# Beyond Borders: A Comparative Analysis of Interstate Collaboration in U.S. Water and Utility Management

### Executive Summary

This report provides a comprehensive analysis of non-federal collaborative frameworks in the United States, focusing on regional water quality compacts and cross-state utility coordination. It contrasts the historical development and governance structures of U.S. interstate agreements with analogous European models to derive insights into the drivers and impediments of effective resource management across political boundaries.

The analysis reveals that U.S. interstate water compacts are fundamentally reactive, typically formed in response to a crisis of resource scarcity, as seen in the Colorado River Basin, or severe environmental degradation, as was the case for the Delaware and Ohio Rivers. Their governance structures are highly bespoke, ranging from powerful federal-interstate regulatory bodies like the Delaware River Basin Commission (DRBC) to advisory frameworks and voluntary partnerships. This stands in stark contrast to European transboundary water management on rivers like the Rhine and Danube, where cooperation is increasingly driven by a top-down, legally binding supranational framework, principally the European Union's Water Framework Directive.

In the realm of utility management, multi-state investor-owned utilities in the U.S. navigate a fragmented regulatory landscape dominated by independent state public utility commissions. This report finds that rather than passively standardizing to the most stringent state regulation, leading utilities are proactively setting ambitious, corporate-wide decarbonization goals. These internal mandates, driven by long-term risk management, investor pressure, and federal incentives, effectively become a self-imposed "highest standard" that the companies then seek to implement through complex, state-by-state planning and approval processes. This de facto standardization from corporate strategy is compared to the EU's integrated internal electricity market, which achieves harmonization through common rules, market coupling, and centralized regulatory cooperation.

The report concludes by offering strategic recommendations for strengthening non-federal collaboration in the U.S. It calls for modernizing the legal framework for interstate compacts to address contemporary challenges like climate change and groundwater depletion, encouraging formal interstate coordination among state utility regulators, and urging multi-state utilities to more clearly articulate the system-wide benefits of their proactive environmental strategies.

## Part I: The Compact Model for Shared Resource Governance: Interstate Water Management

The management of water resources that cross state lines presents a fundamental challenge to the U.S. system of federalism. When upstream actions in one state impact water availability or quality in another, mechanisms for resolving disputes and fostering cooperation become essential. The primary legal instrument for this purpose is the interstate compact, a unique constitutional tool that allows states to form binding agreements to govern shared resources. The history and application of these compacts reveal a landscape of diverse, often reactive, solutions tailored to specific regional crises.

### Foundations of Interstate Water Law in the United States

#### The Doctrine of Equitable Apportionment

Before the widespread use of interstate compacts, the final arbiter of water disputes between states was the U.S. Supreme Court. Through a series of landmark cases, the Court developed the doctrine of "equitable apportionment," a judicial principle for dividing the water of an interstate stream among the states it flows through. The first major application of this doctrine was in the 1907 case of *Kansas v. Colorado* over the Arkansas River, with the most celebrated case concerning the Delaware River in 1931.1 This doctrine provides a legal backstop, ensuring that no single state can monopolize a shared water source to the detriment of its neighbors. However, the process is inherently adversarial, expensive, and protracted, often taking decades to resolve. Recognizing these limitations, the Supreme Court has consistently expressed a preference for states to resolve their differences through mutual negotiation and agreement, thereby positioning interstate compacts as a more efficient and collaborative alternative to litigation.2

#### The Interstate Compact as a Legal Instrument

Interstate compacts are legally binding contracts between two or more states. Once negotiated by the states, they must be ratified by each state's legislature and, in cases where they might affect federal authority or powers, receive the consent of the U.S. Congress to become law.3 This process creates a durable and legally enforceable framework for managing shared resources. Compacts offer greater certainty and flexibility than judicial decrees, allowing states to create tailored governance structures, establish commissions, and set specific rules for water allocation, pollution control, or flood management.2 They represent a powerful expression of state sovereignty, enabling collective action on regional problems that transcend individual state boundaries without necessitating direct federal control.

#### Historical Drivers for Compact Formation

An examination of the historical record reveals a consistent pattern: interstate water compacts are instruments of necessity, forged in the crucible of crisis rather than proactive planning. The specific nature of the crisis typically dictated the timing and purpose of the resulting agreement.

In the arid American West, governed by the water law doctrine of "prior appropriation" ("first in time, first in right"), the primary driver was the threat of permanent water loss. Slower-developing or downstream states grew deeply concerned that rapidly expanding states, particularly California, would establish priority rights to the entire flow of a river, foreclosing future development opportunities. This anxiety was the direct impetus for the Colorado River Compact of 1922, as the other six basin states sought to secure a permanent share of the river's water before California could claim it all.4 Similarly, the desire to coordinate and claim water from large-scale federal water projects, such as those proposed by the Bureau of Reclamation in the Upper Colorado Basin, prompted states to quickly enter compact negotiations to manage the new resources.1

In the more humid East, the drivers were different but no less urgent. The primary impetus was the catastrophic decline in water quality due to unchecked industrial and municipal pollution. By the mid-20th century, major interstate rivers had become dangerously polluted. The lower Delaware River was described as an "open sewer" during World War II, with stretches of water completely devoid of the dissolved oxygen needed to support aquatic life.5 The Interstate Commission on the Potomac River Basin was formed in 1940 in response to "extreme pollution levels" that demanded a regional solution.2 The Ohio River Valley Water Sanitation Commission (ORSANCO) was established in 1948 to control and abate rampant pollution across its eight-state basin.6 In these cases, the crisis was one of public health and ecological collapse, compelling states to cooperate on pollution control.

### Case Study Analysis of U.S. Water Compacts and Commissions

The interstate compact model has been applied in diverse ways across the country, resulting in a variety of governance structures. The form each compact takes is a direct reflection of the region's unique hydrology, legal traditions, and the specific problems it was created to solve.

#### The Allocation Model: The Colorado River Compact (1922)

* **History and Reasoning:** The Colorado River Compact is the foundational document of the "Law of the River," a complex web of compacts, treaties, court decrees, and federal statutes that govern the waterway.4 Negotiated in 1922 among the seven basin states, its central purpose was to prevent endless litigation by apportioning the river's water to ensure orderly development.4 The compact's key political compromise was to divide the water not among the seven states directly—a task deemed too contentious at the time—but between an "Upper Basin" (Wyoming, Colorado, Utah, New Mexico) and a "Lower Basin" (Arizona, Nevada, California). The dividing point was set at Lee Ferry, Arizona, with each basin allocated the right to beneficially use 7.5 million acre-feet (MAF) of water per year.4 This arrangement deferred the difficult state-by-state allocation, which was later addressed in subsequent agreements like the Upper Colorado River Basin Compact of 1948.1 The initial compromise was so fragile that Arizona, fearing California's growing power, refused to ratify the compact for 22 years until 1944.4
* **Governance and Challenges:** The 1922 compact created a framework for allocation but did not establish a powerful, independent commission to manage the river. Instead, management has been largely dominated by federal agencies, particularly the Department of the Interior's Bureau of Reclamation, which operates the river's massive dams and reservoirs like Hoover and Glen Canyon.7 The compact's most significant and enduring flaw was its scientific basis: the 15 MAF annual allocation was based on flow data from an abnormally wet period in the early 20th century. The river's actual long-term average flow is considerably less, creating a structural deficit where demand exceeds supply. This over-allocation, now severely exacerbated by climate change and prolonged drought, has led to persistent conflict and a series of crisis-driven supplemental agreements to manage shortages.7

#### The Comprehensive Management Model: The Delaware River Basin Commission (DRBC) (1961)

* **History and Reasoning:** The DRBC represents a radically different and more powerful model of interstate collaboration. It was established in 1961 after decades of legal and political battles, primarily over New York City's diversions of water from the upper Delaware River to serve its growing population.2 The DRBC's creation was a pioneering act of "cooperative federalism." It is a federal-interstate compact, making the federal government (represented by the U.S. Army Corps of Engineers) an equal, voting partner alongside the four basin states: Delaware, New Jersey, New York, and Pennsylvania.10 This structure was designed to replace a dysfunctional patchwork of 43 state agencies and 19 federal agencies with a single, unified body possessing the authority to manage the entire river basin as a holistic system.9
* **Governance and Accomplishments:** Unlike many advisory commissions, the DRBC has broad regulatory and management powers. It can set and enforce water quality standards, approve or deny permits for major water withdrawals and wastewater discharges, and declare drought emergencies to manage water allocations among the states and New York City.9 Its early achievements were revolutionary. In 1967, the DRBC adopted comprehensive water quality standards and an innovative wasteload allocation program for the polluted Delaware Estuary—five years before the passage of the federal Clean Water Act.5 These actions set a national precedent and led to one of the world's most dramatic water quality success stories, transforming a nearly dead waterway back into a thriving ecosystem.5

#### The Protective Model: The Great Lakes Compact (2008)

* **History and Reasoning:** The Great Lakes Compact is a modern, primarily protective agreement. Its genesis was a 1998 proposal by a Canadian company to obtain a permit to ship bulk water from Lake Superior to Asia.14 The proposal sparked public outrage across the Great Lakes region, crystallizing long-held fears that the world's largest freshwater system could be tapped to supply arid regions globally. The central goal of the compact, which was negotiated by the eight Great Lakes states (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin) and enacted in 2008 after congressional approval, is to prevent such a scenario.3 Its core provision is a ban on all new or increased diversions of water outside the Great Lakes basin, with only limited and strictly regulated exceptions for communities that straddle the basin divide.3
* **Governance and Implementation:** The compact requires all member states to adopt consistent programs for water conservation, efficiency, and management.17 It is administered by the Great Lakes-St. Lawrence River Basin Water Resources Council, composed of the governors of the member states.15 The compact's legal strength was tested by a controversial application from the city of Waukesha, Wisconsin. Located just outside the basin but within a county that straddles it, Waukesha sought an exception to use Lake Michigan water due to radium contamination in its groundwater supply. After extensive review by all eight states, the application was approved in 2016 but with stringent conditions, including a requirement to return all water to the lake after use.16

#### The Collaborative Program Model: The Chesapeake Bay Program (1983)

* **History and Reasoning:** The Chesapeake Bay Program is not a formal interstate compact but a unique, voluntary regional partnership that has guided the restoration of the nation's largest estuary since 1983.18 Its formation was prompted by a multi-year, $27 million EPA-funded scientific study that concluded the Bay was an "ecosystem in decline".19 The research identified three primary culprits: nutrient over-enrichment from agriculture and wastewater, toxic pollution, and the resulting decline of vital underwater grasses.19 In response, the governors of Maryland, Virginia, and Pennsylvania, along with the mayor of the District of Columbia and the EPA Administrator, signed the first Chesapeake Bay Agreement in 1983, pledging to work together on a restoration plan.20
* **Governance and Strategy:** The program operates through a series of evolving agreements (1987, 2000, 2014) that establish specific, science-based, and numerically measurable goals for pollution reduction.19 For example, the 1987 agreement set a goal to reduce nitrogen and phosphorus loads by 40% by the year 2000.19 The partnership is broad, encompassing six states (Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia), the District of Columbia, multiple federal agencies, academic institutions, and non-profit organizations.18 The program is renowned for its reliance on state-of-the-art scientific research and a suite of sophisticated computer models that simulate the ecosystem's response to pollution reduction measures.22 While it lacks the direct regulatory enforcement power of the DRBC, its authority stems from the shared commitment of its partners, the significant federal funding it directs to the states, and the oversight of the EPA.18

### A European Perspective on Transboundary Water Management

Comparing the U.S. experience with major European transboundary water agreements reveals fundamental differences in the legal and political drivers of cooperation. European efforts are increasingly shaped by a supranational legal framework that mandates cooperation and sets common environmental objectives.

#### From Navigation to Ecology: The Evolution of the International Commission for the Protection of the Rhine (ICPR)

* **History and Reasoning:** International cooperation on the Rhine, one of Europe's most important commercial waterways, began in the 19th century with treaties focused on regulating navigation and salmon fishing.24 The modern International Commission for the Protection of the Rhine (ICPR) was founded in 1950 by the five riparian states—Switzerland, France, Germany, Luxembourg, and the Netherlands—as industrial and municipal pollution began to overwhelm the river's ecosystem.26 A defining moment occurred in 1986 with the Sandoz chemical spill near Basel, Switzerland. A fire at a chemical plant released tons of toxic pesticides into the river, creating a toxic plume that flowed downstream, killing millions of fish and contaminating drinking water supplies.28 This ecological disaster served as a powerful catalyst, spurring the ICPR members to adopt the ambitious Rhine Action Plan in 1987. The plan set clear, aggressive targets for reducing pollution and restoring the river's ecological health, famously including the goal of bringing salmon back to the Rhine by the year 2000.28
* **Governance:** The ICPR functions as a coordinating body under an international treaty. Member states, working in close cooperation with the European Commission, use the ICPR as a platform to develop shared goals and harmonize their national programs of measures.30 While the ICPR itself does not have direct regulatory authority over its members, its decisions and plans carry significant weight and are implemented through the national laws of the participating countries. This process is powerfully reinforced by legally binding directives from the European Union.28

#### Governing the World's Most International Basin: The Danube River Protection Convention (DRPC) (1994)

* **History and Reasoning:** The Danube River Basin is the most international in the world, with its waters flowing through or bordering 19 countries.31 As on the Rhine, early agreements focused on ensuring freedom of navigation.32 Modern cooperation for environmental protection began with the 1985 Bucharest Declaration, but was hampered by the political divisions of the Cold War.33 The collapse of the Iron Curtain created a historic opportunity for comprehensive, basin-wide cooperation. This culminated in the signing of the Danube River Protection Convention (DRPC) in Sofia, Bulgaria, in 1994.32
* **Governance:** The DRPC established the International Commission for the Protection of the Danube River (ICPDR), with a permanent secretariat in Vienna, to serve as the implementation body for the convention.34 The ICPDR is the coordinating platform for its 14 contracting parties and the European Union.32 A primary function of the ICPDR is to develop and update a single, integrated River Basin Management Plan for the entire Danube basin. This plan serves as the primary instrument for all member countries to achieve the common objectives set forth by the EU Water Framework Directive.32

#### The Role of the Supranational Framework: The EU Water Framework Directive (WFD)

The WFD, adopted in 2000, is a landmark piece of European environmental legislation that has fundamentally reshaped transboundary water management across the continent.37 It establishes a legal requirement for all EU member states to manage their water resources on a river basin basis, aiming to achieve "good ecological status" for all surface waters. For international river basins like the Rhine and Danube, the WFD legally obligates the riparian EU member states to coordinate their actions. They must produce a single, basin-wide management plan that outlines the measures needed to meet the directive's objectives.31 This creates a powerful, top-down legal driver for cooperation and harmonization that has no direct equivalent in the United States.

This illustrates a fundamental difference in the legal forces that compel cooperation. In Europe, the "shadow of the law" is cast by the EU and its directives. The ICPR and ICPDR are the primary vehicles through which member states meet their binding obligations under EU law. Failure to cooperate effectively and meet the WFD's targets could result in legal action against a member state by the European Commission. In the United States, the "shadow of the law" is the threat of litigation before the Supreme Court under the doctrine of equitable apportionment.1 This is a negative incentive—the desire to avoid a costly and unpredictable lawsuit—rather than a positive, goal-oriented mandate to achieve a specific environmental outcome. The U.S. federal government can encourage cooperation through funding, as with the Chesapeake Bay Program, or act as a direct partner, as in the DRBC, but it does not impose a uniform, binding management framework analogous to the WFD. This distinction helps explain why U.S. compacts are so varied and tailored to specific circumstances, while European river commissions are increasingly aligned around a common set of EU-mandated goals and methods.

### Synthesis and Critical Assessment of Water Compacts

#### Analysis of Governance, Funding, and Enforcement

The case studies demonstrate a wide spectrum of governance models, from the powerful regulatory authority of the DRBC to the collaborative partnership of the Chesapeake Bay Program and the allocation-focused framework of the Colorado River.2 Funding for these entities is often a precarious mix of direct appropriations from member states, federal grants, and sometimes permitting fees, and it remains a persistent operational challenge. Enforcement mechanisms are equally varied. The DRBC can enforce its decisions directly through its legal authority.9 The Chesapeake Program relies on a combination of federal oversight, funding incentives, and political pressure.23 In many western compacts, the ultimate enforcement mechanism for disputes is a return to the Supreme Court, the very outcome the compacts were designed to avoid.39

#### Persistent Challenges

Despite their successes, interstate water compacts face significant challenges, many of which stem from the fact that they were designed to solve the problems of a previous era.

* **Integrating Groundwater:** A critical and widespread failure of most early compacts, particularly in the West, was their complete disregard for the hydrological connection between surface water and groundwater. Of the 22 major water allocation compacts west of the Mississippi, only three even mention groundwater, and they typically do so only to postpone action or explicitly define groundwater as outside the scope of the agreement.1 This oversight has led to intractable problems, as unregulated groundwater pumping in one state can deplete the surface flows that are legally allocated to another state by a compact, sparking new and complex legal battles.
* **Climate Change:** Compacts that allocate fixed quantities of water based on historical flow records, most famously the Colorado River Compact, are proving dangerously ill-suited to the realities of a changing climate.7 As warming temperatures reduce snowpack, increase evaporation, and alter precipitation patterns, the amount of water available in many river systems is declining, rendering the original allocations unsustainable. This forces states into a state of near-constant crisis management and renegotiation to deal with shortages that the original compacts never envisioned.18
* **Ensuring Tribal Inclusion:** Interstate water compacts were negotiated exclusively by states, without the participation of the sovereign tribal governments whose lands and water rights were profoundly affected. Nearly all compacts contain only a generic clause stating that nothing in the agreement shall be construed as affecting the rights of Native American tribes.39 This has effectively sidelined tribes from the primary governance structures for the rivers on which their rights depend. Although tribes often hold the most senior water rights in a basin under the 1908  
  *Winters v. United States* Supreme Court decision, this historical exclusion from compact negotiations and commissions means they have often been left to assert those rights through decades of costly litigation and frequently lack the infrastructure needed to put their water to use.39 To date, no interstate compact commission includes a formal seat for a tribal representative.39

| **Table 1: Comparative Analysis of Water Management Commissions** |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Commission Name** | **Founding Date/Treaty** | **Member States/Nations** | **Primary Driver(s)** | **Legal Authority** | **Role of National/Supranational Gov't** | **Key Accomplishment/Legacy** |
| **Colorado River Compact Framework** | 1922 | 7 U.S. states | Water Scarcity/Allocation, Fear of Prior Appropriation | Allocation/Advisory | Manager of Infrastructure (Bureau of Reclamation) | Enabled large-scale development in the Southwest; framework for the "Law of the River" |
| **Delaware River Basin Commission (DRBC)** | 1961 | 4 U.S. states, U.S. Federal Gov't | Pollution Abatement, Water Supply Disputes | Comprehensive Regulatory | Equal Voting Partner | Pioneered integrated watershed management and pre-CWA pollution standards |
| **Great Lakes Commission** | 1955 (Compact in 2008) | 8 U.S. states, 2 Canadian Provinces (in parallel agreement) | Threat of Diversion, Protection of Resource | Protective/Prohibitive | Congressional Ratification | Created a legal barrier to bulk water exports from the Great Lakes basin |
| **Chesapeake Bay Program** | 1983 | 6 U.S. states, D.C., U.S. Federal Gov't | Ecological Decline, Nutrient Pollution | Partnership/Coordination | Funder/Overseer (EPA) | Model for large-scale, collaborative, science-based ecosystem restoration |
| **Int'l Commission for the Protection of the Rhine (ICPR)** | 1950 (Modern form) | 5 European nations + EU | Industrial Pollution, Ecological Restoration (post-Sandoz spill) | Coordinating Platform | Legal Framework Provider (EU) | Successful ecological restoration of a major industrial river (e.g., return of salmon) |
| **Int'l Commission for the Protection of the Danube (ICPDR)** | 1994 | 14 European nations + EU | Post-Cold War Cooperation, Pollution Control | Coordinating Platform | Legal Framework Provider (EU) | Basin-wide management plan for the world's most international river basin |

## Part II: Navigating the Patchwork: Cross-State Utility Coordination and Standardization

Shifting from the governance of public water resources to the operations of investor-owned utilities reveals a different model of interstate collaboration. Utilities that operate across multiple states face a complex web of differing state regulations. Their path to standardization is not typically driven by formal interstate agreements but by internal corporate strategy, which often results in a voluntary alignment toward higher environmental standards to achieve efficiency and mitigate long-term risk.

### The Fragmented Regulatory Landscape of U.S. Utilities

#### The Primacy of the State Public Utility Commission (PUC)

In the United States, the regulation of investor-owned electric, gas, and water utilities is primarily a state-level function.40 Each state has a Public Utility Commission (PUC) or Public Service Commission (PSC) responsible for overseeing the utilities operating within its borders.42 The core mandate of a PUC is to ensure that customers receive safe, reliable, and adequate service at just and reasonable prices.43 While the Federal Energy Regulatory Commission (FERC) has jurisdiction over wholesale electricity sales and interstate transmission, it is the state PUCs that regulate retail rates, approve the construction of new power plants, and oversee long-term resource planning.40

#### The "Patchwork Problem"

This state-centric regulatory structure creates a significant challenge for utilities that serve customers in multiple states, such as PacifiCorp (operating in six western states) and Xcel Energy (operating in eight states across the West and Midwest). Such a company must navigate a regulatory "patchwork," where each state has its own distinct energy policies, environmental mandates, and political priorities.45 This fragmentation generates substantial administrative burdens and operational complexities. A utility must file separate Integrated Resource Plans (IRPs) in each state, justify investments and costs to multiple commissions, and design a system that can comply with a diverse and sometimes conflicting set of rules.48

#### State Mandates as Drivers of Complexity

The complexity of this patchwork has intensified over the last two decades as states have become more active in climate and energy policy. Thirty states and the District of Columbia have adopted mandatory Renewable Portfolio Standards (RPS) or Clean Energy Standards (CES).52 These policies require utilities to procure a specified percentage of their electricity from renewable or zero-carbon sources by a certain date.41 However, the targets and timelines vary dramatically. For instance, California requires 100% clean energy by 2045, while Arizona's standard is 15% renewable energy by 2025.52 This forces a multi-state utility to build and operate a complex portfolio of generating resources that can simultaneously satisfy the aggressive decarbonization goals of one state while continuing to provide low-cost power in another state that may have different priorities.51

### Corporate Strategy in a Multi-State Environment

In the face of this regulatory fragmentation, a logical question arises: how do multi-state utilities approach standardization? While they are legally obligated to meet the specific requirements of each state, many are adopting proactive, system-wide strategies that effectively create a higher, more uniform standard across their entire service territory.

#### The Rationale for Standardization

Complying with a patchwork of regulations is the legal minimum, but several powerful business drivers push utilities toward a more harmonized approach, often aligning with the policies of their most forward-looking states.

* **Operational Efficiency and Fleet Modernization:** It is often more efficient and cost-effective in the long run to manage a single, modern, and flexible fleet of generating assets rather than maintaining a disparate collection of old and new plants simply to cater to varying state rules.
* **Risk Mitigation:** A proactive transition toward cleaner energy sources reduces multiple forms of long-term risk. It mitigates future regulatory risk from potential federal climate policies, reduces financial risk associated with the price volatility of fossil fuels, and minimizes reputational risk from environmental incidents or public pressure.56
* **Economic Opportunity:** Federal tax incentives, such as the Production Tax Credit (PTC) for wind and the Investment Tax Credit (ITC) for solar, make renewable energy projects economically attractive across the entire system, not just in states that mandate them.55
* **Investor and Corporate Pressure:** There is growing pressure from investors and stakeholders for companies to demonstrate strong Environmental, Social, and Governance (ESG) performance. A clear, ambitious corporate-wide sustainability strategy is now a key factor in attracting capital and maintaining a positive corporate brand.58

#### Case Analysis: Reconciling Corporate Goals with State Plans

An analysis of major multi-state utilities like Xcel Energy, Duke Energy, and PacifiCorp reveals that while none have an explicit written policy of "standardizing to the highest state standard," their corporate actions achieve a similar outcome.60 These companies have established ambitious, corporate-wide goals for decarbonization that significantly exceed the requirements in many of the states they serve.

* **Xcel Energy** was the first major U.S. utility to announce a vision to deliver 100% carbon-free electricity by 2050, with an interim goal of an 80% reduction by 2030.58 This overarching corporate goal, driven by a long-term strategic vision, now serves as the guiding principle for the specific resource plans the company files with individual state PUCs. For example, its Colorado Clean Energy Plan and Upper Midwest Plan both propose the accelerated retirement of coal plants and massive investments in wind and solar energy to align the state's trajectory with the company's broader vision.62
* **PacifiCorp's** regulatory filings offer a clear window into the operational complexity of this approach. The company develops a single, system-wide Integrated Resource Plan that seeks to identify the least-cost, lowest-risk portfolio of resources to serve its entire six-state territory over a 20-year horizon.64 However, it must then disaggregate this plan and demonstrate to each state's PUC how this system-wide strategy complies with that state's unique laws, such as Oregon's mandate to eliminate coal from rates or Washington's Clean Energy Transformation Act.51 This involves a complex cost and benefit allocation methodology to assign shares of a system resource (like a large wind farm in Wyoming) to customers in different states in a manner that each commission will find just and reasonable.51

This evidence suggests that the premise of standardizing to the highest *state* standard is a slight mischaracterization of the dynamic. It is not that a progressive state's law is being passively exported to other states. Rather, these large utilities are proactively setting their own ambitious, corporate-wide decarbonization goals based on their assessment of long-term risks, market trends, and economic opportunities. These internal corporate goals then become the "highest standard" that the utility actively works to implement across all its jurisdictions through the state-by-state regulatory approval process. The primary driver is a top-down corporate strategy, not a bottom-up regulatory mandate from a single state.

### The European Model: An Integrated, Transnational Utility Market

The U.S. model of utility regulation stands in sharp contrast to the approach taken by the European Union, which has spent decades building a single, integrated internal market for electricity.65 The fundamental principle of the EU market is to allow electricity to be generated in one member country and delivered to consumers in another, based on common rules designed to increase competition, ensure security of supply, and reduce costs.65

#### Mechanisms for Harmonization

This high degree of integration is achieved through several key mechanisms:

* **Market Coupling:** The day-ahead wholesale electricity markets of most EU countries are "coupled." This means a single algorithm is used to simultaneously calculate electricity prices and allocate cross-border transmission capacity for the entire region. This highly efficient system ensures that power flows from areas of lower prices (often where there is high renewable generation) to areas with higher prices, reducing overall costs and maximizing the use of available generation.66
* **Centralized Cooperation:** The EU Agency for the Cooperation of Energy Regulators (ACER) works to harmonize the actions of national energy regulators and helps develop common network rules.65 Concurrently, the European Network of Transmission System Operators for Electricity (ENTSOE) provides a platform for the grid operators of all member states to coordinate the technical operation of the interconnected system.68
* **EU-wide Legislation:** The entire market operates under a binding legal framework established by EU directives and regulations, such as the "Clean energy for all Europeans package." This legislation sets common targets and rules for all member states regarding renewable energy, market design, and consumer rights, creating a level playing field that does not exist in the U.S..65

Despite this advanced integration, the EU system still faces challenges, including physical bottlenecks and congestion on cross-border transmission lines, the complexities of integrating diverse national energy policies (such as differing views on nuclear power), and the ever-present political challenge of ensuring solidarity between member states during a severe energy crisis.70

### Analysis of Pathways to Greater U.S. Utility Coordination

#### Challenges to Standardization

The primary structural barrier to greater formal coordination among utilities in the U.S. is the legal mandate of each state PUC. A commission is legally bound to prioritize what is in the best interest of its own state's ratepayers, which is typically interpreted as ensuring reliability at the "least cost".43 This creates a significant hurdle for large, multi-state infrastructure projects. For example, a PUC in a state with low electricity costs might find it difficult to approve a new transmission line that would raise rates for its own customers, even if that line is critical for delivering renewable energy to a neighboring state to help it meet its clean energy mandate.45 Resolving these cross-state cost allocation issues is one of the most difficult challenges in U.S. energy regulation.

#### Emerging Arenas for Cooperation

Despite these barriers, arenas for regional cooperation do exist and are growing in importance.

* **Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs):** These are FERC-regulated, non-profit entities that operate the high-voltage transmission grid and manage wholesale electricity markets across multi-state regions, such as PJM in the East and MISO in the Midwest. RTOs provide a crucial platform for regional grid planning, market efficiency, and reliability coordination. However, state PUCs retain their authority over utility resource decisions and power plant construction, creating a persistent tension between state and regional priorities.40
* **Voluntary Interregional Planning:** There is a growing consensus that more proactive, voluntary coordination among states is necessary to build the transmission infrastructure needed for the clean energy transition. Efforts such as the PJM State Agreement Approach allow groups of states to work together to procure transmission solutions that meet their shared public policy goals, such as connecting offshore wind farms to the grid.75 These initiatives represent a bottom-up approach to achieving the kind of regional planning that is more formalized and top-down in the European Union.

## Part III: Insights and Strategic Recommendations

### Key Findings: Comparing U.S. and European Models

The analysis of non-federal collaboration in the United States and Europe reveals two distinct paradigms. The U.S. model is predominantly **bottom-up, voluntary, and crisis-driven**. States enter into water compacts when compelled by the threat of litigation over scarcity or by severe pollution. Multi-state utilities pursue standardization not because of a regulatory mandate, but as a top-down corporate strategy to enhance efficiency and manage long-term risk within a fragmented system. Success in this model often hinges on the creation of durable institutions—like the DRBC or an RTO—that can facilitate negotiation and provide a stable platform for cooperation.

The European model, in contrast, is increasingly **top-down, legally mandated, and goal-oriented**. Cooperation among member states on both water management and electricity markets is driven by a binding supranational legal framework established by the European Union. This framework sets common environmental objectives and market rules, and the international river commissions and energy regulators serve as the primary vehicles for implementing these shared mandates. While both systems face challenges, the EU model provides a more powerful and consistent impetus for harmonization and integration across political boundaries.

### Recommendations for Fostering Non-Federal Collaboration

Based on this comparative analysis, the following recommendations are offered to strengthen non-federal collaboration on resource management in the United States.

* **For Policymakers:** Congress should act to modernize the legal framework governing the formation and approval of interstate compacts. New legislation could provide incentives and clear guidelines for states to craft "21st-century compacts" that are better equipped to handle modern challenges. This should include provisions that encourage or require the integration of groundwater and surface water management, establish frameworks for adaptive management in response to climate change, and, critically, provide formal roles for sovereign tribal governments as partners in the governance of shared water resources.
* **For Regulators:** State legislatures should authorize and encourage their Public Utility Commissions to engage in more formal and robust interstate coordination. This could take the form of creating regional PUC advisory bodies to address cross-state cost allocation for major transmission projects or developing common methodologies for evaluating the regional benefits of resource decisions. Such collaboration can help overcome the limitations of the state-centric "least-cost" mandate and facilitate more efficient regional grid development.
* **For Multi-State Utilities:** Utilities pursuing ambitious corporate-wide clean energy strategies should enhance their efforts to transparently communicate the long-term, system-wide benefits of this approach to regulators and ratepayers in *all* the states they serve. By clearly demonstrating how a proactive, standardized transition to cleaner energy lowers long-term fuel price risk, maximizes the capture of federal investment, and improves overall system resilience, utilities can build a more compelling economic and reliability case. This can help secure state-level approval for plans that, while potentially involving higher near-term capital costs, are designed to deliver greater long-term value across their entire multi-state service territory.

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