FERC, hydropower, and tribal rights: Confrontations at the Little Colorado River

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Abstract

The Federal Energy Regulatory Commission (FERC) is well positioned to help advance the United States' clean energy transition through their management of energy projects. One obstacle to achieving the transition is meaningful consultation with Tribal Nations. Following decades of conflict between tribes and FERC regarding infrastructure development, the agency issued a "policy statement on consultation with Indian tribes" in 2003. The Policy acknowledges FERC's trust responsibility to tribes and seeks to work on a "government to government" basis with them, and recent amendments explicitly incorporate treaty rights into FERC's decision-making processes. Despite these interventions, tensions between FERC and tribes continue over the persistent lack of consultation and omission of government-to-government discussions regarding proposed hydropower. In this article, we question the application of FERC's decision-making powers as they intersect with tribal sovereignty via a discourse analysis of 'consultation.' The article applies an ethnographic perspective to explore the 'political' in political ecology and assess FERC's role in licensing the Big Canyon project, a proposed closed-looped pump hydropower project in Navajo Nation in Arizona. The project was proposed in 2020 without adequate consultation with the affected Diné peoples, illuminating significant gaps between FERC's stated policy on consultation and its operationalization. Compounding the situation further, the Big Canyon project would exacerbate human-water relationships by diminishing groundwaters in an area already facing aridification, thereby challenging the health of springs that feed the Little Colorado River, provide habitat for protected species, and are sacred to many Indigenous peoples. Studying the intersection of tribal rights and FERC presents a critical juncture for assessing the underlying power dynamics of decision-making processes regarding pumped storage hydropower in the United States, within the broad context of a clean energy transition.

Keywords: Hydropolitics, drought, political ecology of water, settler colonialism, climate governance

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Résumé

La Federal Energy Regulatory Commission (FERC) est bien placée pour contribuer à faire progresser la transition vers une énergie propre aux États-Unis grâce à sa gestion de projets énergétiques. L'un des obstacles à la réalisation de la transition réside dans la consultation significative des nations tribales. Après des décennies de conflit entre les tribus et la FERC concernant le développement des infrastructures, l'agence a publié une «déclaration de politique sur la consultation des tribus indiennes» en 2003. La politique reconnaît la responsabilité de confiance de la FERC envers les tribus et cherche à travailler de «gouvernement à gouvernement» avec elles, et des modifications récentes intègrent explicitement les droits issus de traités dans les processus décisionnels de la FERC. Malgré ces interventions, les tensions entre la FERC et les tribus persistent en raison du manque persistant de consultation et de l'omission des discussions de gouvernement à gouvernement concernant le projet d'hydroélectricité. Dans cet article, nous remettons en question l'application des pouvoirs décisionnels de la FERC dans la mesure où ils recoupent la souveraineté tribale via une analyse du discours sur la 'consultation.' L'article applique une perspective ethnographique pour explorer le 'politique' dans l'écologie politique et évaluer le rôle de la FERC dans l'autorisation du projet Big Canyon, un projet hydroélectrique par pompe en boucle fermée proposé dans la nation Navajo en Arizona. Le projet a été proposé en 2020 sans consultation adéquate avec les peuples Diné concernés, mettant en lumière des écarts importants entre la politique déclarée de la FERC en matière de consultation et sa mise en œuvre. Pour aggraver encore la situation, le projet Big Canyon exacerberait les relations entre l'homme et l'eau en diminuant les eaux souterraines dans une zone déjà confrontée à l'aridification, mettant ainsi en péril la santé des sources qui alimentent le fleuve Little Colorado, fournissent un habitat à des espèces protégées et sont sacrées pour de nombreux peuples autochtones. L'étude de l'intersection des droits tribaux et de la FERC présente un moment critique pour évaluer la dynamique de pouvoir sous-jacente aux processus décisionnels concernant l'hydroélectricité par pompage-turbinage aux États-Unis, dans le contexte général d'une transition énergétique propre.

Mots-clés: hydropolitique, sécheresse, écologie politique de l'eau, colonialisme des colons, gouvernance climatique

Resumen

La Comisión Federal Reguladora de Energía (FERC) está bien posicionada para ayudar a avanzar en la transición a la energía limpia de los Estados Unidos a través de su gestión de proyectos energéticos. Un obstáculo para lograr la transición es la consulta significativa con las naciones tribales. Después de décadas de conflicto entre las tribus y la FERC con respecto al desarrollo de infraestructura, la agencia emitió una "declaración de política sobre consultas con las tribus indias" en 2003. La política reconoce la responsabilidad de confianza de la FERC para con las tribus y busca trabajar con ellas "de gobierno a gobierno" y enmiendas recientes incorporan explícitamente los derechos del tratado en los procesos de toma de decisiones de la FERC. A pesar de estas intervenciones, las tensiones entre la FERC y las tribus continúan por la persistente falta de consulta y omisión de discusiones entre gobiernos sobre la propuesta de energía hidroeléctrica. En este artículo, cuestionamos la aplicación de los poderes de toma de decisiones de la FERC en su intersección con la soberanía tribal a través de un análisis del discurso de la "consulta." El artículo aplica una perspectiva etnográfica para explorar lo "político" en la ecología política y evaluar el papel de la FERC en la concesión de licencias para el proyecto Big Canyon, un proyecto hidroeléctrico de bombeo de circuito cerrado propuesto en la Nación Navajo en Arizona. El proyecto se propuso en 2020 sin una consulta adecuada con los pueblos Diné afectados, lo que ilumina brechas significativas entre la política declarada de consulta de la FERC y su puesta en práctica. Para agravar aún más la situación, el proyecto del Gran Cañón exacerbaría las relaciones entre los seres humanos y el agua al disminuir las aguas subterráneas en un área que ya se enfrenta a la aridificación, desafiando así la salud de los manantiales que alimentan el río Little Colorado, proporcionan hábitat para especies protegidas y son sagrados para muchos pueblos indígenas. pueblos. El estudio de la intersección de los derechos tribales y la FERC presenta una coyuntura crítica para evaluar la dinámica de poder subyacente de los procesos de toma de decisiones relacionados con la energía hidroeléctrica de almacenamiento por bombeo en los Estados Unidos, dentro del contexto amplio de una transición a la energía limpia.

Palabras clave: Hidropolítica, sequía, ecología política del agua, colonialismo de colonos, gobernanza climática

1. Introduction

The Federal Energy Regulatory Commission (FERC) is well positioned to help advance the United States' clean energy transition through their management of energy projects (Harper, *et al*., 2023; Peskoe, 2022). The Biden Administration's clean energy plan aims to reduce greenhouse gas emissions by 50-52% on 2005 levels by 2030, establish a carbon free electricity sector by 2035, and reach net zero emissions by 2050, all while achieving environmental justice via the Justice40 initiative (Tackling the Climate Crisis, 2023; WH, 2021). Both the Infrastructure Investment and Jobs Act (2021) and the Inflation Reduction Act (2023) provide financial incentives to support the clean energy transition through a proposed increase in renewable energy production, with some provisions related to streamlining FERC's permitting processes to accomplish these climate goals.

Broadly understood, the clean energy transition integrates fundamental aspects of both energy and environmental justice, referring to a shift from fossil fuel dependence to a low carbon future while broadly ensuring that 1) populations do not receive an inordinate share of burdens or are denied access to benefits of energy; 2) energy decision-making procedures are fair, equitable, and inclusive; and 3) historical and ongoing inequalities in access to energy are addressed (Carley & Konisky, 2020). More specific to this context, Indigenous climate justice requires relational justice, that is, a system that "repair[s] the qualities of consent, trust, accountability, and reciprocity" across societal institutions (Whyte, 2020, p. 3) because, as Whyte (2020, p. 1) argues, "the qualities of relationships connecting indigenous peoples with other societies' governments…are not conducive to coordinated action that would avoid further injustice against indigenous peoples in the process of responding to climate change" (see also Whyte, 2011).

The Chairman of FERC appears committed to aligning with equity-based tenets. FERC acknowledges their own trust responsibility to tribes and seeks to work on a "government to government" basis with them (DOE, 2003) that incorporates tribal treaty rights into FERC's decision-making processes (DOE, 2019a). The agency now asserts that they will "endeavor" to work with tribes to "seek" to address the effects of proposed projects on tribal lands and assure that tribal concerns are "considered" in decision-making. The head of FERC further stated that they will do what they "reasonably can to ensure that environmental justice communities affected by the Commission's decisions do not bear too great a share of the burdens or too small a share of the benefits that new energy infrastructure can provide" (FERC, 2023a, p. 3). Furthermore, FERC recently created a Senior Counsel for Environmental Justice and Equity position and hosted a roundtable to understand how to address environmental justice concerns (FERC, 2023b).

These newly created policies are in response to FERC's legacy of "fundamentally inadequate" interactions with Tribal Nations (Bevan, 2021). Since the 1970s, the U.S. government has passed multiple orders, laws, and regulations regarding the need for federal agencies to engage in tribal "consultation," which have historically been ignored (Blumm & Pennock, 2021). Even now, despite these new justice-based interventions, tensions between FERC and tribes continue over the persistent lack of consultation and clear omission of government-to-government discussions regarding proposed energy projects. For example, in 2020 FERC accepted a preliminary permit application from a private corporation to build the Big Canyon pumped storage hydropower project in Navajo Nation's sovereign territory without performing government-to-government consultation with the affected Diné peoples (or any of the other Tribal Nations in the region who would also be negatively affected by the project's implementation on sacred lands and waters).

Pumped storage hydropower (PSH) is a type of hydropower referred to as "water batteries," which are supported as clean, renewable energy projects within climate governance policies and discourse for their perceived capacity to store large amounts of energy and generate electricity through the gravitational flow of water from upper to lower reservoirs (Blakers, *et al*., 2021; Immendoerfer, *et al*., 2017). PSH are thus increasingly utilized to expand power system flexibility and to increase the resilience of electricity grids faced with climatic changes, playing a key role in a clean energy transition (DOE, 2021). After a three-decade hiatus, the United States is facing a resurgence in PSH development with 67 new PSH sites proposed since 2019. These are in various FERC permitting stages (DOE, 2021). The currently operating 43 PSH sites in the United States have a total power generating capacity of 21.9GW and the newly proposed sites could add 52.48GW

(DOE, 2021). These numbers are expected to increase given that PSH projects are now supported with federal tax credits under the Inflation Reduction Act (2023; see also Charles, 2022; Tang, 2022).

Growth of PSH could prove problematic for Diné communities—if FERC does not enforce policies regarding tribal consultations and incorporate decisions from Tribal Nations into energy extraction proposals, tribal territories will continue to be (neo)colonial 'sacrifice zones' for hydropower development (Del Bene, Scheidel, & Temper, 2018; Manning, 2018). PSH is just the newest form of energy extraction to threaten the "Diné energy landscape" as the proposed Big Canyon project occurs in the context of a long history of the energy industry consuming Navajo Nation lands and resources in "a literal and figurative transfusion of power" (Powell, 2018, p. xiii; see also Powell, 2015). Similarly, the U.S. government's extraction of uranium from the Navajo Nation illustrates the legacy of colonization of tribal lands, waters, and resources, wherein consultation and government-to-government responsibilities were (and continue to be) ignored by the settler state (Voyles, 2015).

The proposal of the Big Canyon project therefore raises serious concerns regarding the intersection of FERC's decision-making powers and tribal water rights and sovereignty, particularly in light of increased water insecurity, vulnerabilities, and uncertainty driven by rapidly changing climatic conditions in the Southwest USA (Wheeler, *et al*., 2022). Given that these government-to-government interactions (or lack thereof) are occurring within the context of a climate-water-energy nexus (Ke, Khanna, & Zhou, 2022) inside a settler colonial state, we understand this space as a hydrosocial territory. Hydrosocial territories bring together contested imaginaries of how "humans, water flows, ecological relations, hydraulic infrastructure, financial means, legal-administrative arrangements and cultural institutions and practices" are "defined, aligned and mobilized" considering the diversity of "epistemological belief systems, political hierarchies and naturalizing discourses" (Boelens, *et al*., 2016, p. 2). To narrow the scope of this assessment, we place a specific focus in this article on the 'political' in political ecology by examining legal documents and conducting literature reviews, event ethnography at conferences, and interviews with non-tribal environmental governance representatives. This research questions the viability of a clean energy transition without relational justice (herein through the pathway of consultation). Through a political discourse analysis of 'consultation,' we contribute to a greater understanding of the hydropolitics of pumped storage hydropower permitting specifically and achieving a clean energy transition in the United States more broadly (Turton & Henwood, 2002).

We begin this article by contextualizing the proposed Big Canyon project, followed by a review of FERC's consultation policies. Next, we discuss tribal water rights in the Colorado River Basin (hereafter Basin) and consultation regarding the Big Canyon project more specifically. Finally, we close by discussing some solutions to more just consultation processes. In conclusion, we argue that a clean energy transition cannot be reached without effective consultation with tribes, that is, consultation that meets not only U.S. (and international) political-legal and ethical mandates, but also fulfills the autonomous, self-determined lived dimensions of territorial sovereignty (Powell, 2015) that simultaneously respects human-water relationships through relational justice (see also Whyte, 2020).

2. Description and history of the proposed Big Canyon Pumped Storage Project

The Big Canyon project is proposed to be built in a dry canyon, off the main stem of the Little Colorado River. The Little Colorado drains a 69,000 km^2 area of Arizona and New Mexico, running a northwestern course for 547km before draining into the Colorado River. Collectively, the Colorado River Basin is facing dramatic challenges due to climatic changes and aridification (Wheeler, *et al*., 2022). The confluence of the Little Colorado and the Colorado Rivers near Cameron, AZ is referred to as "an Indigenous socio-ecological landscape" (Ellis & Perry, 2020), marking a region of significant "biocultural" values where biological and cultural resources are inseparable (The Center for Sustainable Environments, 2002; Maffi & Woodley, 2012). The confluence is located within the overlapping boundaries of Grand Canyon National Park and Navajo Nation, complicating local management and protection measures that are founded in colonial governance structures and favor "Western" society norms over tribal and Indigenous rights (Ellis and Perry, 2020).

While the majority of the Little Colorado is free flowing due to its remote location, there are two dams near its headwaters, creating River Reservoir and Lyman Lake, both of which are used for irrigation. Pumped Hydro Storage LLC (hereafter Pumped Hydro), a private company out of Phoenix, Arizona, is threatening to further disrupt the Little Colorado by developing three pumped storage projects on it, all within Navajo Nation lands. The preliminary permits were all accepted by FERC, giving the permit holder priority over the sites for development for four years. During this time span they are to conduct feasibility studies, however FERC does not allow the permit holder "to perform any land-disturbing activities or enter upon lands or waters owned by others without the owners' express permission" (DOE, 2019b, p. 54136; see also FPA, 2018).

First, Pumped Hydro filed a permit application for the Navajo Nation Salt Trail Canyon Pumped Storage Project (FERC Project No.14992-000) on May 8, 2019 (DOE, 2019b). The Salt Trail project would be an open-looped system (reservoirs exchanging water with the Little Colorado) and include an upper concrete dam (152m x 73m high) with a resulting reservoir of 0.24km^2, a lower concrete dam (305m x 43m high) with a resulting 0.61km^2 reservoir, as well as supportive infrastructure including two penstocks, a powerhouse, a roadway access tunnel, wells, well pipelines, and new transmission lines.

Second, Pumped Hydro filed a permit application for the Little Colorado River Pumped Storage Project (FERC Project No. 14944-000) on May 10, 2019 (DOE, 2019c). The Little Colorado project would also be an open-looped pumped storage system and include construction of an upper rockfill dam (975m x 61m high) with a resulting 0.89km^2 reservoir, a lower concrete dam (305m x 46m high) with a 1.01km^2 reservoir, and supportive infrastructure. FERC accepted both permit applications on September 17, 2019.

The final proposal, and our primary focus, is for the Big Canyon Pumped Storage Project (FERC Project No. 15024-000), and an application was submitted on March 12, 2020. FERC accepted the application on June 2, 2020 (DOE, 2020). Pumped Hydro originally named the project "Navajo Nation Big Canyon Pumped Storage Project", but it was redesignated by FERC who removed "Navajo Nation" recognizing that the project "is not in any way affiliated with the Navajo Nation and the Nation has played no role in the development of this project" (DOE, 2020).

The proposed Big Canyon site is 37km west of Tuba City, Arizona, located within the Bodaway-Gap Chapter of the Navajo Nation that is located within the Arizona State's borders. The project would be a close-looped pumped storage hydropower, meaning that water is contained and pumped between reservoirs and the flow is not directly connected to the Little Colorado. The four reservoirs that would be associated with Big Canyon would require 90 million m^3 of water to operate. Between 64-72 billion m^3 of groundwater would be pumped from the underlying aquifer to fill the reservoirs, with additional aquifer pumping required to account for evapotranspiration loss. Those aquifers are the source of the springs that feed the Little Colorado, give the river its unique turquoise hue, provide habitat to endangered and other aquatic species, and have cultural and spiritual significance to multiple tribes in the region.

The project entails the construction of a concrete upper dam (137m x 61m high), an earth filled upper dam (305m x 32m high), and a third upper concrete dam (3048m x 61m high), each of which would impound a reservoir and have a combined surface area of 1.62km^2 and a total storage capacity of 35.77 million m^3. These would be connected to a lower concrete dam (183m x 122m high) that would impound a lower reservoir with a surface area of 1.05km^2 and a total storage capacity of 54.27 million m^3. The project would also include construction of supporting infrastructure.

Each application states that the project will "alleviate the stress being placed on the Southwest electrical generating system" and in section 6 they each state that "the proposed project will develop, conserve, and utilize water resources" benefitting the public through generation of green, renewable power, reducing carbon footprints, stimulating the Navajo Nation economy, increasing electricity reliability and resilience, promoting Navajo resources via a road that will make the area more accessible to the community, and providing potable water and electric to the Navajo Nation. Pumped Hydro also argues that Hopi peoples (residing in their own sovereign nation in northeastern Arizona and surrounded by the Navajo nation) would benefit from the Big Canyon project because electricity generation would flow through Hopi's switchyard (James, 2020). Each application set a task in their proposed activity schedules to "Meet with the Navajo Nation for discussions"

during the first year of its permit term and conduct cultural and tribal studies "to confirm if the project would impact cultural or tribal resources" (e.g., see DOE, 2019c, p. 10).

After each preliminary permit was accepted, FERC opened the required 60-day period for filing public comments, motions to intervene, or to other applications. A motion to intervene allows individuals the right to intervene in a proceeding, become participants in that proceeding, request rehearing orders, and seek relief of final agency actions in the U.S. Circuit Courts of Appeal (see for example DOE, 2019a). In the case of the first two proposed projects, FERC received over 100 comments from the public, with many people submitting comments regarding both proposals in a single filing, and multiple motions to intervene, including from the Navajo Nation. For the Big Canyon project, over 62,000 comments and almost a dozen motions to intervene were received. The primary reasons for objection to each project were issues related to tribal sovereignty and consultation, rights of the river, social and economic impacts, and a variety of environmental concerns, which align with critiques of PSH broadly.

Despite promises of being a gateway to a clean energy transition, PSH operations have "net negative electricity generation balances" because they consume more energy than they create, which could negate their climate benefits and mean continued reliance on fossil fuels for their operation (EIA, 2019; see also IPCC, 2022). Moreover, the construction phase of PSH projects interferes with "nature" to the same extent as traditional dams (Harby, *et al*., 2013). Environmental impacts include significant greenhouse gas emissions from construction processes and decaying biota under reservoirs (Fearnside, 2016; Hertwich, 2013; Hite, 2022a; Normyle & Pittock, 2020; Song, *et al*., 2018). Pumped storage hydropower projects also fragment landscapes, affect species growth and lifecycles, negatively influence water quality and ice cover, and degrade the overall health of ecosystems and biodiversity, among other social and ecological consequences associated with hydropower projects (Harby, *et al*., 2013, p. 611; WCD, 2000; Wrobleski, *et al*., 2020; see also Hite, 2022b). Conflict over development of these pumped hydropower projects is also happening against the backdrop of a severe 23-year megadrought; the Southwest is already imperiled by catastrophic water insecurity (DOI, 2022; Miller, *et al*., 2021; Turley, *et al*., 2022; Wilson, *et al*., 2021). Further interfering with the hydrological regime of the springs that feed the Little Colorado, which in turn feeds the Colorado River, will place additional undue stress on an already overexploited system (Kuhn & Fleck, 2019; Overpeck & Udall, 2020).

On July 26, 2021, Pumped Hydro surrendered their preliminary permits for both the Salt Trail and the Little Colorado River Pumped Storage Projects. Their decision came after realizing "that the study requirements and eventual environmentalist opposition makes investing resources in this project a very high risk," although the surrender could have also been prompted by FERC's notification of likely cancellation due to a violation of section 5 of the Federal Power Act, which requires an annual progress report that Pumped Hydro omitted (Kunz, 2021).

Yet, while surrendering their permit for the first two projects, Pumped Hydro are now focusing their efforts on the Big Canyon project. They argue that it will not involve a dam directly built on the Little Colorado and thus has a "much greater likelihood to be accepted by all stakeholders" (Kunz, 2021). Considering the magnitude of concerns expressed in the tens of thousands of comments and a dozen motions to intervene, such broad acceptance does not seem likely. However, FERC has not rescinded the Big Canyon permit application as of this writing, shining a spotlight on continued issues regarding their consultation process.

3. FERC and tribal consultations

The Federal Power Commission was created by Congress in 1920 to regulate hydropower development. The Department of Energy later reorganized the Commission in response to the 1973 oil crisis, creating FERC in 1977 to manage energy sources more broadly. Under the Electric Consumers Protection Act of 1986, FERC must consider energy conservation, fish and wildlife protections, recreational activities, and environmental quality equally in permitting decisions, while also considering the recommendations from affected tribes (ECPA, 1986).

Broadly, in the United States, tribes are legally recognized as "domestic dependent nations" requiring that government agencies respect "government-to-government" relationships with them and abide by the trust

responsibility concerning tribes, their sovereignty, and their cultural resources (Blumm & Pennock, 2021). Trust responsibility is considered "of the highest moral obligation that the United States must meet to ensure the protection of tribal and individual Indian lands, assets, resources, and treaty and similarly recognized rights" and has evolved from early treaties, statutes, and Supreme Court decisions (Jewell, Secretarial Order 3335, 2016, p. 1). The concept of consultation grew out of this trust obligation and efforts by tribes to reestablish their rights in the 1960s and 1970s and has been incorporated multiple ways into laws, executive orders, policy initiatives, and protocols ever since (see WH-IAEWG, 2009 for a partial list). The U.S. federal government established legal measures for meaningful consultation and collaboration with tribal officials in all policies that have tribal implications (Clinton, Executive Order 13175, 2000). The principles of U.S. government consultation include that each executive department and agency:

> …shall consult with tribal governments prior to taking actions that affect them. All such consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals; shall assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities; shall take appropriate steps to remove any procedural impediments to working directly and effectively with tribal governments on activities that affect the trust property and/or governmental rights of the tribes. (Presidential Memorandum, 1994)

Further, in 2000, the *Consultation and Coordination with Indian Tribal Governments* defined consultation as being a proactive, affirmative process that requires the "direct and interactive (i.e., collaborative) involvement of tribes in the development of regulatory policies on matters that have tribal implications" (Clinton, Executive Order 13175, 2000).

Each department, agency, and bureau also have their own interpretations and applications of consultation, including FERC, although there are some guidelines that they each follow. For example, the Electric Consumers Protection Act mandates that FERC take into account the recommendations made by affected tribes while making decisions, stating "Indian tribes often have a high degree of concern and unique interests in hydroelectric licensing proceedings and can make important contributions" (House of representatives in McCann, 2005, p. 421). FERC updated its own tribal engagement strategies in its 2003 *Policy Statement on Consultation with Indian Tribes in Commission Proceedings*, which "articulate[s] its commitment to promote a government-to-government relationship between itself and federally recognized Indian tribes." It also "recognizes the sovereignty of Tribal Nations and the Commission's trust responsibility to Indian tribes… [and]…establishes certain actions specific to the hydroelectric program" (DOE, 2003, p. 46453).

Despite these multilayered executive orders, memoranda, pledges, and laws, consultation remains a source of contention between government agencies and Tribal Nations. Regarding FERC, this may be in part due to the fact that FERC has "no direct pathway for consultation with Tribal Nations," an assertion made by a representative for an environmental organization involved in the Big Canyon project during an interview in 2022. Their belief is supported by a thorough review of federal consultation policies by the Government Accountability Office (GAO) who found that (according to the federal agencies) the factors hindering federal consultation with tribes include challenges regarding contact information for tribes, resource constraints to support consultation, and difficulties coordinating consultations when other federal agencies are involved (GAO, 2019). GAO recommended that FERC document and communicate with tribes about how tribal input from consultation was considered. FERC had previously stated that they do not need to do so since they make their decisions publicly available, and tribes can look up such decisions in their eLibrary.

Furthermore, an interviewee from an environmental organization pointed out that FERC consultation does not meet the international standards of FPIC, referring to the 'free prior and informed consent' that is mandated through the United Nations Declaration of Rights of Indigenous Peoples (UNDRIP). According to article 19 of UNDRIP, nations "shall consult and cooperate in good faith" with Indigenous peoples, "in order to obtain free, prior and informed consent before adopting and implementing" any measures that would affect them (Hohmann, 2018; UNDRIP, 2007). Similar to the resistance by the United States to UNDRIP, in drafting

the International Labor Organization's Convention 169 (the Indigenous and Tribal Peoples Convention, ILO, 1989), the United States was part of a larger bloc of countries that worked to "ensure that international standards remained well below the domestic standards" of those states regarding their relationships with Indigenous peoples, with the aim of forming "a convention that had little political meaning, except as a cover for continued state exploitation of indigenous peoples" (Rÿser, 1999, p. 147). It is also key to note that the United States adopted the American Declaration on the Rights of Indigenous Peoples (2016) at the third plenary session of the General Assembly of the Organization of American States, wherein the United States is described as having "persistently objected to the text" supporting rights of Indigenous peoples (p.47). Operationally, this means that the United States does not require 'consent' (or permissions) from a tribe regarding infrastructure development, only 'consultation,' which frequently meant only placing notifications on FERC websites.

In response to ongoing criticisms and feedback, FERC recently committed to an Equity Action Plan, highlighting their commitment to consultation with Tribal Nations, while also recognizing barriers to its implementation, including: FERC employs a "one-size-fits-all approach" to notifying and interacting with tribes, does not send notices to tribes with enough time to engage, FERC rejects requests for consultation, that only one Tribal Liaison is not enough to manage consultations with 574 Tribal Nations, and overall there is a lack of Indigenous representation among FERC employees (FERC, 2022). FERC thus pledges to complete their assessment of tribal government consultation policies and processes with its Tribal Working Group and take measures to build staff capacity to support more meaningful tribal engagement, although the operationalization of those steps remain to be seen and are not employed in the case of the Big Canyon proposal.

4. Tribal water rights and consultation

Water rights in the Colorado Basin

Consultation with Tribal Nations over energy-related infrastructure projects has been problematic historically (e.g., Powell, 2015; Voyles, 2015), and continues to be the case regarding the water-energy nexus in the Colorado Basin broadly, as the Big Canyon proposed project highlights. Consultation underlies a dizzying array of existing water acts, treaties, policies, court cases, decrees, and processes managing water in the West, and the Colorado River is known to be the most regulated and complex transboundary water governance system in the world. Water is allocated to users based on a system of senior water rights, known colloquially as "first in time, first in right" along with numerous additional multi-scalar governance regimes that collectively form the Law of the River (Garner & Ouellette, 1995), including its most famous component, the Colorado River Compact (see Adler, 2008; MacDonnell, 2022; Robison, 2022). The Law of the River is plagued by a history of inadequate, ineffective, and inequitable policy decisions that were based on an assumed bounty of excess annual water flow and excluded all tribes from participating in or benefiting from decision-making processes (Curley, 2019, 2021; Kuhn & Fleck, 2019; Schiffer, *et al*., 2007).

Recently, Anne Castle, the federally appointed Commissioner of the Upper Colorado River Commission, affirmed that challenges in the Basin are so big that "no one basin, no one state, no one sector can address it by themselves, it has to be an overall effort among states, tribes, governments, and water users" (Castle, 2023). Similarly, Rebecca Mitchell (2023), Director of the Colorado Water Conservation Board and Colorado Commissioner to the Upper Colorado River Commission, asserted that "we" need to correct the wrongs of the past regarding the purposeful omission of consulting Tribal Nations during the establishment of the Colorado Compact.

The exclusion of Tribal Nations from participation in policy decisions has occurred despite historical consultation mandates as well as their inherent senior water rights as inhabitants of the region and water users since time immemorial—tribes have lived in the Basin for at least 10,000 years (Simms, 2016) and the Hohokam Tribe, for example, began irrigating Colorado River waters over 2000 years ago (Glenn, 2022). This message was relayed to a room full of tribal, legal, government, academic, agricultural, and civil society representatives by Daryl Vigil, Water Administrator for the Jicarilla Apache Nation and the former Chairman of the Colorado River Basin Ten Tribes Partnership at a recent law conference. Vigil reiterated a message from John Echohawk, founder of the Native American Rights Fund, stating that there are still threats to tribes in the Colorado Basin; assimilation and extermination are still active and in play today. As Vigil laments, tribes have

no ability to participate in the policy conversation and there is no place for them to be involved. He questioned how water governance could be equitable when instead of inclusion (at the table making decisions or via consultation) there is only erasure (Vigil, 2022).

According to Vigil, thirty Tribal Nations in the Colorado Basin have water rights of up to 25% of the Colorado River, the majority of which they leave in the river (Vigil, 2022).[2] Glenn (2022) explains that this is because many tribes have not solidified their water rights due to the expensive and time-consuming nature of litigation and settlements that often take decades to complete and are further wrapped up in settler colonial legal processes (Arizona, *et al*. v. Navajo Nation, *et al*., 2023). Although the 1908 Supreme Court Winter's Doctrine decision legally quantified "Indian" water rights, it did not guarantee inherent tribal rights to water, only the legal right to water for the "purpose" of the reservation (Curley, 2019). The Ten Tribes Partnership has rights to 2.8 million acre-feet (3.45 billion m^3) per year, which goes largely unused as this and many other settlements are "paper water" rights that, among other reasons, cannot be accessed without new infrastructure, greatly benefiting junior rights holders (Glenn, 2022). The concept of 'acre-feet' that is tied into water management and settlements are further critiqued as colonial constructs that serve to "divorce water from the land, species, and kinship networks" (Curley, 2019, p. 61).

Instead of acknowledging or using traditional water management systems, U.S. government agencies, the Navajo Nation executive branch, and specific Navajo chapters govern water through interconnected entities or "colonial entanglements" (Dennison, 2017) in "watery networks" (Cohn, *et al*., 2019). This has been referred to as the "third space of sovereignty" in which tribal governance "resides neither simply inside nor outside the American political system but rather on these very boundaries, exposing both the practices and contingencies of American colonial rule" (Bruyneel, 2007 *in* Cohn, *et al*., 2019, p. 2). Unlike the national sovereignty generated and protected by building the Itaipú dam in Paraguay (Folch, 2019), Big Canyon is yet another example of transforming Tribal Nation's sovereign territory in the United States into 'sacrifice zones' (Manning, 2018) wherein "tribes" are "meant to step aside for the greater good of the colonial state" (Curley, 2019, p. 73). While complex and multifaceted factors continue to influence the colonization of water governance, it is clear that there is still greater need for anticolonial pathways (Ellis & Perry, 2020), as well as community and tribal engagement and influence in management of the Colorado River (Robison, McKinney & Vigil, 2021). As Whyte (2013) argues, a justice framework is needed that not only addresses the injustices of the violation of tribal rights, but that also incorporates justice into institutional responsibilities to tribes, thus ensuring that tribes are respectfully treated as the national governments that they are.

Given the ongoing struggle to effect meaningful consultation, tribes remain concerned about their participation in water-energy management decisions. In a letter to Secretary Haaland, a group of tribal representatives from the Basin call for recognition of tribal water rights and sovereignty, as well as more federal accountability to tribal trust responsibilities. In a further attempt to rectify longstanding issues with a lack of engagement in FERC decisions, tribes joined with numerous other environmental organizations in submitting proposed amendments to the Federal Power Act (NHA, 2022). The revisions would improve licensing, relicensing, and license surrender processes for hydropower projects by enhancing cooperation among agencies and tribes, improving clarity of actions and intentions, and would respect autonomy and self-determination of Tribal Nations, among other advances. The goal of the package is to improve cooperation among FERC, tribes, and agencies during hydropower licensing decisions, expand the authority of tribes in protecting their lands, waters, resources, and rights, and many additional provisions related to climate change and technology.

FERC-Tribal Nation consultation of the Big Canyon Pumped Storage Hydropower Project

From a tribal perspective, the application of FERC's consultation processes remains inadequate. According to tribes, some of the key factors hindering effective consultation on infrastructure projects generally include federal agencies that initiate consultation in late stages of project development, not adequately considering tribal input in decision-making processes, and not respecting tribal sovereignty or government-to-

[2] See also the letter from the Colorado River Basin Tribal Coalition to Secretary of the Interior Deb Haaland available at http://naturalresourcespolicy.org/docs/letter-to-sec-haaland-11.15.2121.pdf

government relationships (GAO, 2019). The United South and Eastern Tribes Sovereignty Protection Fund (USET SPF), for example, provide detailed feedback regarding FERC tribal consultation in their response to creation of FERC's Office of Public Participation. According to a 2021 letter submitted by USET SPF, "the Commission has an abysmal track record regarding consultation with Tribal Nations." They urge FERC to recommit to uphold "trust and treaty obligations…as well as a more transparent, respectful relationship with Tribal Nations." They argue that the newly created Office of Public Participation is not sufficient for addressing tribal concerns, as tribes are not considered part of the "public" or "stakeholders," instead they hold a special political status with sovereignty and rights of self-determination. USET SPF believe that FERC's failure to uphold consultation directives has caused irreparable damage to tribes, their homelands, sacred sites, and interests.

Regarding the Big Canyon project, FERC has not consulted with the Navajo Nation. A Navajo representative argued that if FERC were abiding by its consultation responsibilities, it would have consulted tribes before accepting Pumped Hydro's application (Nelson, 2020). According to the motion to intervene, the Navajo Nation Heritage and Historic Preservation Department is concerned that the project will adversely impact multiple sites that are important for water collection for ceremonial, medicinal, and domestic uses. The Navajo Nation "claims historic, appropriative, and reserved water rights to all surface and ground waters on the Navajo Nation" (motion to intervene). They cite the ongoing adjudication of those waters in the Supreme Court of Arizona (Arizona *et al*., v. Navajo Nation *et al*., 2023) and therefore any request to utilize water on the Navajo Nation must abide by the Navajo Nation Water Code of 1984.

Furthermore, the Navajo Nation believes that the project "would likely adversely impact the land, water, wildlife, and cultural resources of the Navajo Nation" (motion to intervene). They stress the ecological importance of the Little Colorado River gorge, which they designated as a Biological Preserve in 2008. The Preserve was established to protect the ecosystem and endangered species, including the (recently delisted) humpback chub (Gila cypha) as well as multiple other aquatic, game, and bird species. The Navajo Nation also asserts that the "Nation has not authorized the permit holder to enter upon the lands of the Navajo Nation or to use its waters," making it impossible for Pumped Hydro to conduct feasibility studies. Therefore, the Navajo Nation "requests meaningful government-to-government consultation with the Federal Energy Regulatory Commission before any formal action is taken pursuant to the disposition of the application."

Pumped Hydro's manager dismissed the need to consult with the Hopi Tribe or list them as a vested party in their application, despite acknowledging they would benefit, as stated previously. Yet, Hopi lands are located within Navajo territory and Hopi peoples have historic and ongoing cultural connections to the lands. Therefore, Hopi leaders claim they will be directly affected by the project and filed a motion to intervene. In the motion, Hopi leaders argue against construction of Big Canyon, calling the project "unacceptable to Hopi religious leaders, practitioners and the Hopi people as it will significantly and forever adversely impact sacred places to which Hopis have aboriginal title and use." They further state that the "Grand Canyon is the place from which the Hopi people believe that they emerged and the place to which they believe they ultimately return in the end," emphasizing how their spiritual and cultural connections to the region will be destroyed by the proposed development.

Hopi leaders also pointedly question "how can the proposed project be located entirely on Navajo Nation land and simultaneously not be affiliated in any way with the Navajo Nation?" They also reiterate that government-to-government consultation meetings between Tribal Nations and FERC are required, and they do "not support FERC delegating its government-to-government consultation responsibilities to the applicant" (although Pumped Hydro has not performed a consultation either). In their motion, Hopi leaders further point out that FERC's dismissal of consultations as "premature" does not comply with legal requirements.

The Hualapai Tribe also responded to the Big Canyon project in a comment, stating that since the project is within the ancestral territory of numerous tribes, and holds cultural significance to them, "*meaningful* government-to-government consultation" is required under Section 106 of the National Historic Preservation Act. They also believe that "FERC should have already initiated its consultation obligations" before the preliminary permit application was accepted, and without doing so "is an affront to tribal sovereignty." In relation to pumping water from aquifers, the Hualapai Tribe critique FERC's (mis)understanding of

groundwater stating, "For FERC to permit proposals like these, submitted by speculators, over the knowledge and experience of people who have lived in this land for thousands of years, is beyond reason."[3] It is clear from the perspective of Tribal Nations that FERC did not fulfill its consultation obligations.

5. Solutions for a just consultation process

Indigenous climate justice is an imperative component of a clean energy transition. The transition thus requires attention to "the qualities of relationships connecting indigenous peoples with other societies' governments" because as they stand, they "are not conducive to coordinated action that would avoid further injustice against indigenous peoples in the process of responding to climate change" (Whyte, 2019, p. 3). Such a relational justice demands attention to the "qualities of consent, trust, accountability, and reciprocity" across societal institutions (Whyte, 2019, p. 1). Whyte (2019) points to the broken relations between federal agencies and Tribal Nations that hinder effective consultation, as briefly described in relation to the Big Canyon project herein. Consultation, if operationalized in a manner that is appropriate and satisfactory to Tribal Nations, could provide a process through which these relationships can be repaired, as well as finally put an end to unjust extractive resource grabs on Navajo Nation territory.

While the Bureau of Reclamation Commissioner, Camille Touton (2023) affirmed that her agency and the Department of the Interior are strongly engaged in nation-to-nation consultations with tribes throughout the Colorado Basin regarding its management, consultation remains a conflicting issue that needs greater input from tribes themselves on how to remedy ongoing injustices. The United South and Eastern Tribes Sovereignty Protection Fund suggest that "the federal government must work to standardize and provide a uniform foundation to its Tribal consultation methods to provide certainty to Tribal Nations and federal officials alike. It is time for a Tribal Nation-defined consultation model, with dual consent as the basis for strong and respectful diplomatic relations between two equally sovereign nations" (USET SPF, 2021). They urge consultation to take place nation to nation, leader to leader, with duly elected or appointed leaders and further that tribal leaders must be afforded the respect and opportunity to directly voice their concerns and have the opportunity to confer with staff during consultations (same as federal officials). The United South and Eastern Tribes also note that federal agencies must not delegate consultation obligations to third parties because "Tribal Nations are the final arbiters of whether a federal action impacts our governments, homelands, cultures, public health, or sacred sites." Consultation should be early and ongoing, which requires advanced notice and sufficient response times. There should be transparency and federal employees should be educated about tribal sovereignty and invest in diplomacy (USET SPF, 2021).[4]

At the recent 2023 Colorado Law Conference on Natural Resources, a panel of 13 Tribal leaders and representatives from Basin states all requested that they have a "seat at the table" on all decisions regarding the Colorado River. Nora McDowell of the Fort Mojave Indian Tribe emphasized the need for a greater recognition of tribal sovereignty in dealing with matters that directly affect them, particularly in the Basin, a space where Tribal Nations have historically been silenced. Christopher L. Tabee of the Ute Indian Tribe also argued that discussions should expand far beyond consultation, stating, "We have been consulted to death." What they need now is action. Since the beginning, he says, their sovereignty has been attacked and they have always been met with roadblocks, so yes, they need to be at the table, but when they get there, Mr. Tabee says, "I want to be [at a table] with decision-makers. We are decision-makers, elected by our people. So why aren't we sitting with people making decisions instead of being consulted constantly (Tabee, 2023)?" This critical point highlights that while a structured and enforced consultation is a key component of justice, a just transition requires a more meaningful, engaged approach that not only respects and enforces the federal government trust responsibility to tribes but fully recognizes tribal sovereignty and thus understands they should be negotiating on par with all other government agencies and entities.

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[3] Hualapai Tribe letter to Kimberly D Bose at Department of Energy in response to Pumped Hydro Storage LLC proposals. https://www.grandcanyontrust.org/sites/default/files/resources/Big_Canyon_comments_Hualapai.pdf

[4] USET SPF letter to Kimberly D. Bose at FERC, dated April 23, 2021. https://www.usetinc.org/wp-content/uploads/2021/04/USET-SPF-Comments_FERC-OPP-FINAL-4_23_21.pdf

A further pathway was suggested by representatives from environmental organizations we spoke with who believe that FERC should adopt the principles of free prior and informed consent (FPIC) to develop a clear pathway to consultation that better aligns with international standards (see also Echo-Hawk, 2016; Mengden, 2017). While the United States supports the UN Declaration of Rights of Indigenous Peoples regarding consultation, they see it as "an aspirational document of moral and political force" but not an obligation that is "legally binding" (Arndt, 2019). Requiring *consent* may stop companies and government agencies from accepting preliminary permits without first consulting with tribes and receiving their consent and input. In this case, it may have prevented FERC from providing Pumped Hydro with a preliminary permit for the Big Canyon proposal. The fact that Pumped Hydro claims that they "had consulted with some Navajo Nation officials" but "did not have complete approval" is not adequate and this should never be the case in a just clean energy transition (Nelson, 2020).

Consultations could also be utilized to develop more permanent protections, which would then relieve Tribal Nations from the stress, time, and resources of constantly carrying the burden of responding to unjust, extractive infrastructure proposals or facing further disconnections from place (for example see Agnew, 2011; Bessire, 2014; Basso, 1996; McCully, 1996; Samson & Gigoux, 2016). Expansion of the Wild and Scenic Rivers act could provide greater protections (Perry, 2021) as could Federal-Tribal protected areas like the recently established Baaj Nwaavjo I'tah Kukveni Grand Canyon National Monument in Northern Arizona. Developing a legal framework that recognizes the Rights of Nature could also provide not only better water protections, but also acknowledge the deeper dimensions of human-water relationships that tribes have with rivers and water (Perry, *et al*., 2021). This point was made clear by Nora McDowell who prompted audience members at the 2023 Law conference to "Think about what the river would say" in regards to its historical mismanagement. She argues, "We have to speak for it. I know it would say, 'respect me, take care of me, let me heal, let me breathe. Let me give you what I was supposed to do from the beginning—give you life, sustain life, create life, continue life, be the heart that continues to beat. Don't let me die'" (McDowell, 2023).

6. Conclusion

The Federal Energy Regulatory Commission (FERC) may be well positioned in theory to help advance the United States' clean energy transition through their management of energy projects; however, they will only succeed at contributing to this effort if they recognize their trust responsibility to Tribal Nations, enforce a process of consultation with them, and ensure equitable seats at the decision-making table for them. Therefore, this article questions the operationalization of FERC's policies towards tribal consultation and highlights FERC's decision-making powers as they intersect with tribal rights regarding the development of Big Canyon pumped storage hydropower project. It becomes apparent through continued calls for greater consultation from tribes, and even recognition by government agencies themselves (including FERC), that FERC is not fulfilling its obligations.

In the case of Big Canyon, FERC accepted a preliminary permit for development of a close-looped pumped storage hydropower project on Navajo Nation without consultation with the tribal government. Two previous pumped storage hydropower projects were also proposed nearby and received preliminary permits without consultation, but they were later surrendered due to strong opposition. In reviewing the hydropolitics of the Colorado Basin, the projects highlight a lack of consultation, and additionally raise issues of sustainability regarding building a pumped storage hydropower in an arid region during a mega drought using water from slow-recharging aquifers, creating significant challenges in this hydrosocial territory.

These pumped storage projects are just some of the most recent examples of unwanted, extractive infrastructure development projects on tribal lands, supported by a settler colonial state, highlighting a continued lack of recognition of tribal sovereignty. Given that the Basin is facing a shifting hydrological regime under climatic changes and is managed by a complicated multi-layered, intricate governance structure, incorporating all sovereignties, stakeholders, and communities into decision-making is necessary to develop an equitable and sustainable future. This future requires mending relationships with tribes, achieving a

relational justice via meaningful and enforced consultation. These steps will make significant steps towards an Indigenous climate justice that respects tribal territorial sovereignty and aid the U.S. in achieving a clean energy transition.

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