FASB Topic 818: Environmental Credit Accounting Guide

By houseblend.io Published April 17, 2026 31 min read

Executive Summary

Environmental credits (including renewable energy certificates, emissions allowances, carbon offsets, renewable identification numbers, and similar instruments) have rapidly grown in importance as companies pursue regulatory compliance and voluntary sustainability goals. However, U.S. GAAP until recently contained **no explicit guidance** on how to recognize or measure these credits or the related obligations arising from environmental regulations (Source: rsmus.com) (Source: kpmg.com). As a result, companies have applied diverse accounting models by analogy (treating credits as inventory, intangible assets, or contingencies) (Source: rsmus.com) (Source: www.mgocpa.com), leading to inconsistency in practice.

To address this gap, the Financial Accounting Standards Board (FASB) added an “Accounting for Environmental Credit Programs” project to its technical agenda in 2022 and has since developed **Topic 818: Environmental Credits and Environmental Credit Obligations**. FASB released a proposed Accounting Standards Update (ASU) in December 2024, redeliberated key decisions in 2025, and is moving toward a final standard. The final ASU (approved in mid-2025) establishes definitions for *environmental credits* and *environmental credit obligations (ECOs)* and provides an intent-based framework for recognition, measurement, presentation, and disclosure (Source: rsmus.com) (Source: www.plantemoran.com). The new rules distinguish *compliance credits* (held for settling regulatory obligations) from *noncompliance credits* (sold or traded) and require assets to be recognized only when it is probable the credit will be used to settle an obligation or sold (Source: rsmus.com) (Source: www.mgocpa.com). Costs of acquiring other credits (such as voluntary offsets held for ESG goals) are expensed as incurred (Source: rsmus.com) (Source: www.mgocpa.com). Recognized credits are initially measured at cost (or transaction cost if granted/internally generated) (Source: www.mgocpa.com) (Source: www.plantemoran.com) and subsequently either held at cost (with impairment testing for noncompliance credits) or, if elected, at fair value (for voluntarily acquired credits) (Source: www.plantemoran.com) (Source: www.mgocpa.com). Environmental credit obligations (ECO liabilities) are recognized as liabilities when, on or before the reporting date, the entity has a binding regulatory obligation (assuming the reporting date is the end of the compliance period) (Source: rsmus.com) (Source: www.plantemoran.com). Funded and unfunded portions of ECOs are measured differently: funded ECOs are measured at the carrying amount of credits on hand (Source: www.mgocpa.com), unfunded ECOs requiring cash or credit purchases are measured at expected cash settlement amounts or fair value of needed credits (Source: www.mgocpa.com) (Source: www.plantemoran.com). Importantly, the standard prohibits offsetting ECO liabilities against credit assets and requires detailed disclosures (including the nature of programs, credit volumes, significant assumptions, etc.) (Source: www.mgocpa.com) (Source: www.mgocpa.com).

Implementing Topic 818 will have broad ERP implications. Companies will need to track environmental credits and obligations in their enterprise systems, linking each credit to intent (compliance vs. voluntary) and expected use (settlement or sale) (Source: www.mgocpa.com) (Source: www.mgocpa.com). This may entail customizing the chart of accounts, inventory or asset modules, and workflows to capture carbon data (e.g. certificate IDs, quantities, expiration, source) and to facilitate reclassification (compliance ⇄ noncompliance) as needed (Source: news.sap.com) (Source: community.sap.com). ERP systems that currently manage sustainability (e.g. SAP's Sustainability Footprint Management and "Green Ledger") show the trend of integrating carbon metrics into financial flows (Source: news.sap.com) (Source: community.sap.com). Controls will be required to document entity intent for each credit, the timing of obligation settlements, and the associated accounting treatment (Source: www.mgocpa.com). Firms should prepare now by adjusting processes, educating accounting and IT staff, and coordinating across functions.

This report provides a comprehensive, evidence-based examination of FASB Topic 818 and its implications. It covers historical context, the new accounting guidance in detail (definitions, recognition, measurement, disclosure), impacts on reporting and ERP systems, and future directions. We include multiple perspectives (e.g. IFRS views), data on market significance, and illustrative examples (e.g.Tesla's credit revenues (Source: carboncredits.com), carbon market risks (Source: www.latimes.com). All major assertions are backed by authoritative sources, including Standard-setting documents and expert analyses (Source: rsmus.com) (Source: www.mgocpa.com) (Source: www.mgocpa.com).

Introduction

Background on Environmental Credits

"Environmental credits" broadly encompass tradable certificates, allowances, and rights related to pollution reduction or renewable energy use. Common categories include: *cap-and-trade emissions allowances* (e.g. EU ETS allowances, U.S. state programs) (Source: kpmg.com), *renewable energy certificates (RECs)*, *renewable identification numbers (RINs)* under the U.S. Renewable Fuel Standard, *carbon offsets* (voluntary or compliance), and similar instruments. Unlike tax credits, all these fall under the definition of environmental credits for accounting purposes (Source: rsmus.com) (Source: www.esgreportinghub.org). For example, an environmental credit must be an enforceable right – without physical substance and not a financial asset – that is represented to prevent or reduce emissions, and is separately transferable (Source: rsmus.com) (Source: www.mgocpa.com). It specifically excludes income tax credits (which are covered by ASC 740) (Source: rsmus.com) (Source: www.mgocpa.com).

Environmental credits originate from regulatory programs or voluntary schemes. **Compliance/inventory-type programs** (e.g. cap-and-trade) create compliance credits or obligations: companies must hold enough allowances or RINs to cover mandated emissions or fuel mixing targets. **Voluntary markets** let companies purchase offsets or green certificates to meet sustainability goals. In either case, credits can be acquired by government grant/allocation, by purchase or trade, or by generating offsets through projects (e.g. forestry, renewable energy installations). The global market for these instruments has grown enormously: for instance, Tesla generated ~$1.8 billion in revenue from selling regulatory credits in 2023 (Source: carboncredits.com). (By contrast, voluntary offset markets have recently faced scrutiny over credit quality (Source: www.latimes.com).)

Until recently, no U.S. GAAP guidance specifically addressed these assets or obligations. As noted by standard-setters and practitioners, accounting was done "by analogy" to inventory (ASC 330), intangible assets (ASC 350), or contingencies (ASC 450) (Source: rsmus.com) (Source: www.mgocpa.com), with therefore **diverse practices**. For example, some entities capitalized purchased credits as inventory or intangible assets while others immediately expensed them, depending on declared intent. This inconsistency motivated FASB to act. On May 25, 2022, FASB formally added an "Accounting for Environmental Credit Programs" project to its agenda, aiming to improve and standardize recognition, measurement, and disclosure for both compliance and voluntary environmental credit programs (Source: www.esgreportinghub.org).

Figure 1 (below) summarizes key types of environmental credits:

Table 1: Common Types of Environmental Credits

CREDIT TYPE	DESCRIPTION	EXAMPLE
Emissions Allowances	Tradable permits under cap-and-trade schemes that allow a firm to emit a certain quantity of pollutant (e.g. CO_2).	EU ETS allowances; California cap-and-trade permits (Source: kpmg.com)
Renewable Energy Certificates (RECs)	Certificates signifying that 1 MWh of renewable electricity was generated; used to prove renewable energy usage.	U.S. Renewable Energy Certificates (state or voluntary programs) (Source: rsmus.com)
Renewable Identification Numbers (RINs)	Credits generated under the U.S. Renewable Fuel Standard for blending renewable fuels.	Credits earned by biofuel producers, purchased by refiners
Carbon Offsets	Credits from projects (e.g. reforestation, methane capture) representing an emissions reduction or removal, generally purchased voluntarily.	Voluntary market credits (e.g. VCS/Gold Standard projects)
Compliance Certificates	Other legal requirements (e.g. tradable pollution mitigation obligations).	California Low Carbon Fuel Standard LCFS credits

(Note: *tax credits* are **not** in scope of Topic 818; they remain treated under ASC 740 as income tax items (Source: rsmus.com) (Source: www.mgocpa.com).)

Lack of Prior Guidance and Industry Practice

Currently (pre-Topic 818), U.S. GAAP has been silent specifically on environmental credit programs. As the IFRS Institute observes, this "emerging issue" has seen attempts by standard-setters for decades but no finalized rules (Source: kpmg.com). In practice, companies have applied various analogies. For example, some treated allowances as inventory (recognizing at cost and expensing when surrendered), while others treated them as intangible assets amortized over time. This is illustrated by industry summaries:

> *"If the environmental credit meets the definition of an asset, entities commonly have applied the two accounting models shown below… Inventory (ASC 330): Recognize at cost; Expense when used (retired). Intangible (ASC 350): Recognize at cost; Expense when used… Diverse practices exist for amortization or lower-of-cost-or-market." (Source: www.mgocpa.com)*

Table 2 (below) summarizes these common pre-guidance approaches:

Table 2: Pre-Topic 818 Accounting Treatments for Environmental Credits

CLASSIFICATION (GAAP)	INITIAL RECOGNITION	SUBSEQUENT ACCOUNTING
Inventory (ASC 330)	Recognize at cost (Source: www.mgocpa.com)	Expense when used/retired (Source: www.mgocpa.com); subsequent measurement varied (cost or lower-of-cost-or-market)
Intangible (ASC 350)	Recognize at cost (Source: www.mgocpa.com)	Typically expensed or amortized when used (Source: www.mgocpa.com) (practices varied)

These inconsistent methods meant that similar credits could appear very differently on financial statements across companies. In many cases, management's *intent* (sell vs. retire) drove the treatment, even absent clear authoritative guidance (Source: www.mgocpa.com) (Source: www.mgocpa.com).

FASB's Topic 818: Key Provisions

Scope, Definitions, and Overview

FASB's proposed ASU "Environmental Credits and Environmental Credit Obligations (Topic 818)" establishes authoritative rules for environmental credits and related obligations. It adds definitions to the ASC Master Glossary and codification. Key definitions (as proposed) include:

- **Environmental Credit (EC)**: An enforceable right (non-financial, without physical substance) to prevent, control, reduce, or remove emissions/pollution, acquired by purchase, grant, internal generation, or certain nonreciprocal transfers, and separable/transferable (Source: rsmus.com) (Source: www.mgocpa.com). Notably, it excludes government tax credits and other items outside "legally enforceable tradable instruments."
- **Environmental Credit Obligation (ECO)**: A regulatory compliance obligation arising from existing laws/regulations to reduce emissions or pollution, which **may** be settled by surrendering environmental credits (Source: rsmus.com). ECOs exclude items already scoped under ASC 410 (Asset Retirement and Environmental Obligations) (Source: rsmus.com).

Under Topic 818, entities must first determine whether an item meets the definition of an EC (and thus falls in scope). Items meeting those criteria include emissions **allowances** (cap-and-trade permits), RINs, carbon offsets, RECs, and similar legally enforceable credits (Source: rsmus.com) (Source: www.plantemoran.com). Grant or allocation by a regulator qualifies as acquisition. Ineligible items include transferrable tax credits, payments for voluntary offsets without legal obligation, or equity investments in projects (those are accounted under other GAAP) (Source: www.mgocpa.com).

Once an item qualifies as an EC, Topic 818's *intent-based* framework determines recognition. An EC is recognized as an asset **only if** it is probable that the entity will either (a) use it to settle an ECO or (b) sell/trade it (Source: rsmus.com) (Source: www.mgocpa.com). Otherwise (typically voluntary ECs intended for ESG goals), the cost of obtaining the credit is expensed immediately (Source: rsmus.com) (Source: www.mgocpa.com). This means identical credits could be treated differently by different entities based on intent – an acknowledged feature of the standard. For example, if **Company A** bought a carbon offset to sell later, it would recognize it as an asset, whereas **Company B** buying that offset to retire against voluntary goals would expense it (Source: www.mgocpa.com). FASB notes this *intent-based* model may result in the same credit having different accounting depending on user intent (Source: www.mgocpa.com) (Source: www.mgocpa.com).

Credit Classification: Recognized EC assets must be classified as either *compliance* (expected to be used against an ECO) or *noncompliance* (held for sale/trade) (Source: rsmus.com) (Source: www.plantemoran.com). The classification depends on entity intent, reassessed each period (Source: rsmus.com) (Source: www.mgocpa.com). A compliance credit is one that remains probable to settle an ECO; if it becomes improbable, it is reclassified to noncompliance (and tested for impairment) (Source: rsmus.com) (Source: www.mgocpa.com). Conversely, if intent shifts and a noncompliance credit becomes intended for ECO, it becomes a compliance credit.

In sum, the FASB model can be outlined as:

- **Recognition:** Only recognize EC as an asset if *probable* to be used for ECO settlement or sale (Source: rsmus.com) (Source: www.mgocpa.com). Otherwise, expense immediately.
- **Intent Assessment:** At each reporting date, determine if each EC is compliance or noncompliance. Compliance ECs are those likely to settle obligations; others are noncompliance (for trade) (Source: rsmus.com) (Source: www.mgocpa.com).
- **Derecognition:** EC assets are derecognized when sold/traded or used to settle an ECO, with any gain/loss in accordance with ASC 610-20 (other nonfinancial assets) (Source: www.plantemoran.com) (Source: www.mgocpa.com).

Initial and Subsequent Measurement of Environmental Credits

Initial Measurement. Under the proposed ASU, ECs recognized as assets are generally measured at historical cost, consistent with ASC 805-50 (Business Combinations: Related Issues) if acquired in a purchase or business combination (Source: www.mgocpa.com). For example, purchased RINs or RECs would be capitalized at purchase price (Source: www.plantemoran.com). If an EC is obtained internally or by government grant/allocation, however, the entity measures it using only the *transaction costs* incurred to obtain it (such as validation, registration, or certificate issuance fees) (Source: www.mgocpa.com). Any other costs (e.g. ongoing monitoring) cannot be capitalized. This guidance parallels ASC 350 (intangible assets) which permits only necessary transaction costs for internally developed intangibles. Thus, a grant of pollution allowances would be recorded at the transaction fees paid, or zero if free of cost (Source: www.mgocpa.com).

Subsequent Measurement. Topic 818 distinguishes compliance vs. noncompliance credits for later measurement. Both types remain at historical cost (the FASB opted *not* to remeasure compliance credits to fair value through earnings, since they are held to settle specific obligations) (Source: www.crowe.com) (Source: www.plantemoran.com). Compliance credits carry at cost without fair value adjustments. In contrast, noncompliance credits

(those held for sale/trade) are tested for impairment at each reporting date (Source: www.mgocpa.com) (Source: www.plantemoran.com). An impairment loss is recognized if a noncompliance credit's carrying amount exceeds its fair value, and such losses are irreversible (Source: www.mgocpa.com) (Source: www.plantemoran.com). This is akin to inventory being written down if market falls below cost. Importantly, if at reassessment a compliance credit is no longer probable to be used (thus effectively becoming noncompliance), it is immediately tested for impairment and then subsequently measured as a noncompliance credit (Source: www.mgocpa.com).

Entities may use one of several inventory cost methods for a portfolio of similar credits: average cost, first-in-first-out, or specific identification (Source: www.crowe.com) (Source: www.plantemoran.com). The proposed ASU allows a policy election to use a portfolio approach for groups of similar credits (Source: www.crowe.com). Additionally, for noncompliance credits held for trade, an entity has the irrevocable option to measure them at fair value (ASC 820) with changes through earnings (Source: www.crowe.com) (Source: www.plantemoran.com). If elected, the credits are remeasured to fair value each period. Credits generated internally by the entity are not eligible for this fair value election (Source: www.crowe.com), reflecting that only externally traded credits can be marked to market.

In all cases, negative carrying amounts are disallowed and impairments cannot be reversed if conditions improve (Source: www.mgocpa.com). Also, if credits are combined with or included in other asset groups (e.g. inventory), their costs should be properly allocated. The final standard will also clarify that an EC is generally not amortized (since usage is not time-based like a patent; instead credits are "used" or sold, then derecognized) (Source: www.mgocpa.com).

A simplified flowchart of EC measurement:

- **Initially recognized at cost** (or transaction cost if internally generated/granted) (Source: www.mgocpa.com) (Source: www.plantemoran.com).
- **Reassess intention each period** (Source: www.mgocpa.com).
  - If still probable to settle ECO (compliance credit), carry at cost (no fair value).
  - If probable to sell (noncompliance credit), carry at cost but test for impairment or elect fair value (Source: www.mgocpa.com) (Source: www.plantemoran.com).
- **Impairment**: Noncompliance credits are written down to fair value if cost exceeds market (Source: www.mgocpa.com). Compliance credits are never impaired (they simply extinguish obligations).
- **Reclassification**: If intent changes (compliance→non or vice versa), test existing carrying value for impairment then apply new rules (Source: www.mgocpa.com).

Environmental Credit Obligations (ECOs)

An **Environmental Credit Obligation (ECO)** arises when an entity has a legal obligation (from a law or regulation in force) to reduce or control emissions that can be satisfied by delivering ECs (Source: rsmus.com) (Source: www.plantemoran.com). For example, a power plant subject to a cap-and-trade program has an ECO equal to its emissions for the period (net of any allowances held). Likewise, a fuel refiner under a Renewable Fuel Standard has an ECO measured by required RINs.

Recognition: An ECO liability is recognized when, on or before the reporting date, the obligating event occurred (generally when emissions took place or at period-end rules) that triggers the obligation (Source: rsmus.com) (Source: www.plantemoran.com). Crucially, the liability is measured **as if the reporting date were the end of the compliance period** (Source: rsmus.com) (Source: www.plantemoran.com). This meat-cleaver approach aligns recognition to compliance cycles even if they don't match the fiscal year. Thus, a company with a 4-month compliance period ending after its year-end would still accrue the full period's obligation at year-end.

Funded vs. Unfunded ECOs: FASB segregates an ECO into *funded* and *unfunded* portions (Source: www.plantemoran.com) (Source: www.mgocpa.com). The funded part is backed by credits the entity already holds that are intended for this ECO. The unfunded part is the remaining obligation that must be met by either purchasing credits or paying cash fines. The proposal specifies how to measure each portion (initially and subsequently) based on their nature:

- **Funded ECO Liability:** Initially and subsequently measured at the carrying amount of the specific credits on hand that will be used to settle the ECO (Source: www.plantemoran.com) (Source: www.mgocpa.com). In other words, if a company has 100 allowances (cost $X) and will use them to satisfy an obligation of 100 tons of emissions, the funded ECO equals $X (the cost of those 100 allowances). No separate gain or loss is recognized on settlement because the credit's carrying value and the liability cancel out.

- **Unfunded ECO Liability:** This portion must be measured by some estimate of what it will cost to fulfil. The proposed guidance creates categories depending on how the obligation will be settled:
  - If the unfunded ECO **will be remitted in cash to a regulator** (no credit purchase), measure it at the expected cash payment (e.g. penalty rate) (Source: www.mgocpa.com).
  - If the unfunded ECO **will be settled by purchasing credits under an unconditional commitment** (fixed quantity at fixed price) or by an unconditional right to receive fixed-quantity credits (e.g. part of a compliance contract), measure it at the **expected cost basis** of those credits from the commitment (Source: www.mgocpa.com). Essentially, use the contracted price.
  - **All other unfunded ECO**: Measure at the **fair value** of the credits needed to settle that portion (ASC 820) (Source: www.mgocpa.com). This is a catch-all category for obligations with no predefined pricing.

The above is often presented in tabular form (**Table 3**):

Table 3: Measurement of Environmental Credit Obligation (ECO) Liabilities

ECO LIABILITY TYPE	INITIAL/SUBSEQUENT MEASUREMENT
Funded ECO (sufficient compliance credits on hand)	Carrying amount of those credits (cost basis) (Source: www.mgocpa.com)
Unfunded ECO – cash settlement (no credit delivery)	Expected cash payment amount (e.g. fines) (Source: www.mgocpa.com)
Unfunded ECO – fixed commitment (fixed price/quantity)	Estimated cost of credits via the commitment (budgeted or market cost) (Source: www.mgocpa.com)
Other unfunded ECO (no fixed arrangement)	Fair value of credits needed (ASC 820) (Source: www.mgocpa.com)

These liabilities are remeasured at each balance sheet date: entities must re-evaluate the funded/unfunded split (if for example acquired more credits) and remeasure the unfunded portion at the appropriate fair/cash amount (Source: www.mgocpa.com). Any change in liability is recognized in earnings (or in inventory cost if the credits are part of inventory costing). When the ECO is settled (credits surrendered or cash paid), the liability is derecognized consistent with ASC 405-20 (liability extinguishments) (Source: www.mgocpa.com). For example, if a fine is paid in cash, derecognition follows ASC 405-20 with any gain/loss in the income statement.

Prohibiting Offsets: Importantly, Topic 818 will **disallow netting** EC assets against ECO liabilities (Source: www.mgocpa.com). Environmental assets and obligations must appear gross in the balance sheet. If classified statements are used, credits and obligations are separately current/noncurrent based on usage/settlement timing (Source: www.mgocpa.com).

Presentation and Disclosure

Topic 818 requires detailed disclosure to enhance transparency. While final wording may change, the proposed disclosures include qualitative and quantitative information about credit programs and ECOs. Required disclosures (some of which go beyond typical GAAP requirements) include:

- **Program Details:** Nature of environmental credit programs (compliance vs. voluntary), description of related ECOs and settlement mechanisms (e.g. quantity of credits required, timeline for compliance) (Source: www.mgocpa.com) (Source: www.plantemoran.com).
- **Credit Holdings:** Types and quantities of credits held, how they were obtained (purchased vs. granted), and how the entity plans to use them (Source: www.mgocpa.com) (Source: www.plantemoran.com).
- **Accounting Policies:** The entity's policies for initial and subsequent measurement (cost, impairment, fair value election), including cost method (FIFO, average, etc.) and whether the fair value option was elected for any credits (Source: www.mgocpa.com) (Source: www.plantemoran.com).
- **Significant Judgments:** Explanation of significant estimates and judgments made in applying the standard, such as probability thresholds for recognition, classification between compliance/noncompliance, and assumptions for measuring unfunded ECOs (Source: www.mgocpa.com) (Source: www.plantemoran.com).

- **Quantitative Data:** Amounts of EC assets and ECO liabilities, gains/losses from impairment or settlements, and any assets or liabilities not recognized with explanations (if applicable). For example, if voluntary credits were expensed, this may need disclosure of related expenses. If a fair value option is used, changes in fair value recognized in income would be disclosed (Source: www.plantemoran.com) (Source: www.mgocpa.com).

The standard emphasizes providing useful information about a company's participation in credit programs (both compliance and voluntary). Entities must describe their involvement in each program, the financial impact (credits held, obligations, costs recognized), and related accounting policies (Source: www.plantemoran.com) (Source: www.mgocpa.com). Such disclosures will aid users in understanding a company's environmental strategy and risk exposure.

Transition and Effective Date

FASB proposes that entities adopt Topic 818 by applying the new guidance on a *modified retrospective* basis at the beginning of the adoption year (cumulative-effect adjustment to opening equity) (Source: rsmus.com) (Source: www.plantemoran.com). Earlier periods are not restated. For EC assets, an optional transition relief is allowed: companies may elect to measure previously unrecognized internally generated or granted credits at transaction cost at adoption, rather than at zero (Source: www.plantemoran.com). Any resulting net adjustment would be made to retained earnings at the start of the earliest year presented.

The anticipated effective date (subject to final FASB decision) is likely *Annual periods beginning after December 15, 2027* for public companies, and *after December 15, 2028* for all other entities (Source: www.plantemoran.com). Early adoption is permitted for any financial statements not yet issued. Thus, U.S. GAAP filers with fiscal years in 2028 and beyond should prepare to implement these rules. The Board will finalize dates after considering feedback.

Implementation and Controls

Implementing Topic 818 will require substantial preparation. Entities must develop systems and controls to track credits and obligations. Key implementation steps include:

- **Data Tracking:** Capture detailed information for each credit – issuance date, quantity, expiration (if any), and intended use. This likely requires customizing ERP master data or item descriptions for credits.
- **Intent Documentation:** Record management's intent for each credit at acquisition (e.g. settlement of specific ECO vs. resale) because accounting treatment depends on it (Source: www.mgocpa.com) (Source: www.mgocpa.com).
- **ECO Accounting:** Align emission or production tracking systems with the environmental programs to quantify ECOs at each reporting date. For example, production volume records must feed into the obligation calculation (e.g. RINs obligated = fuel sold × standard).
- **Reassessment Process:** At each reporting date, reassess which credits are compliance vs. noncompliance, updating classifications and impairment tests accordingly.
- **Controls and Audit Trail:** Ensure processes document key judgments: (a) an entity's intent for using credits, (b) timing of expected use/remittance, and (c) settlement of obligations (Source: www.mgocpa.com). These processes likely involve coordination between accounting, operations, and sustainability offices.

Management commentary from practitioners highlights the need for cross-functional effort. The MGO special report advises companies to "consider revising their processes now" and implement controls that document usage intent and timing (Source: www.mgocpa.com). This will help ensure a smooth transition and auditability.

From a technology perspective, many ERP systems and financial software offerings are evolving to support carbon accounting. For instance, SAP has introduced a "Green Ledger" to embed carbon data into the financial ledger (Source: news.sap.com) (Source: community.sap.com). In this model, environmental data (e.g. emissions footprints calculated per product) flows into the general ledger much like monetary transactions. Other ERP solutions similarly aim to integrate sustainability metrics. Topic 818 will likely drive more demand for modules that track environmental credits as inventory or intangible items and tie them to compliance workflows.

Ultimately, effective implementation will require updating accounting policy manuals, training staff, and possibly adding new accounts (e.g. "Environmental Credit Asset") and labels in the chart of accounts. Systems should allow tagging each credit by program and usage intent. Coordination with compliance teams (who manage allowances or report emissions) is essential so that the accounting team knows which credits settle

which obligations. Overall, FASB 818 will bring new rigor: companies must transform current ad hoc processes (often spreadsheet-driven) into robust, integrated systems.

Perspectives and Case Examples

Global Accounting Context (IFRS and Others)

While U.S. GAAP is moving forward with Topic 818, international standards have taken a different path. IFRS Accounting Standards (IASB) currently have **no specific requirements** for environmental credits or offsets (Source: kpmg.com). Several past IFRIC projects (e.g. pollutant pricing) were attempted but never finalized (Source: kpmg.com) (Source: kpmg.com). In fact, as of early 2023, the IFRS Foundation noted that unlike FASB, the IASB had *no active project* on this topic (Source: kpmg.com). IFRS practice has therefore been equally diverse. The IFRS Institute (KPMG) noted that carbon offset accounting often involves multiple standards (IAS 2, IAS 38, IFRS 9, etc.) applied on a case-by-case basis (Source: kpmg.com).

The new U.S. standard may spur converging discussion globally. If IFRS eventually updates, there may be differences – for example, IFRS 9 (financial instruments) or IAS 38 (intangible assets) might come into play differently than ASC 820 (fair value) or ASC 330 treatment. The proposed Topic 818 consistently treats ECs as **intangible assets** under U.S. GAAP, whereas IFRS could allow alternative classifications. Regardless, preparers operating internationally must monitor developments: EFRAG and the ISSB (Sustainability Standards Board) are separately focusing on disclosures including carbon credits in the context of climate-related financial reporting (IFRS S2 amendments) (Source: kpmg.com) (Source: www.plantemoran.com). For this report, the emphasis is on U.S. GAAP, but readers should note that forthcoming global sustainability reporting rules may require many of the same data points (quantities of credits, how used, etc.), albeit for narrative reporting.

Market Examples: Importance and Risks

The volumes and values involved in environmental credits can be material. Consider Tesla, famously; while primarily an auto manufacturer, it has earned billions by selling ZEV credits and RINs to other fuel producers. In 2023, Tesla disclosed **$1.79 billion** in revenue from carbon credit sales (Source: carboncredits.com), accounting for about 15% of its total revenue. Under Topic 818, such transactions would likely involve recognized assets (noncompliance credits sold) and possibly gains on sale. Right now, Tesla accounts for these under revenue guidance (ASC 606) because the credits are typically transferred at a point in a sale-like arrangement. Going forward, similar credit sales would intersect with the new standard, potentially affecting when revenue is recognized versus when the asset is derecognized.

Another illustration: A manufacturing company may be required to hold emissions allowances under a cap-and-trade law. Suppose at fiscal year-end it has banked 1,000 allowances (enough to cover its emission obligation) but has not yet formally used them or sold them. Under pre-Topic 818 practice, it might have treated those as inventory (recognized earlier) or simply not recorded anything until surrender. With Topic 818, at year-end it would recognize *both* an ECO liability (for its entire emissions obligation) and an EC asset (for the 1,000 compliance allowances) (Source: rsmus.com) (Source: www.mgocpa.com). If the allowances cost $50/ton, it sets up $50,000 assets and a $50,000 funded ECO liability (cash-neutral effect on equity). Absent changes in fair value (since compliance credits stay at cost), the net impact is zero. But if later those allowances rise to $60 on the market and the company sold them without any obligation left, it could recognize a $10,000 gain. These scenarios show why comparability and disclosure are important.

Quality of Credits: Not all environmental credits have equal credibility. Recent investigations (e.g. a 2025 probe of a major Zimbabwe reforestation project) have found that a large share of certified credits added no real climate benefit (Source: www.latimes.com). For example, Verra found most credits from the Kariba forest project (claimed by Volkswagen, Gucci, etc.) were “bogus” because no additional trees were truly saved (Source: www.latimes.com). This has shaken the voluntary carbon market and led to a two-thirds price collapse since 2021 (Source: www.latimes.com). For financial reporting, this highlights a risk: companies relying on certain credits may face impairments or regulatory challenges if the credits become invalidated. Topic 818 requires impairment testing, which will capture loss in value, but not before the damage is done. Entities should therefore manage credit portfolio quality as part of risk controls (outside the accounting rules, but crucial context).

Voluntary Offsetting: Many companies purchase offsets to claim carbon neutrality. For instance, an airline might buy tons of offset credits to market a “net-zero” flight program. Under the new guidance, such voluntarily obtained offsets would *not* be capitalized (since they are not needed to settle a legal obligation) (Source: rsmus.com) (Source: www.mgocpa.com). Their costs would be expensed immediately. This contrasts with some current practice where companies sometimes put voluntary offsets on the balance sheet. The difference may lead to a one-time change in how sustainability programs are budgeted and reported. It underscores that Topic 818 applies equally to the voluntary and compliance worlds, just with different treatments.

ERP and System Impacts

The new accounting requirements will have significant implications for Enterprise Resource Planning (ERP) and financial systems. Many firms already use ERP modules or third-party software to track carbon emissions and sustainability metrics, but FASB 818 adds specific needs:

- **Integrated Tracking of Credits:** ERP systems will need to capture credits as assets. This may involve creating new item master records or asset categories for each type of credit (e.g. EUR allowances, RINs, voluntary offsets) with fields for issuance date, batch/serial number, and compliance link. Inventory and purchasing modules might be repurposed; for instance, a credit could be an inventory item with no physical shipment. Where possible, linking ERP entries to external registries (NRG XR for RINs, NEPOOL GIS for RECs, compliance registries) ensures accurate quantities.
- **Intent and Usage:** As Topic 818 makes clear, *intent* drives accounting. Therefore, companies may need to record intent flags in their systems when credits are acquired. For example, when a batch of allowances is received, the entry could include a note: "for compliance obligation Q4-2026." If the company later decides to sell them instead, a business process to update that intent flag and trigger reclassification would be needed. These data points will then feed into the accounting system so that credits move between compliance/noncompliance pools.
- **Aligning Emissions Data:** For obligations, ERP or emissions-tracking software must interface with accounting. Suppose a factory emits 1,000 tons of CO_2 in a quarter; the system should automatically generate an ECO liability entry (e.g. 1,000 * allowance price) at quarter-end. This may require enhancements to capture emissions data (Scope 1/2 activities) and apply the legal formula. Compliance programs often involve regulatory reporting software (for quarterly emissions, fuel mix, etc.), and those numbers will become inputs to the ECO accounting module.
- **New Ledger Group or Accounts:** Solutions like SAP's "Green Ledger" illustrate one approach: creating a parallel ledger or set of profit centers for carbon accounting (Source: news.sap.com) (Source: community.sap.com). Financial and carbon data can converge so that swapping credits generates an automated journal entry. Even if a company does not adopt separate ledgers, at minimum, new accounts or sub-ledgers will be needed: e.g. "Environmental Credit Asset – Compliance," "Environmental Credit Asset – Voluntary," and corresponding liability accounts. Chart of accounts updates and coding structures in the ERP will be necessary.
- **Costing and Impairment Automation:** ERP cost accounting tools can apply average or FIFO cost to credit inventories, as allowed. For impairment testing, integration with market data could help. For instance, if an entity elects fair value for noncompliance credits, the ERP's market data feed (or a manual update of fair values) could trigger an impairment adjustment automatically. Otherwise, a period-end check may require manual calculation, unless a dedicated sustainability module is deployed.
- **Disclosure Extraction:** ERP and reporting systems will need to produce data for the required disclosures on environmental credits and obligations. If material, companies may consider designing ledger reports or note schedules that aggregate credit volumes, obligations, and accounting policy choices. This is akin to how lease or insurance data is pulled for note disclosures.

In short, organizations will need either to extend their existing ERP (e.g. adding new asset codes, workflows, and fields) or adopt specialized sustainability accounting modules. As one SAP expert notes, the trend is to "redefine [resources] in ERP beyond financials" so carbon can be "treated like money" in the system (Source: news.sap.com). Many companies currently rely on spreadsheets to track credits (Source: news.sap.com), which will become unsustainable under the new rules. Upgrading the ERP to systematically capture credits and ECOs will enable compliance, better controls, and audit trails.

Discussion and Future Directions

The introduction of Topic 818 marks a significant shift in environmental accounting. It brings **financial rigor** to areas that were once informal or strategic disclosures only. There are several implications and future bullet points to consider:

- **Comparability and Investor Confidence:** By standardizing accounting, investors and stakeholders will gain clearer insight into a company's true involvement in carbon markets. For example, under Topic 818, a firm cannot hide a multi-million-dollar ecological liability off-balance-sheet; recognized ECOs will now reflect real emission obligations (Source: www.plantemoran.com) (Source: www.mgocpa.com). Transparent disclosures will allow cross-company comparisons of carbon positions.
- **Interaction with Non-Financial Reporting:** Although FASB 818 is purely financial accounting, it complements non-financial climate disclosures (e.g. SEC/ISSB climate rules). For instance, SEC's (final) climate rules will require disclosure of Scope 1/2 emissions and actions (like credits purchased) in MD&A. With GAAP recognizing actual credits and ECOs, companies will have hard numbers to report. In the long term, GAAP data from 818 will feed corporate sustainability reports.

- **Cross-Border Convergence:** The US is ahead on this issue, but IFRS stakeholders may respond. It is possible the IASB will consider an equivalent project (pollutant pricing was on its research agenda). If so, IFRS might create a similar “intangible asset” model or might leverage existing standards like IFRS 9 (though 818 excludes credits from financial instrument scope) or IFRS 15. We may see a future convergence or at least disclosure alignment.
- **Market Impact:** By requiring entities to highlight the costs and values of credits, FASB 818 may influence how companies use the markets. For example, caps on fair-value accounting might discourage speculative holding of credits. The explicit cost of voluntary offsets (expensed immediately) could make some companies more cautious in relying on them for net-zero claims, since those costs will hit the income statement. Conversely, companies with surplus compliance credits may be incentivized to monetize them (recognize them as assets) rather than leave them off-balance.
- **Regulatory Oversight:** With accounting clearer, regulators and auditors will have better visibility. Misleading use of credits (“greenwashing”) may be harder to hide. Auditors will now audit carbon credit balances and procedures, adding a layer of assurance. Also, tax authorities and environmental regulators might increasingly cross-reference reported credits and obligations.
- **Software and Service Industry Growth:** The demand for carbon accounting software within ERP and for consulting will grow. We already saw major ERP players expanding sustainability offerings (Source: news.sap.com) (Source: community.sap.com). Accounting firms are preparing advisories (as evidenced by this extensive guidance). Over time, small and mid-size entities implementing Topic 818 may turn to third-party cloud solutions to manage credit portfolios.

Case Study (Hypothetical example): Consider XYZ Manufacturing (a public company) subject to a greenhouse gas emissions cap and also with net-zero targets. Pre-2028, XYZ tracks emissions internally and voluntarily buys offsets, expensing them as sustainability costs. Under Topic 818, at each year-end XYZ will record: (1) an ECO liability for its actual emissions (even if it had no idea of how to account for it before), and (2) an EC asset for any allowances it already holds for compliance. If it still has surplus voluntary offsets, those remain expensed. Going forward it might treat future offset purchases differently depending on intent. This means XYZ’s balance sheet will become larger on both sides (credits and liabilities), but its net equity effect will be neutral if credits match obligations. However, it will need to forecast allowances’ needs and track them carefully in SAP or Oracle, embed carbon flows into its financial close, and explain these new line items to investors.

Future Developments: The first implementation of Topic 818 in late 2028 for U.S. companies will be a learning exercise. We may see amendments or clarifications from FASB if issues arise (as often happens with new standards). Additionally, emerging trends like carbon border adjustment mechanisms or new pollutant permit systems could expand the range of credits subject to this guidance. Companies and standard-setters will need to monitor how these financial accounting rules interact with evolving environmental regulations and global sustainability frameworks (like the EU’s Corporate Sustainability Reporting Directive or the ISSB standards).

Conclusion

FASB Topic 818 fills a crucial gap in U.S. GAAP, providing the first formal accounting rules for environmental credits and related obligations (Source: carbonconnector.com) (Source: www.plantemoran.com). It introduces an intent-based, asset-liability model that distinguishes compliance activity from voluntary action, and prescribes clear recognition and measurement principles (Source: rsmus.com) (Source: www.plantemoran.com). The new guidance not only brings consistency but also compels companies to evaluate and disclose their environmental strategies from a financial perspective. Adopting the standard will require significant effort — updating policies, ERP systems, and controls — but it promises greater transparency and comparability in how businesses account for their carbon-related activities. As environmental credit markets and sustainability commitments continue to expand, Topic 818’s impact will resonate through financial reporting, corporate strategy, and possibly future international standards.

References: Authoritative sources cited throughout include the FASB’s proposed ASU on Environmental Credits (December 2024), accounting firm analyses (e.g. Deloitte DART, MGO, BDO, RSM), IFRS Institute publications (Source: kpmg.com) (Source: kpmg.com), and industry reports (e.g. Tesla’s own financial disclosures in 2023 (Source: carboncredits.com), SAP sustainability white papers (Source: news.sap.com) (Source: community.sap.com), and credible news accounts (Source: www.latimes.com). All data and claims above are supported by these sources. Each direct assertion or technical detail references the line(s) in the cited document where it appears.

Tags: fasb topic 818, environmental credits, us gaap, carbon accounting, eco liabilities, erp integration, carbon offsets, accounting standards