Article 47 [CFR]’.⁷⁷ In *Aquind v ACER*, the EU courts stated that a limited review by the BoA would lead to a limited review on a limited review by the GC as only the BoA decision can be appealed and not the modified decision by the Agency. This limited review of a limited review ‘fails to offer the guarantees of effective judicial protection’.⁷⁸ It appears that, following from both these cases, a more intense review by the BoAs is necessary in order to guarantee an effective remedy and effective judicial protection. It is still unclear as to what this exactly means for the role of the BoAs in general. While the GC seems to ask for a more intense review by the BoAs as otherwise no effective remedy may be provided, it also might seem to suggest a judicialization of the BoA remedy by moving them into the realm of Article 47 CFR. However, this is still a hot topic to be researched within European administrative law.⁷⁹

⁷³ Case T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 56; Case C-46/2 P *ACER v Aquind* [2023] ECLI:EU:C:2023:182, para 61.

⁷⁴ T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 61.

⁷⁵ T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 69.

⁷⁶ T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647, para 56.

⁷⁷ *ibid* para 57.

⁷⁸ Case T-735/18 *Aquind Ltd v ACER* [2020] ECLI:EU:T:2020:542, para 58; Case C-46/2 P *ACER v Aquind* [2023] ECLI:EU:C:2023:182, para 67.

⁷⁹ See for example the various contributions in M Chamon, A Volpato and M Eliantonio (eds) *Boards of Appeal of EU Agencies: Towards Judicialization of Administrative Review?* (Oxford University Press 2022) that discuss the applicability of art 47 CFR on the BoAs.

3.3. New decision-making practice?

Following these judgments, the ECHA and ACER BoAs have adjusted their decision-making accordingly to fit the new and more intense standard.

The ECHA BoA has dealt with a handful of cases in which the appellant questioned the scientific assessment of ECHA. This has often been raised in cases on substance and dossiers evaluations in which the appellant disagrees with ECHA that it has to conduct certain studies. In these cases, the ECHA BoA reiterated that because of the adversarial nature of the proceedings that the burden of proof is on the appellant to demonstrate that ECHA made an error. The ECHA BoA observed specifically that, '[i]n this respect, it is necessary to examine whether the Agency has examined carefully and impartially all the relevant facts of the individual case, and whether those facts support the conclusions that the Agency drew from them'.⁸⁰ It also observes that in examining this, the ECHA BoA should rely on the legal and scientific competences of its members.⁸¹ It follows the new standard set by the GC in stating that its aim is to examine 'whether the evidence submitted by the Appellant is capable of demonstrating that the decision is vitiated by error'.⁸² The ECHA BoA thus confines itself to the pleas brought forward by the appellant and has primarily focused on whether the appellants have provided sufficient evidence or has sufficiently substantiated its argument that ECHA made an error of assessment. Merely the existence of diverging scientific opinions, the ECHA BoA notes, 'is not, in itself, sufficient for the purposes of demonstrating the existence of an error vitiating the Contested Decision'.⁸³ Most of the cases brought forward post-GC rulings fail on this point; the ECHA BoA concludes that most appellants did not bring forward any studies contradicting the Agency's conclusions or merely show a difference of opinion on the interpretation of the used studies. This also fits within the boundaries that the GC drew in its landmark cases; while the ECHA BoA is expected to assess the scientific underpinnings of the contested decisions, they are limited to the grounds brought forward by the

⁸⁰ ECHA BoA A-007-2019, *Chermours Netherlands B.V. v ECHA* [2021] para 40; ECHA BoA A-015-2019, *Polynt S.p.A. v ECHA* [2021] para 36; ECHA BoA A-003-2020, *Campine nv v ECHA* [2022] para 111; ECHA BoA A-004-2020, *Tribotecc GmbH v ECHA* [2022] para 111; also comparable ECHA BoA A-002-2021, *LANXESS Deutschland GmbH v ECHA* [2022] para 55 in which the ECHA BoA states that 'it is necessary to examine whether the Agency took into account all the relevant facts of the individual case'.

⁸¹ ECHA BoA A-002-2021, *LANXESS Deutschland GmbH v ECHA* [2022] para 54.

⁸² ECHA BoA A-016-2019 to A-029-2019, *Lubrizol France SAS a.o. v ECHA* [2021] para 103; ECHA BoA A-002-2021, *LANXESS Deutschland GmbH v ECHA* [2022] para 54; ECHA BoA A-004-2021, *Clanese Production Germany GmbH & Co. KG v ECHA* [2022] para 36.

⁸³ ECHA BoA A-007-2019, *Chermours Netherlands B.V. v ECHA* [2021] para 64; ECHA BoA A-015-2019, *Polynt S.p.A. v ECHA* [2021] para 73; ECHA BoA A-003-2020, *Campine nv v ECHA* [2022] para 134.

parties. In other words, it is up to the appellant to convincingly argue that ECHA substantively erred in its decision-making. In the two most recent cases, the ECHA BoA directly addresses the scientific content of the studies that the appellants bring forward and discusses how these compare to the studies used by ECHA.⁸⁴ Likewise, the ECHA BoA is not convinced by the studies brought forward by the appellants.

In anticipation of the *Aquind* case by the GC, the ACER BoA seems to have already attempted a more stringent review of its decisions through an analysis of proportionality.⁸⁵ Ever since the *Aquind* judgment, the ACER BoA has reiterated the aim of its BoA procedure: to protect ‘the rights of the parties in cases brought against decisions involving significant decision-making powers over complex scientific or technical matters’.⁸⁶ In two decisions from 2022, the ACER BoA repeated the new standard of review as introduced by the GC. In *BnetzA* decision from 2022, the ACER BoA concludes that the Appellant was ‘unable to demonstrate that the Contested Decision is vitiated by an error’.⁸⁷ Also in the *PSE* decision, the ACER BoA held that it must assess ‘whether the considerations on which the Contested Decision is based are vitiated by an error’.⁸⁸ The ACER BoA also refers explicitly to the *Aquind* judgment of the GC in which this was established.

In 2023, prior to the eventual *Aquind* judgment, the GC was once again confronted with the intensity of review conducted by the ACER BoA. In two judgments, the GC recalls its judgment in *Aquind* and states ‘that the review carried out by the Board of Appeal of the complex technical and economic assessments contained in an ACER decision must not be confined to a limited review of the manifest error of assessment’.⁸⁹ Instead, the GC states, the ACER BoA must use its scientific expertise to examine ‘whether the arguments put forward by the applicant are likely to show that the considerations on which ACER’s decision is based are flawed’.⁹⁰ The ACER BoA would have to carry out a full review.⁹¹ The GC finds that regarding ACER’s legal assessments, the

⁸⁴ ECHA BoA A-004-2021, *Clanese Production Germany GmbH & Co. KG v ECHA* [2022] para 74; ECHA BoA A-009-2021, *SCAS Europe S.A./N.V. v ECHA* [2023] para 99-100.

⁸⁵ Krajewski (n 23) 296; C Tovo, ‘The Boards of Appeal of Networked Services Agencies: Specialized Arbitrators of Transnational Regulatory Conflicts?’ in M Chamon, A Volpato and M Eliantonio (eds) *Boards of Appeal of EU Agencies: Towards Judicialization of Administrative Review?* (Oxford University Press 2022), 53.

⁸⁶ ACER BoA A-002-2022, *RWE Supply & Trading GmbH v ACER* [2022] para 31; ACER BoA A-003-2022, *Uniper Global Commodities SE v ACER* [2022] para 31.

⁸⁷ ACER BoA A-013-2021 *BNetzA v ACER* [2022] para 117.

⁸⁸ ACER BoA A-001-2022 *PSE v ACER* [2022] para 62.

⁸⁹ Case T-606/20 *APG v ACER* [2023] ECLI:EU:T:2023:64, para 201; Case T-607/20 *APG v ACER* [2023] ECLI:EU:T:2023:65, para 201.

⁹⁰ *ibid.*

⁹¹ Case T-606/20 *APG v ACER* [2023] ECLI:EU:T:2023:64, para 202; Case T-607/20 *APG v ACER* [2023] ECLI:EU:T:2023:65, para 202.

ACER BoA conducted a full review.⁹² The extent to which it was called upon to review complex technical assessments, the GC found that the BoA ‘in practice carried out a review which went beyond a mere limited review, so that, de facto, it complied with its obligations as regards the intensity review it was required to carry out’.⁹³ In the underlying appeal decision dating back from 2020, the ACER BoA still adhered to its deferential review but did explicitly consider the technical requirements for bidding platforms for balancing energy.⁹⁴ In this context, the GC stated that even though the ACER BoA found that ACER had a margin of appreciation, the ACER BoA, nevertheless ‘was able to conclude correctly that the process of continuously updating the available cross-zonal transmission capacity, in a centralized or decentralized form, was a technically required function to operate the [aFRR and mFRR] platform’.⁹⁵

4. What’s next? True potential to mitigate challenges of uncertainty

With these judgments, the EU courts attempted to clarify the relationship between the BoAs and the EU courts in terms of their intensity of review. Krajewski argues that in particular the *Aquind* judgment could be read ‘as expressing the willingness of the GC to legitimize the two-tier system of administrative and judicial review by placing greater expectations as to the intensity of review by the BoAs’.⁹⁶ The EU courts, in these judgments, seem to have struck a clear middle ground between a stringent review and a deferential approach: the BoA should conduct a more intense review than the EU courts but at the same time cannot be expected to do the same as the Agency, independently of whether they can, based on their regulatory framework, exercise the same powers as the agency. The expertise of the BoA members seems to have been the decisive factor in formulating this in-between position.

In cases relating to scientific uncertainty, the appellant disagrees with the choice the agency has made on the scientific justification of its decision. As the GC also clearly stated in its case law, the BoAs are, in any case, bound to the grounds brought forward by the appellant due to the adversarial nature of the appeal proceedings. It is, therefore, always the appellant’s responsibility to

⁹² Case T-606/20 *APG v ACER* [2023] ECLI:EU:T:2023:64, para 203; Case T-607/20 *APG v ACER* [2023] ECLI:EU:T:2023:65, para 203.

⁹³ Case T-606/20 *APG v ACER* [2023] ECLI:EU:T:2023:64, para 204; Case T-607/20 *APG v ACER* [2023] ECLI:EU:T:2023:65, para 204.

⁹⁴ ACER BoA A-001-2020 *Austrian Power Grid and TenneT v ACER* [2020] para 192; ACER BoA A-002-2020 *Austrian Power Grid and TenneT v ACER* [2020] para 192.

⁹⁵ Case T-606/20 *APG v ACER* [2023] ECLI:EU:T:2023:64, para 204; Case T-607/20 *APG v ACER* [2023] ECLI:EU:T:2023:65, para 204.

⁹⁶ Krajewski (n 23) 296.

convincingly substantiate its concerns on the agency's scientific assessment. While the GC observes a difference between 'manifest errors of assessment' and 'vitiated in error', it is still unclear how these two actually relate to one another. The BoAs have to intensify their review, but how? As Krajewski also observed, 'the intensity of judicial and extra-judicial review is a matter of degree rather than clear-cut distinctions'.⁹⁷ Within scientific uncertainty, three degrees can be identified: known, unknown or unknowable uncertainties. These could be helpful in deciding the degree to which the BoAs may address the scientific or technical assessment underlying the contested decision.

4.2. Intensity of review in known, unknown and unknowable uncertainties

Scientific uncertainty is not an 'all-or-nothing'-approach; therefore, the degrees of known, unknown and unknowable, borrowed from risk regulation, could be helpful in defining the extent of scientific uncertainty in agencies' decisions. Issues or risks are known if it can be identified and quantified beforehand, meaning that there is an underlying paradigm which is well-understood. This does not necessarily mean that the theory is correct, but only that the experts are in broad agreement.⁹⁸ Issues or risks are unknown if it can be identified beforehand but cannot be meaningfully quantified at the moment. This means that there may be competing theories, none of which has achieved the status of a paradigm.⁹⁹ Issues or risks are unknowable if the (existence of the) risk cannot be identified or predicted nor be quantified beforehand. This means that there is no underlying theory or no theory with scientific credibility about these issues or risks.¹⁰⁰ The degree to which uncertainty is known, unknown or unknowable may also dictate on whether the agency has a choice in a particular area and, thus, should be granted a margin of appreciation. This margin of appreciation is a crucial element of the control exercised over these agencies.

In cases of known uncertainties, there is barely any debate about the scientific status of certain studies or methodologies. There is, thus, a consensus on these topics. This sets a high bar for the appellants to convincingly raise doubts about the agency's scientific assessment. At the same time, it also enables the BoA to substantively address the concerns the appellants raise. The BoA may therefore conduct a full, substantive review of the contested decision. Once the BoA

⁹⁷ Krajewski (n 23) 290.

⁹⁸ FX Diebold, NA Doherty and RJ Herring, 'Introduction', in FX Diebold NA Doherty and RJ Herring (eds), *The Known, The Unknown, and the Unknowable in Financial Risk Management: Measuring and Theory Advancing Practice* (Princeton University Press 2010).

⁹⁹ *ibid.*

¹⁰⁰ *ibid.*

has decided that the grounds raised by the appellant are well-founded, then it may carry out its own in-depth assessment on the complex technical and scientific considerations of the contested decision. Although the BoA is not expected to conduct a *de novo* review, as its scope of review is limited to the grounds brought forward by the appellant, it can conduct a full and unlimited review. Since there is a consensus on the topic, the case is more clear-cut and there may be a limited margin of appreciation for the agency. Therefore, the BoA may assume the same margin of appreciation granted to the agency and substitute the contested decision with its own.¹⁰¹

As previously discussed, both ECHA and ACER have a complex decision-making procedure in which respectively the Member States and the National Regulatory Authorities are involved. The competences of the ACER BoA have also changed since 2019; they can only confirm the contested decision or remit the case to ACER, they cannot substitute the contested decision anymore with its own. The ECHA BoA, however, does still have that possibility and has in its decision-making (partially) annulled decisions and, mostly, introduced new time limits for the appellants to provide the requested information.¹⁰² They have not, however, conducted a scientific analysis on their own. In the *Germany v ECHA*, the GC also stated that the ECHA BoA must take account of the objectives of the underlying Regulation and whether adopting a final decision would be compatible with those objectives.¹⁰³ If that were not the case, they would have to remit the case to ECHA. Although some authors, rightfully, point out that it is still rather unclear what this requirement entails exactly, a complete substitution for the ECHA decisions seems, until the EU courts provide more guidance on this aspect, not very likely.¹⁰⁴

In cases of unknown uncertainties, there are competing scientific studies on a particular topic, none of which have achieved the status of a paradigm. The BoA may therefore conduct a process-oriented review on the substance, or sometimes also referred to as semi-procedural review.¹⁰⁵ This is different from the process-oriented review as conducted by the EU courts in that it directly substantively addresses the agency's scientific considerations, whereas the EU courts would only conduct a process-oriented review on the procedural aspects of the contested decision. In these cases, the BoA may assess whether the agency could have come to its decision based on the scientific studies it has used as its justification. Thus, do the contents of the studies actually match the conclusions that the agency has drawn in the contested decision? This does not solely address

¹⁰¹ This approach is comparable to the AG opinion in *Aquind* (n 71), see under 4.3.

¹⁰² See for example: ECHA BoA A-001-2022, *Cytec Engineered Materials GmbH v ACER* [2023].

¹⁰³ T-755/17 *Federal Republic of Germany v ECHA* [2019] ECLI:EU:T:2019:647, para 89.

¹⁰⁴ Chamon and Volpato (n 59).

¹⁰⁵ Widdershoven (n 19) 59-60; I Bar-Siman-Tov, 'Semiprocedural Judicial Review' (2012) 6 *Legiprudence* 271.

the question of whether the scientific study is reliable and authoritative but also whether the agency could have come to its specific decision based on the used studies. The BoA's assessment is thus confined to substantively verifying whether the agency could have reasonably come to the contested decision. In these cases, the agency does have a certain margin of appreciation. In light of their complex decision-making procedure, which usually involves multiple parties such as the Member States, the industry and NGOs, the agency has a better understanding of all the interests that should be taken into account and balanced correctly. The BoA may, therefore, remit the case to the agency so that it can take a new final decision based on the appeal decision. Nonetheless, the BoA can still draw the parameters of the unknown uncertainties by finding that the agency has not interpreted the scientific study correctly or should, perhaps, also look into other studies.

The ECHA BoA and the ACER BoA seems to have followed this approach already in their decision-making. In its underlying decision in *Germany v ECHA*, the ECHA BoA already acknowledged in its proportionality review that there is 'no scientific consensus' on the status of the particular substance and the relevant reports and studies. The ECHA BoA continues that '[i]t is currently unknown to what extent the metabolites will be identified during the conduct of the study'.¹⁰⁶ Here, the ECHA BoA has explicitly employed the language of 'unknown' as well. In cases where the appellant argues that ECHA made an error of assessment, the ECHA BoA assesses whether the studies relied on by the ECHA are sufficient to conclude its contested decision.¹⁰⁷ In the majority of the cases before the ECHA BoA, the appellant invokes the principle of proportionality. Within this context, even also already before the landmark cases of 2019, the ECHA BoA then examines whether studies relied upon by ECHA does sufficiently demonstrate the necessity of, usually, further testing of the particular substance that the appellant wishes to bring onto the European market.¹⁰⁸ While not using the language of 'unknown scientific uncertainties', the ECHA BoA clearly seems to conduct a process-oriented review on the substance. The decision-making practice of the ACER BoA does not appear to show (yet) such explicit decision-making. As previously discussed, the GC found that the ACER BoA did conduct a full review in both APG decisions in which the ACER BoA concluded on the technical requirements for a specific bidding

¹⁰⁶ ECHA BoA A-026-2015, *Envigo Consulting Limited and DJChem Chemicals Poland Spolka Akcyjna v ACER* [2017] paras 138-139.

¹⁰⁷ ECHA BoA A-004-2021, *Clanese Production Germany GmbH & Co. KG v ECHA* [2022] paras 71-76 and 87-90; ECHA BoA A-009-2021, *SCAS Europe S.A./N.V. v ECHA* [2023] para 98.

¹⁰⁸ See for example ECHA BoA A-005-2011, *Honeywell Belgium N.V. v ECHA* [2013] as also discussed by D Thomas, 'European Chemical Agency Board of Appeal decisions in Honeywell and Dow Chemicals' (2013) 20 *Maastricht Journal of European and Comparative Law* 609.

platform based on the documents underlying the appeal. This might also hint at a similar level of scrutiny.

In cases of unknowable uncertainties, there are no studies or no studies with scientific credibility on the particular topic and the possible risks. The BoAs may, in such cases, conduct a process-oriented review within the context of the precautionary principle. As the contested decision touches upon new territory, more margin of appreciation may be left to the agency. In these cases, the BoA may focus on whether (1) there is a risk involved by making a certain choice for the contested decision, and (2) whether the agency has made a comprehensive assessment of that risk based on the most reliable and recent objective scientific data and research available.¹⁰⁹ As the BoA is also made up of experts, it has some knowledge as to judge whether the scientific data and research is reliable and recent. In its assessment, the BoA may combine the process-oriented review with the precautionary principle. By assessing whether the choice for studies is scientifically sound, the agency has the appreciation to take this decision and the decision complies with the duty of care, the duty to state comprehensive reasons, the duty to impartial and objective investigation of facts, and the principle of proportionality.

As previously discussed, the ACER BoA seems to have intensified its review grounded on the principle of proportionality. However, its review still seems to be limited mostly to the procedural aspect of the contested decision-making. In its decision-making practice, the ACER BoA states that ACER's discretionary powers are not unlimited. They are circumscribed by the relevant legal framework and by general principles of EU law, including the principle of proportionality.¹¹⁰ Following this line, the ACER BoA also appeared to have raised the bar considering the duty to provide due statement of reasons where it also remitted the contested decision because ACER failed to comply with this duty.¹¹¹ In its decision-making practice, the ACER BoA appears to predominantly focus on assessing the followed procedure; this might serve as an example of the assessment framework for unknowable scientific uncertainties.

These degrees of known, unknown and unknowable may guide the BoAs in deciding to what extent they need to delve into the technical and scientific assessments of the contested decisions. The extent to which an uncertainty is known, unknown or unknowable should be based on the technical expertise of

¹⁰⁹ Comparable and inspired by the process-oriented review and the precautionary principle of the EU courts, see under 2.4.

¹¹⁰ ACER BoA A-001-2020, *APG and TenneT v ACER* [2020] para 240; ACER BoA A-002-2020, *APG and TenneT v ACER* [2020] para 241; ACER BoA A-003-2020 (consolidated), *TenneT and Vereniging Energie-Nederland v ACER* [2020] para 206; ACER BoA A-008-2020, *Réseau de Transport d'Electricité v ACER* [2020] para 296; A-001-2021 at [1155]; A-007-2021 at [188]; ACER BoA A-007-2020, *ENTSO-E v ACER* [2020] para 66.

¹¹¹ C Tovo (n 86) 53-54; ACER BoA, A-007-2020, *ENTSO-E v ACER* [2020].

the BoA members; it is essential that they are well-informed of the current technical and scientific paradigms and discussions within their respective fields.

5. Conclusion

This article aimed to answer the question of how the expertise of the ACER and ECHA BoAs can mitigate the challenges of uncertainty that arise from specialized decision-making by their respective agencies. From the outset, it has been unclear what the role of these BoAs is. This is also clearly reflected in their own case law; when in doubt, leave a margin of appreciation to the agency, conduct a deferential review and act like the EU courts. The EU courts made quick work of this approach and clearly stated that because of their expertise, these BoAs are expected to do more than EU courts, although they also cannot be expected to do the same as the agencies. But what does that exactly mean? This article provided suggestions as to how the BoAs can address issues of scientific uncertainties.

There is no standard formula as to how the BoAs should approach this issue, as intensity of review is a matter of degree. To that end, the degrees known, unknown and unknowable uncertainties have been introduced for the extent to which the BoAs may substantively assess the technical and scientific considerations by the agency. These degrees show how the BoAs may be allowed to mitigate the challenges of scientific uncertainty that underly the decision-making of their respective agencies. As the introduction already hypothesized, these degrees show that the more consensus on a topic exist, the more stringent the review by the BoAs can be; the more uncertainty, the more appreciation may be granted to the agency, although the BoAs should still use their expertise to draw the boundaries of uncertainty. Moreover, using these degrees may make the BoAs' decision-making more transparent. This may result in more effective judicial review over the BoA decisions and thereby also strengthen the effective judicial protection over the agencies' decisions. This also would further clarify the task division between the BoAs and the EU courts is clearer; while the BoA can, varying to the degree of scientific uncertainty, substantively address the scientific and technical considerations of the agencies' decisions, the EU courts are still there to address the larger issues of legality.