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Environmental Permitting and Environmental Impact Assessment in the United States and the European Union: A Comparative Legal Study

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Abstract

Environmental permitting is one of the principal legal techniques through which contemporary legal systems translate environmental protection from a general public objective into a condition governing concrete projects. Yet the United States and the European Union organize this function through markedly different institutional and doctrinal structures. In the United States, the National Environmental Policy Act operates primarily as a procedural framework for federal decision-making and is superimposed upon sector-specific permitting regimes under statutes such as the Clean Water Act and the Clean Air Act. In the European Union, environmental assessment is embedded within a denser supranational framework in which the Environmental Impact Assessment Directive establishes binding requirements for the authorization of public and private projects, while parallel instruments concerning habitats, water, industrial emissions and public participation may impose additional substantive constraints. This study compares the scope, screening mechanisms, assessment requirements, treatment of alternatives, public participation, judicial review and substantive legal effects of the two systems. Particular attention is paid to the recent evolution of United States law, including Seven County Infrastructure Coalition v Eagle County, and to the jurisprudence of the Court of Justice of the European Union. The comparison demonstrates that the two systems share a common preventive logic but diverge significantly as to the legal intensity of environmental assessment and its relationship with the final authorization decision.

Keywords: environmental permitting, environmental impact assessment, national environmental policy act, European Union, comparative environmental law.

Introduction

Environmental authorization lies at the intersection of administrative law, environmental law and infrastructure governance. Its central function is preventive: environmental consequences are to be identified before a competent authority commits itself to a project whose ecological effects may be difficult or impossible to reverse. This temporal dimension distinguishes environmental assessment from liability and remediation. The law seeks to influence the decision before environmental damage occurs.

The United States and the European Union provide particularly useful comparative models. The American system is historically associated with the National Environmental Pol-

icy Act of 1969, which became a prototype for environmental impact assessment throughout the world. NEPA requires federal agencies to integrate environmental considerations into decision-making, but the Supreme Court has repeatedly characterized the statute as essentially procedural. The European model, developed initially through Directive 85/337/EEC and now principally contained in Directive 2011/92/EU as amended by Directive 2014/52/EU, similarly requires prior assessment but operates within the distinctive constitutional structure of EU law (European Parliament & Council of the European Union, 2011; National Environmental Policy Act, 1969).

The expression environmental permitting must therefore be used carefully. Neither NEPA nor the EIA Directive constitutes, by itself, a complete code of all environmental permits. Both systems combine horizontal environmental assessment with specialized authorization regimes. The comparison is consequently not between two identical permits, but between two legal architectures governing the environmental dimension of project authorization.

Constitutional and Institutional Foundations

The first structural difference concerns the source and allocation of regulatory authority. In the United States, federal environmental regulation operates within a federal constitutional order in which Congress legislates within its enumerated powers and environmental administration is divided among federal, state and local institutions. NEPA applies to federal agency action and does not transform every environmentally significant private project into a federal project. A private development ordinarily enters the NEPA framework because a federal permit, federal funding, federal land decision or another sufficiently significant federal action is involved. State environmental review statutes may independently impose analogous or more demanding requirements (U.S. Environmental Protection Agency [EPA], 2026).

The European Union follows a different model. Article 191 TFEU identifies the objectives and principles of Union environmental policy, including a high level of protection, precaution, preventive action, rectification of environmental damage at source and the polluter-pays principle. Article 192 TFEU supplies the principal legislative basis for EU environmental measures. Directives bind Member States as to the result to be achieved while leaving national authorities the choice of form and methods. Environmental permitting is therefore administered predominantly by national authorities, but within a harmonized legal framework whose interpretation is ultimately controlled by the Court of Justice (European Union, 2016).

This difference has practical consequences. In the United States, the threshold inquiry often concerns federal jurisdiction and the relationship between NEPA and the particular agency action. In the European Union, the central inquiry is more frequently whether a project falls within the categories and thresholds established by the EIA Directive and national implementing legislation, and whether other EU environmental regimes impose cumulative authorization requirements.

The United States: NEPA and the Federal Permitting Structure

NEPA requires environmental review before federal agencies undertake qualifying major federal actions. The contemporary review structure generally operates through categorical exclusions, environmental assessments and environmental impact statements. A categorical exclusion is used for categories of actions that normally do not have significant environmental effects. Where the significance of effects is uncertain, an agency may prepare an Environmental Assessment. If the agency concludes that significant effects will not occur, the process may terminate in a Finding of No Significant Impact. Where significant environmental effects require fuller examination, an Environmental Impact Statement is prepared (U.S. Environmental Protection Agency [EPA], 2026).

The EIS performs an informational and deliberative function. It identifies significant environmental effects and examines alternatives. It creates a structured administrative record and exposes the agency's environmental reasoning to public scrutiny. Nevertheless, NEPA does not generally command the agency to select the environmentally preferable alternative. In Robertson v Methow Valley Citizens Council, the Supreme Court emphasized that NEPA prescribes a decision-making process rather than a particular substantive outcome. An agency may therefore approve an environmentally harmful project after adequate NEPA review, provided that other applicable substantive statutes permit that outcome (Robertson v. Methow Valley Citizens Council, 1989).

Environmental permitting in the United States consequently cannot be reduced to NEPA. A project may require a permit under section 404 of the Clean Water Act for discharges of dredged or fill material, an NPDES permit for qualifying pollutant discharges, approvals under the Clean Air Act, consultation under section 7 of the Endangered Species Act, or permissions under federal land-management legislation. The environmental review and the substantive permit may be institutionally connected, but their legal functions remain distinct. EPA itself notes that most EPA actions under the Clean Water Act are exempt from NEPA, while certain EPA-issued NPDES permits for new sources remain subject to NEPA review (Clean Water Act, 1972; EPA, 2026).

The American model is thus characterized by procedural environmental review combined with a fragmented network of substantive regulatory statutes. Its effectiveness depends not only upon the quality of the EIS but also upon the legal standards contained in the underlying permitting statute.

The European Union: The EIA Directive and Integrated Authorization

The EU EIA Directive applies to public and private projects likely to have significant effects on the environment. Annex I projects are generally subject to mandatory assessment, whereas Annex II projects are subject to Member State determination through case-by-case examination, thresholds or criteria, subject to the Directive's screening requirements. The system is therefore based on ex ante classification coupled with an obligation to prevent national thresholds from excluding projects that may nevertheless produce significant environmental effects (European Parliament & Council of the European Union, 2011).

The assessment concerns a broad set of factors, including population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape, as well as interactions among relevant factors. Directive 2014/52/EU strengthened the framework by expressly reinforcing issues such as climate change, biodiversity, disaster risks, monitoring and the quality of environmental reports (European Parliament & Council of the European Union, 2014).

The developer supplies an environmental impact assessment report containing the information required by Article 5 and Annex IV. The competent authority must possess sufficient expertise to examine that material. Public authorities with relevant environmental responsibilities and the public concerned participate before the development consent is granted. The final decision must take account of the environmental report, consultations and other relevant information and must include the elements required by Article 8a.

Unlike a purely informational model, EU environmental assessment is integrated into a broader network of binding environmental obligations. A project affecting a Natura 2000 site may trigger Article 6(3) of the Habitats Directive, which permits authorization only after the competent authority has ascertained that the plan or project will not adversely affect the integrity of the site, subject to the exceptional derogation in Article 6(4). Similar interaction occurs with the Water Framework Directive and industrial-emissions legislation. The EIA is therefore frequently one component of a multi-layered authorization process in which other EU rules may impose substantive barriers to approval (Council of the European Communities, 1992).

Screening and the Threshold of Assessment

Screening illustrates the different legal grammars of the two systems. Under NEPA, the initial classification of an action depends substantially upon agency procedures and the significance of the proposed federal action. Categorical exclusions are important instruments of administrative proportionality because they prevent the full assessment machinery from being applied to routine actions lacking significant environmental effects. An Environmental Assessment occupies the intermediate position and may establish either the need for an EIS or the absence of significant impact.

EU law structures screening more directly through Annexes I and II of the EIA Directive. Annex I reflects a legislative determination that specified classes of projects require assessment. Annex II leaves greater discretion to Member States, but that discretion is constrained by the objective of ensuring assessment of projects likely to have significant environmental effects. The Court of Justice has consistently resisted national rules that use thresholds in a manner capable of exempting entire classes of environmentally significant projects from assessment.

The distinction is conceptually important. American screening is strongly connected to the agency-action model and the significance of federal involvement. EU screening is more explicitly project-centered. It asks whether the environmental characteristics of the project, its location and the characteristics of its potential impacts bring it within the preventive assessment obligation.

Scope of Environmental Effects and Causation

The definition of relevant environmental effects is among the most contested aspects of environmental assessment. In American law, the Supreme Court has repeatedly linked NEPA analysis to causation and agency authority. Department of Transportation v Public Citizen held that an agency need not consider environmental effects for which it lacks statutory authority to prevent the relevant causal consequence. This doctrine limits the conversion of NEPA into a general inquiry into every environmental consequence economically associated with a federal action (Department of Transportation v. Public Citizen, 2004).

The Supreme Court substantially reinforced this approach in Seven County Infrastructure Coalition v Eagle County in 2025. The case concerned federal approval of a railway intended to connect Utah's Uinta Basin to the national rail network. The Court held that the reviewing court had demanded too expansive an inquiry into effects associated with separate upstream and downstream projects. The Court stressed both the procedural character of NEPA and the substantial deference owed to agency judgments concerning the scope and detail of environmental review. The decision is particularly significant for infrastructure and energy permitting because it narrows the circumstances in which geographically or temporally separate activities must be incorporated into the EIS for the project before the agency (Seven County Infrastructure Coalition v. Eagle County, 2025).

EU law approaches scope through the Directive's concept of significant effects and through the requirement to assess direct and indirect effects across the environmental factors identified by the legislation. Although questions of causal connection remain unavoidable, the legal analysis is less

dominated by the American doctrine linking the scope of review to the precise limits of the lead agency's statutory power. The project-centered nature of the Directive and the possibility of cumulative application with other EU instruments generally produce a more integrated inquiry.

Alternatives and Mitigation

Alternatives are central to both systems but occupy different doctrinal positions. Under NEPA, analysis of reasonable alternatives has traditionally been regarded as a core element of the EIS. The alternatives inquiry makes environmental review meaningful because it tests whether the proposed action is genuinely necessary in its chosen form and reveals trade-offs that might otherwise remain hidden. Yet the range of reasonable alternatives is shaped by the project's purpose and the agency's statutory mandate.

The EIA Directive requires the developer to provide a description of reasonable alternatives studied that are relevant to the project and its specific characteristics, together with an indication of the main reasons for the option chosen, taking environmental effects into account. This is not identical to the American alternatives doctrine, but it similarly transforms environmental assessment from a description of impacts into a comparative decision-making exercise (European Parliament & Council of the European Union, 2014).

Mitigation also exposes the procedural-substantive divide. American NEPA analysis may identify mitigation measures without independently creating the substantive statutory authority necessary to compel every environmentally preferable measure. EU development consent, by contrast, must identify environmental conditions and measures envisaged to avoid, prevent, reduce and, where possible, offset significant adverse effects, and Member States must determine procedures regarding monitoring of significant adverse effects where appropriate. The authorization is therefore more visibly connected to enforceable environmental conditions.

Public Participation and Access to Information

Public participation is a common normative foundation. NEPA review provides opportunities for public comment and makes environmental information available before final agency action. Public scrutiny improves the factual record, exposes distributional effects and provides potential litigants with the information necessary to challenge deficient analysis.

EU law embeds participation within the EIA Directive and the broader architecture influenced by the Aarhus Convention. The public concerned must receive early and effective opportunities to participate in environmental decision-making, when options remain open. Access to environmental information and access to review procedures reinforce participation. The result is a model in which procedural environmental rights are not merely techniques of administrative consultation but elements of a wider system of environmental democracy.

Both systems face the same institutional risk: participation can become formal rather than deliberative when documentation is excessively technical, consultation occurs after practical choices have already hardened, or the volume of environmental information makes meaningful engagement difficult. Legal compliance therefore depends upon timing, accessibility and the genuine capacity of comments to influence the decision.

Judicial Review and Remedies

Judicial review is perhaps the field in which the divergence is clearest. NEPA litigation generally proceeds under the Administrative Procedure Act. Courts review whether the agency complied with the procedural requirements of environmental assessment and whether its decision survives the applicable standards of administrative-law review. The judiciary does not ordinarily substitute its preferred environmental policy for that of the agency. Marsh v Oregon Natural Resources Council illustrates the deference traditionally accorded to agency technical judgments, particularly where the dispute concerns scientific information and the need to supplement an EIS. Seven County further emphasizes judicial restraint and agency discretion over the boundaries of the environmental inquiry (Marsh v. Oregon Natural Resources Council, 1989).

In EU law, national courts enforce rights and obligations derived from the EIA Directive subject to the principles of equivalence and effectiveness and to Article 11 of the Directive concerning access to a review procedure. The Court of Justice has developed a substantial body of case law concerning defective or omitted assessments. In Wells, the Court recognized that national authorities must take appropriate measures to remedy a failure to carry out the assessment required by EU law, which may include revocation or suspension of consent where national law permits. In Altrip, the Court rejected an unduly narrow understanding of the procedural defects capable of being invoked by members of the public concerned and addressed the relationship between procedural error and access to judicial review (Gemeinde Altrip, 2013; Wells, 2004).

The EU remedial structure is therefore influenced by the primacy and effectiveness of EU law. National procedural autonomy remains important, but it cannot make the exercise of rights conferred by EU environmental law practically impossible or excessively difficult. This gives environmental assessment a constitutional dimension that has no exact equivalent in American NEPA litigation.

Climate Change and Cumulative Environmental Effects

Climate change tests the capacity of project-level environmental assessment to address effects that are individually

incremental but collectively global. Both systems must confront emissions produced directly by a project, emissions induced by associated economic activity, vulnerability of the project to climatic hazards and the relationship between project approval and broader decarbonization policy.

The EU framework expressly incorporates climate among the factors relevant to assessment after Directive 2014/52/EU. This facilitates consideration both of project effects on climate and of climate-related vulnerability. In addition, EU climate legislation and sectoral energy rules may independently influence whether and under what conditions a project can be authorized.

In the United States, climate analysis under NEPA has developed through agency practice, guidance and litigation, but the outer boundary of indirect effects is affected by the Supreme Court's causation jurisprudence and, most recently, Seven County. The issue is not whether greenhouse-gas emissions can ever be environmentally relevant; rather, it is how far an agency must extend the causal chain beyond the project it is legally charged with approving. The American model therefore places greater doctrinal pressure on the distinction between the project at hand and separate upstream or downstream activity.

Comparative Evaluation

The two regimes share several foundational characteristics. Both institutionalize prevention, require environmental information before final authorization, recognize alternatives as relevant to rational decision-making, provide mechanisms for public participation and permit judicial scrutiny of procedural legality. Both also seek proportionality by distinguishing projects requiring full assessment from actions for which a lighter review or no detailed assessment is justified.

Their differences, however, are more consequential than the shared vocabulary suggests. First, NEPA is fundamentally tied to federal agency action, whereas the EU Directive is organized around categories of public and private projects subject to development consent. Second, the American system separates procedural NEPA review from the substantive standards of sectoral permitting more sharply. EU environmental assessment is situated within a supranational network in which parallel directives may directly constrain the permissible authorization outcome.

Third, the role of courts differs. American Supreme Court doctrine emphasizes that NEPA does not mandate environmentally preferable results and increasingly warns against judicial micromanagement of agency assessment choices. EU judicial doctrine emphasizes the effective enforcement of assessment obligations and the need to remedy authorizations granted in breach of EU requirements. Fourth, the European system more expressly links project assessment with principles of high environmental protection and with a wider set of procedural environmental rights.

These distinctions should not be overstated. EU law does not automatically prohibit every project with serious environmental effects, and American environmental permitting contains powerful substantive constraints outside NEPA. The correct comparison is therefore between legal architectures rather than between an environmentally substantive European system and an environmentally procedural American system in the abstract.

Toward Convergence or Continuing Divergence?

Contemporary permitting reform in both jurisdictions is driven by a common tension. Governments seek faster authorization of renewable energy, transmission grids, transport infrastructure, housing and strategic industrial facilities, while environmental law continues to demand reliable assessment before irreversible commitments are made. Delay itself can produce environmental costs where slow permitting obstructs decarbonization infrastructure. Conversely, acceleration can weaken prevention if it compresses scientific analysis or public participation beyond the point at which they remain meaningful.

Recent American developments emphasize bounded review, statutory causation and administrative discretion. The Supreme Court's 2025 Seven County judgment is emblematic of a legal movement against indefinitely expanding the scope of NEPA analysis. EPA materials current in 2026 likewise reflect active efforts to streamline federal NEPA implementation while retaining the statutory environmental review framework (U.S. Environmental Protection Agency [EPA], 2026).

The European Union has also pursued procedural efficiency, particularly through coordinated and streamlined assessments, but the EIA Directive continues to operate alongside substantive nature, water and pollution-control legislation. The European model therefore tends toward integration of procedures rather than conversion of assessment into an exclusively informational exercise.

A durable permitting system must reconcile speed with legal certainty. Predictable screening criteria, early scoping, coordinated agency consultation, accessible environmental data and clearly defined causal boundaries can reduce delay without eliminating environmental scrutiny. Comparative analysis suggests that efficiency is best achieved by clarifying the decision architecture rather than by postponing environmental analysis until conflicts become judicial disputes.

Final Observations

Environmental permitting in the United States and the European Union rests upon the same preventive premise but expresses it through different public-law traditions. The United States developed a pioneering federal environmental assess-

ment statute whose principal legal command is procedural: agencies must examine and disclose environmental consequences before acting. The European Union transformed environmental assessment into a harmonized requirement of development consent operating within a broader supranational system of substantive environmental obligations.

The distinction is especially visible in contemporary judicial doctrine. American law, culminating in Seven County, gives agencies substantial room to define the reasonable boundaries of NEPA review and maintains a strong separation between environmental information and the ultimate policy choice. EU law gives Member States procedural discretion but subjects that discretion to the effectiveness of Union law, the requirements of the EIA Directive and the cumulative force of related environmental legislation.

For comparative environmental law, the principal lesson is that environmental assessment cannot be evaluated solely by the length or technical sophistication of an EIS. Its legal significance depends upon the jurisdictional trigger, the scope of effects examined, the alternatives considered, the timing and quality of public participation, the substantive statutes surrounding the assessment and the remedies available when the process fails. These institutional variables determine whether environmental assessment functions merely as disclosure, as disciplined administrative reasoning, or as an operative condition of lawful project authorization.

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