With technical assistance and workforce program support from the organization now known as the Alliance for Tribal Clean Energy, the Northern Cheyenne Tribe launched an innovative residential solar program for low-income and elder Tribal members, helping reduce monthly electricity costs by 20-50%.
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Resource List: Indigenous Data & Energy Sovereignty

This resource list is for Indigenous and non-Indigenous professionals working at the intersection of energy sovereignty and data governance. It brings together frameworks, legal tools, spatial data resources, and key organizations into a practical guide for building transparent, accountable partnerships. A key tension runs through this literature: mainstream open-data principles prioritize broad sharing and accessibility, but often exclude Indigenous stewarding rights, values, and ownership in the process. Indigenous data governance frameworks respond to a long history of outside extraction and federal overreach by arguing that data about Indigenous communities should be Indigenous-owned and led - where Tribes, not institutions, control how their data is collected, used, and shared. ***The Nature Conservancy will make any paywalled literature referenced in this guide available online for access by permission of the content owners.***

I. Foundational Frameworks & Principles

GIDA. (2019). CARE Principles for Indigenous Data Governance DOI | One-Pager PDF
The CARE principles (Collective Benefit, Authority to Control, Responsibility, Ethics) shift governance focus from data sharing to Indigenous well-being and self-determination. They directly address power imbalances left unresolved by the FAIR principles and are the most widely cited framework in this field.

FNIGC. The First Nations Principles of OCAP fnigc.ca
OCAP (Ownership, Control, Access, Possession) establishes First Nations jurisdiction over community information regardless of where data is physically held. Originating in 1998 from health survey governance, it remains the foundational model for Indigenous data stewardship in Canada and is increasingly applied in U.S. contexts.

IEEE. (2025). IEEE 2890-2025: Recommended Practice for Provenance of Indigenous Peoples' Data. IEEE Standards Association Standard Page | Access via IEEE GET Program
The first formal technical standard establishing common parameters for Indigenous data provenance, published November 2025. It formalizes disclosure of relationships and data linkages to support Indigenous governance, participation, and future use. Developed under Working Group Chair Stephanie Russo Carroll, the standard acts as an interoperability bridge between CARE-based governance and technical infrastructure. Essential for energy-sector practitioners designing GIS platforms or repositories involving tribal data; accessible at no cost via the IEEE GET Program.

II. Legal & Strategic Governance

Carroll, S. R., Rodriguez-Lonebear, D., & Martinez, A. (2019). Indigenous Data Governance: Strategies from United States Native Nations. *Data Science Journal*, **18(1)** DOI
Examines how tribes overcome colonial "data dependency" through governance mechanisms. Case studies include the Swinomish Tribe's data-sharing agreements and the Navajo Nation's Human Research Review Board. The foundational U.S.-focused academic reference for IDGov practice.

Ulbricht, B. (2025). Actualizing Indigenous Data Sovereignty Through Tribal Self-Governance. *New Mexico Law Review*, **55(1), 77–136** Full Text
Argues that federal IP law is structurally inadequate for Indigenous data protection and proposes tribal law as the enforcement mechanism. Uses the Yurok Tribe to demonstrate jurisdiction over "placeless" digital data and non-member researchers.

Guedel, W. G., & Viles, P. H. (2024). Energy Sovereignty for Native American Nations: The Model Tribal Energy Code. *Tulsa Law Review*, **59(1)** Full Text
Presents a comprehensive Model Tribal Energy Code enabling full tribal self-regulation of renewable and traditional energy. Documents how BIA oversight has historically blocked tribal development and provides a 100% tribally governed legal framework-the energy-domain companion to Ulbricht.

AIPI & NCAI. Center for Tribal Digital Sovereignty (CTDS). Arizona State University
aipi.asu.edu/ctds | Tribal Digital Sovereignty Guidebook
The first institution dedicated to tribal governance of digital infrastructure, data, spectrum, and AI. Co-founded by ASU's American Indian Policy Institute and the National Congress of American Indians; provides research, policy tools, and the Tribal Energy Leaders Fellowship.

III. Energy Sovereignty & Spatial Data

Milbrandt, A., Heimiller, D., & Schwabe, P. (2018). Techno-Economic Renewable Energy Potential on Tribal Lands. NREL/TP-6A20-70807 Report PDF | Tribal Energy Atlas
The key spatial data foundation for tribal renewable siting finds tribal lands hold 6.5% of U.S. utility-scale renewable potential despite comprising only 5.8% of land area. The companion Tribal Energy Atlas is a resource list for tribal energy planners–though its federal authorship raises data ownership questions relevant to IDSov.

Raimi, D., et al. (2023). Securing Energy Sovereignty: A Review of Key Barriers and Opportunities for Energy-Producing Native Nations *Energy Research & Social Science* ScienceDirect
Peer-reviewed review of structural barriers to tribal energy sovereignty–including land checkerboarding, federal bureaucracy, and limited internal capacity–alongside innovative tribal governance responses. Essential for understanding why spatial data governance matters for siting decisions.

Native BioData Consortium (NativeBio). (est. 2018) nativebio.org | IndigiData Program
The first Indigenous genomic biorepository physically located within a sovereign American Indian nation—the Cheyenne River Sioux Reservation—operating under tribal regulation and jurisdiction, with a governance structure integrating a management team. Though rooted in health data, NativeBio is the most developed model of a tribally sovereign data repository in the U.S. and offers a governance architecture directly applicable to environmental and energy data contexts.

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Energy Sovereignty Institute. Resource Portal for Native American Energy Planning energysovereigntyinstitute.org
U.S.-focused clearinghouse linking tribal communities to federal resources, DOE Office of Indian Energy updates, and national laboratory research. Hosts annual research workshops featuring Sandia, NTUA, and university partners. Particularly useful for New Mexico and Southwest tribal energy practitioners.

IV. Evaluation, Applications & Protocols

Duriano, K. (2025). "Data Has Spirit": A Return to Balance. The Nature Conservancy, Hawai'i & Palmyra Marine Fellowship
For more information, please contact Maya.Batres@tnc.org
Applies CARE principles to marine conservation using the Ka`ūpūlehu "Try Wait" initiative. Frames data as carrying "ancestral intelligence" and demonstrates practical consequences of open-access data (e.g., overharvesting of sacred species). A strong case study for environmental stewardship contexts.

Gachupin, F. C., & Molina, F. (2019). How to Build and Sustain a Tribal IRB. Collaborative Research Center for American Indian Health (CRCAIH) CRCAIH Resources
Step-by-step guide for tribes establishing Institutional Review Boards to formalize oversight of research conducted on tribal lands. Navigates federal regulations (45 CFR 46) while centering community benefit and participant protection. Practical companion to the governance frameworks above.

Sample Data Sharing Agreement (Tribal Template). Collaboratory for Indigenous Data Governance Resources
Legal template for defining data access, confidentiality terms, and tribal retention of exclusive property rights over original materials. Developed within a framework that centers Indigenous terms in research partnerships. Useful starting point for institutional or energy-sector data agreements with tribes.

V. Key Organizations & Networks

US Indigenous Data Sovereignty Network (USIDSN) usindigenousdata.arizona.edu
Founded 2016. Advocates for tribal demography and proactive vital statistics systems to counter federal undercounting. Primary U.S. policy and research network for IDSov.

Te Mana Raraunga (Māori Data Sovereignty Network) Māori Data Governance Model PDF
Aotearoa/NZ network with a formal governance model emphasizing Rangatiratanga (authority) and Whakapapa (relational provenance). Provides the most developed national-level Indigenous data governance model globally.

UC Berkeley Ethnic Studies Library. Native American Studies: Indigenous Data Sovereignty Guide Library Guide
Curated research guide organizing foundational readings, organizations, case studies, and data tools. Useful entry point for new researchers and a reliable index of peer-reviewed literature across the IDSov field.