This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

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Standard Guide for Financial Disclosures Attributed to Climate Change[1]

This standard is issued under the fixed designation E2718; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 *Purpose*—The purpose of this guide is to provide a series of options or instructions consistent with good commercial and customary practice for *climate change*-related disclosures accompanying audited and unaudited financial statements. This guide encourages consistent and comprehensive disclosure of *financial impacts attributed to climate change*.

1.2 *Objective*—The objective of this guide is to determine the conditions warranting disclosure and the content of appropriate disclosure.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

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2. Referenced Documents

2.1 *ASTM Standards:*[2]

E2137 Guide for Estimating Monetary Costs and Liabilities for Environmental Matters

E2173 Guide for Disclosure of Environmental Liabilities

E2725 Guide for Basic Assessment and Management of Greenhouse Gases

E3032 Guide for Climate Resiliency Planning and Strategy

2.2 *Financial Accounting Standards Board:*[3]

Accounting Standard Codification Topics 350, 410, 440, 450, 460, 820

2.3 *Governmental Accounting Standards Board:*[4]

Statements 42, 49, 72, 83

2.4 *International Accounting Standards Board:*[5]

IAS 37, IFRS 13

3. Terminology

3.1 *Definitions:*

3.1.1 *asset impairment*—formal devaluation of the book value of an asset, stated for example, in US generally accounting principles in ASC 350, GASB 42.

3.1.2 *climate change*—any change in climate over time whether due to natural variability or as a result of human activity. **Intergovernmental Panel on Climate Change**[6]

3.1.3 *constructive obligation, n*—concept that past practice creates a valid expectation on the part of a third party.

3.1.4 *environmental liabilities, n*—asset retirement obligations, accrued liabilities, commitments, contingencies, and guarantees associated with any natural conditions or man-made incidents, including terrorism, that pose an unacceptable risk to health, safety, property, or the environment that would be the subject of an enforcement action or other legal action. (ASC 410, 440, 450, 460, GASB 49, IAS 37)

3.1.5 *financial impacts attributed to climate change*—material financial impacts on a company's performance, operations, assets, and liabilities attributed to climate change effects, including but not limited to real or expected risks of physical damage to facilities, regulatory costs and incentives, and shifts in the market for products and services (including stranded assets).

3.1.5.1 *Discussion*—In this guide, the short form designations of 'financial impact' and 'impact' are also used to designate this specific concept.

3.1.6 *financial statement(s)*—include, but are not limited to, statements associated with shareholder reporting, periodic reports, registration statements, loans, mergers, acquisitions, or divestitures. *Financial statements* may include statements outside of SEC filings.

3.1.7 *greenhouse effect, n*—the trapping of the sun's warmth in a planet's lower atmosphere, due to the greater transparency of the atmosphere to visible radiation from the sun than to

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from Financial Accounting Standards Board (FASB) https://www.fasb.org/

[4] Available from Governmental Accounting Standards Board (GASB) https://www.gasb.org/

[5] Available from International Accounting Standards Board, https://www.ifrs.org/

[6] The Intergovernmental Panel on Climate Change (IPCC) https://www.ipcc.ch/

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infrared radiation emitted from the planet's surface.

Oxford Languages[7]

3.1.8 *greenhouse gas*—a gas that has been shown through measurement to generate the greenhouse effect and is currently higher in concentration in the atmosphere than it was in the demonstrated atmosphere of 1860, and which includes carbon dioxide, methane, nitrogen trifluoride, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, amongst others.

3.1.9 *materiality*—the significance of an item to users of a financial statement that considers all relevant and surrounding circumstances. A material item is one that its omission or misstatement is of such a magnitude in the surrounding circumstances that either the judgment of a reasonable person relying on the financial statement would have been changed or influenced by its inclusion or correction, or there is a substantial likelihood that the item, after assessing the inferences, and their significance, drawn from the given set of facts associated with the financial statement, would be viewed as significantly altering the information made available to the investor or shareholder. (For additional information on *materiality*, see Guide E2173.)

3.1.10 *scenario*—a entity's selection and description of a set of guiding assumptions (commonly, GHG level(s) or temperature levels associated with upcoming dates) to enable valuations of forecasted impacts caused by climate change; an entity may select a third-party set of assumptions.

3.1.11 *stranded assets*—an asset that has become obsolete or non-performing, bringing a recent or pending asset impairment (devaluation of the stranded asset). The asset may be obsolete or non-preforming for any reason, including societal, technical, monetary, regulatory, or judicial impediment.

3.1.12 *supply chain*—the sequence of processes involved in the production and distribution of a commodity, for example, raw materials to manufacturers to customers/retail outlets.

3.1.13 *reporting entity*—any business or public agency preparing a financial statement.

3.2 *Acronyms and Other Abbreviations:*

3.2.1 *FASB—US* Financial Accounting Standards Board

3.2.2 *GAAP—US* Generally Accepted Accounting Principles

3.2.3 *SEC—US* Securities and Exchange Commission

4. Significance and Use

4.1 *Uses*—This guide is intended for use on a voluntary basis by a reporting entity that provides disclosure in its financial statements regarding *financial impacts attributed to climate change*. The degree and type of disclosure depends on the scope and objective of the financial statements. This guide is intended to apply to U.S. and international operations at the discretion of the reporting entity.[8] The user should be aware that there may be contractual obligations, court decisions, or regulatory directives that may affect the flexibility in use of this guide. The user should also maintain an awareness of international regulations that may be relevant to disclosures, such as those of the International Accounting Standards Board and International Financial Reporting Standards.

4.2 *Principle:*

4.2.1 The following principles are an integral part of this guide and are intended to be referred to in resolving any ambiguity or dispute regarding the interpretation of financial disclosures regarding *financial impacts attributed to climate change*.

4.2.1.1 *Uncertainty Not Eliminated*—Although a *reporting entity*, as of the time when its financial statements are prepared, may have evaluated the existence and extent of financial impacts attributed to climate change, there remains uncertainty with regard to the final resolution of scientific, technological, regulatory, legislative, and judicial matters, which could affect its financial impacts attributed to climate change. Where, as defined by the reporting entity, such uncertainties cannot be eliminated, the reporting entity shall provide its justification. In addition, the reporting entity shall provide estimates of the risks involved regarding uncertainties. Typically, this is accomplished through the development of reasonable scenarios or ranges to recognize and address uncertainties. While one or more climate change uncertainties may be unforeseeable for any reporting period, once recognized, subsequent reports will include any previous material exclusions. Further, a discovery of significant impediment to the reporting entities stakeholders, as and when discovered by the reporting entity, may require an interim statement.

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4.2.1.2 *Comparison with Subsequent Disclosures*—Subsequent disclosures that convey different information regarding the extent or magnitude of the *reporting entity's financial impacts attributed to climate change* should not be construed as indicating the initial disclosures were inappropriate. Disclosures shall be evaluated on the reasonableness of judgments and inquiries made at the time and under the circumstances in which they were made. Subsequent disclosures should not be considered valid standards to judge the appropriateness of any prior disclosure based on hindsight, new information, use of developing analytical techniques, or other factors. However, information on trends between disclosure years may be of value to a user of financial statements.

4.2.1.3 *Not Exhaustive*—Appropriate disclosure does not necessarily mean an exhaustive disclosure. There is a point at which the cost of obtaining information or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly preparation of financial statements and the ability of readers to understand the information contained therein. However, all relevant and reasonably ascertainable information should be used to determine the content of appropriate *financial impacts attributed to climate change*.

5. Determining Whether a Disclosure is Warranted

5.1 *Circumstances Associated with Financial Impacts Attributed to Climate Change:*

[7] Oxford Languages https://languages.oup.com/dictionaries/#oed

[8] See for example, Securities and Exchange Commission (SEC), Commission Guidance Regarding Disclosure Related to Climate Change (Release Nos. 33–9106; 34–61469; FR-82), 17 CFR Parts 211, 231, and 241, February 8, 2010.

5.1.1 The following are examples of major circumstances that might give rise to *financial impacts attributed to climate change* that may be subject to disclosure:

5.1.1.1 Enforcement of laws or regulations regarding greenhouse gas emission levels (for example, caps, trade systems, emission taxes), investigations, controls, resource use, technology use, compliance, reporting, and other costs attributed to climate change. This includes predicted changes in federal, state, and local regulations that are anticipated to have a material effect upon the capital expenditures, earnings and competitive position of the company and its subsidiaries, as well as statutory and common law developments imposing liability for past emissions of greenhouse gases

5.1.1.2 Predicted changes/trends in resource costs or availability that may change a company's products, processes, and/or markets or services (including both positive and negative impacts).

5.1.1.3 Predicted changes in a company's assets due to *financial impacts attributed to climate change*, including but not limited to changes in weather, sea levels, disease and pest levels, drought and fires, stranded assets, and resource availability (for example, food, labor, energy, water).

5.1.1.4 Predicted changes in the value of a company's assets due to societal or market forces (for example the price of energy, sales boycotts).

5.1.1.5 Contractual assumption of risk or risk transfer agreements. The most familiar forms of risk transfer agreements are insurance contracts, hold harmless agreements, indemnity agreements, and similar terms within contracts for the transfer of property or liabilities.

5.1.1.6 Commencement of litigation or assertion of a claim or assessment by a party alleging legal liability related to *climate change* on the part of the *reporting entity*.

5.1.1.7 Information known by the *reporting entity* indicating that *financial impacts attributed to climate change* have been incurred or are likely to be incurred.

5.2 *Sources of Information*—This guide identifies standard sources that should be reviewed by a *reporting entity* to properly determine if conditions warrant disclosure. Such sources may include but are not limited to the following categories:

5.2.1 *Publicly Available Environmental Record Sources*—Any environmental record available from a government agency or commercial entity.

5.2.2 *Internal Reporting Entity Records*—The *reporting entity's* internal records regarding greenhouse gas emissions and *financial impacts attributed to climate change* (for example, see management and planning records in Guide E2725 and Guide E3032.)

5.2.3 Current and proposed foreign, national, state, and local environmental laws or rules related to *climate change*.

5.2.4 Publicly available and internal studies on benchmarking, modeling, trends, and forecasts.

5.3 *Estimation of Financial Impact Attributed to Climate Change*—Once a *reporting entity* has identified potential *financial impacts attributed to climate change*, it should determine whether these impacts (*1*) have a likelihood that is more than remote, (*2*) could have a severe impact that would disrupt the normal functioning of the entity or the entity's financial position, cash flows, or operations, and (*3*) are near-term, occurring during the next year. If these criteria apply, the *reporting entity* should estimate the likelihood, magnitude, and timing of potential impacts to the entity's financial position, including assets, liabilities, and income. (For additional guidance on estimating environmental costs and liabilities, see Guide E2137). Note that if the level of uncertainty or the time horizon of the financial impact is determined to be too great to allow meaningful estimation, disclosure may still be warranted as described below in Section 6.

NOTE 1—For longer-term *financial impacts attributed to climate change*, the company should, when possible, estimate the likelihood, magnitude, and timing of potential impacts.

5.4 *Estimation of Materiality*—The materiality of the *financial impacts attributed to climate change* should be evaluated in the aggregate to determine whether disclosure is warranted. While there currently is no bright-line or simple formulaic test for materiality, guidelines for this analysis are provided in the appendix of Guide E2173. In general, FASB states in Statement of Accounting Concepts No. 2 that an item is material if "the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement." The U.S. Supreme Court ruled in 1976 that a disclosure is material if there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available" or if there is "a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote."[9]

6. Content of the Disclosure Accompanying Financial Statements

6.1 *Application:*

6.1.1 The content of the disclosures addressed by this guide are provided by management and are meant to supplement, rather than replace, the disclosure requirements as prescribed or regulated through GAAP, SEC, or any other agency or regulatory body. Disclosures may occur in many places, including but not limited to the notes and narrative text of financial statements. Some third-party reporting standards are listed in Related Materials.

6.1.2 Reporting entities should disclose the *financial impacts attributed to climate change* and the impacts of both existing and anticipated future regulation of greenhouse gas emissions on their business, results of operations, and financial condition, or disclose their basis for determining that such an assessment is not warranted.

6.2 *Disclosures to be Made for Financial Impacts Attributed to Climate Change:*

6.2.1 Disclosure should be made when an entity believes its *financial impacts attributed to climate change* in the aggregate are material. These amounts include, but are not limited to, damages attributed to the entity's products or processes,

[9] FASB, Statement of Financial Accounting Concepts No.2, Qualitative Characteristics of Accounting Information, Original Pronouncements as Amended, 2008; TSC Industries Inc. V. Northway, Inc. 426 U.S. 438, 448 (1976).

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regulatory compliance costs (including changes in resource costs, technology costs, distribution and transportation costs, and costs in its supply chain), physical costs (including asset impairments and stranded assets, and adaptation costs), changes in income due to changes in markets for products and services, and litigation and management costs. Costs include both initial response costs as well as long-term costs (for example, operations and maintenance costs, changing energy costs).

6.2.2 The following disclosures should be made by the *reporting entity* for material circumstances described in 6.2.1:

6.2.2.1 Statement concerning management's strategic analysis of the company's *financial impacts attributed to climate change*, including but not limited to:

(1) An assessment of regulatory risks and opportunities (for example, *greenhouse gas* emission limits or reduction, taxation, trading systems, resource limitations, *greenhouse gas* emissions allowances and/or credits),

(2) An evaluation of physical risk to company's facilities (for example, asset impairment) and operations,

(3) A discussion of risk/opportunities related to the *reporting entity's* resources,

(4) An assessment of risks related to financing,

(5) An evaluation of risks/opportunities (both positive and negative impacts) related to the company's products or services,

(6) An assessment of legal proceedings (including legislative and common law developments creating new bases of liability relating to past and future greenhouse gas emissions),

(7) A discussion of the company's current management position on and strategic activities related to climate change, with a description of where in the corporate governance structure the responsibility lies for addressing these issues.[10]

6.2.2.2 Relevant regulatory requirements impacting the *reporting entity* should be identified, and resulting financial impacts disclosed. There are a variety of state and regional regulatory requirements related to climate change now in existence (for example, the Regional Greenhouse Gas Initiative).

6.2.2.3 The *reporting entity's* estimated likelihood, magnitude, and timing of its *financial impacts attributed to climate change* assessed using 5.3 and 5.4, a description of the approach used to quantify the impacts, a discussion of the approach for assessing materiality, and for liabilities, the amounts accrued by the *reporting entity*.

(1) financial impacts attributed to climate change should be stated prior to reduction for amounts anticipated to be recovered from any third parties (for example, recoveries from insurance). Any such recoveries should be reported separately.

(2) The *reporting entity* should disclose the techniques used for data measurement. Major uncertainties, assumptions, and estimates should be disclosed. In addition, the methodology employed for estimating *financial impacts attributed to climate change* and for determining materiality should be disclosed.

(3) In a situation where a *reporting entity* believes it has *financial impacts attributed to climate change* but cannot quantify all or part of them, a written statement should be included that describes the conditions or problems associated with estimation.

(4) The *reporting entity* should provide a balanced assessment of both the positive and negative financial impacts attributed to climate change to the company.

(5) To the extent feasible, disclosures should be calculated and reported consistently over time so that historical trends and changes can be analyzed. If changes are made to the methodology for reporting, these changes should be disclosed and reporting entities should, to the extent feasible, restate historical data to reflect the same methodological approach so that trends analysis and comparisons can be made with minimal data interpretation error.

(6) Disclosures should be made on a regular, consistent schedule. The time period covered by the disclosure should be clearly indicated.

(7) Data and information should be presented in a clear, accessible manner that can be easily understood and interpreted by users of the information. Graphics, summary data tables, trend analysis, and benchmarking comparisons can assist with improving clarity of the disclosure. Technical terminology and abbreviations should be clearly defined.

(8) The information developed for the disclosure should be supported by documentation that has been reviewed for quality control. The steps used to gather, interpret, and summarize data should be documented, and the metrics and targets clearly defined.

6.2.2.4 The *reporting entity's* separate estimate of anticipated insurance or other recoveries and a description of its approach to estimate the amount of anticipated recoveries from other parties by means of risk transfer agreement(s) that are associated with the estimated liabilities. The description should disclose any significant issues regarding the probability of successfully collecting the recoveries. If insurance or other recoveries are not available, an affirmative statement should be provided stating that items are not insured.

6.2.2.5 A discussion of key external and internal factors regarding the timing or amount of *financial impacts attributed to climate change*.

6.3 *Common Format of Disclosures under E2718*—E2718 is focused on identifying disclosures to the three common financial statements (balance sheet, income statement and cash flow statement), although entities are free to make other financial statements which may address the financial impacts of climate change adaptation.

6.3.1 *Low Impact Disclosure Format*—where an entity finds the impact of climate change adaptation to be immaterial, this low impact disclosure report provides succinct, timely and auditable evidence that – while the entity is aware of the impact of climate change scenarios – the impact is believed to be immaterial:

6.3.1.1 *Sample narrative to support adaptation model results in* Table 1—"sustained asset impairments continue to reduce the size of the enterprise, although at an immaterial rate. Pass-through of climate change adaptation operating expenses

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[10] This is consistent with guidance outside the U.S. See, for example, Chartered Accountants of Canada, "Building a Better MD&A: Climate Change Disclosures, a Canadian Performance Reporting Board Publication, 2008.