Economic Development, Native Nations, and Solar Projects

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Volume 34, Number 2

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ECONOMIC DEVELOPMENT, NATIVE NATIONS, AND SOLAR PROJECTS

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Introduction

A "clean energy economy" has become the Obama administration’s watchword for pulling out of the recession vis-à-vis renewable energy and clean technologies investment.¹ Indeed, one of the first measures taken by the administration was the introduction of comprehensive legislation (the most comprehensive to date)² allocating billions of dollars toward expanding and accelerating development, deployment, and use of geothermal and solar energy throughout the United States.³ Currently, the Bureau of Land Management (BLM) is conducting a Solar Energy Development Programmatic Environmental Impact Statement in order to identify and prioritize specific locations best suited for large-scale production of solar energy.⁴ The U.S. people are on board as well—a recent poll shows that the majority of “Americans approve of the way President Obama is handling energy issues and support efforts by him and Democrats in Congress to overhaul energy policy . . . .”⁵ President Obama is even installing solar panels on the White House.⁶

The Obama administration also has voiced a strong commitment to Native American economic development.⁷ Here, too, the administration has followed through with many of its promises. Surprisingly, the administration was the first in the history of the United States to actually put Native Americans in charge of

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The Journal of Energy and Development, Vol. 34, Nos. 1 and 2
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Indian country. One need not look far for an economic example: the now-controversial American Recovery and Reinvestment Act of 2009 earmarked over $40 billion to Indian tribes. Tribal governments also have seen significant increases in the 2010 budget for health care, law enforcement, and education.

Indian lands have some of the most significant energy potential in the United States. In fact, solar electricity forecasts on tribal lands are estimated to be 4.5 times the annual total U.S. electricity needs. Oddly enough, tribal lands are also the most economically impoverished and underdeveloped regions in the country. In fact, notwithstanding the much publicized growth and success of the casino gaming enterprises owned by many tribal governments, gaming incomes have been concentrated in a relatively small number of tribes near metropolitan patron populations, and, on average, American Indians residing in Indian Country remain the poorest group in America.

To add an unfortunate and incongruous twist, much of Indian country lacks electricity service altogether. Where electricity service is available, Native Americans pay the highest rates in the nation—usually totaling a disproportionately high amount of their income.

This article will examine the issues surrounding economic development in American Indian country, and how solar projects may pose a solution to many of the issues currently blocking development in these lands. We shall first address Native American economic development in general, focusing on capable institutions, practical sovereignty, and cultural match. This will be followed by a discussion of solar energy projects: the benefits of solar energy when compared to other types of energy production; the ways that these projects specifically will benefit Indian country; and the rationale behind implementing solar energy projects as a means to sustainable economic development in Indian country. Finally, having argued for and laid out a framework for economic development via solar projects, this article will offer some suggestions on how to implement a successful solar project.

**Economic Development**

**Capable Institutions:** One of the fundamental components to successful economic development is putting into place a tribal administration that works and is supported by its citizens. In fact, research so far submits the conclusion that capable institutions are a necessary condition to successful economic development. In their 2000 study of over 60 of the most governmentally diverse Indian tribes in the United States, S. Cornell and J. Kalt, for example, concluded that “institutions are keys to economic development.”

When tribes are unable to effectively govern themselves, it is largely due to the residual effects of past U.S. policies. Substantially contributing to the failure of current Indian institutions is the fact that many tribal governments are built on
remnants of Indian Reorganization Act (IRA) policies. Congress passed the IRA in 1934, in light of previous failures in federal Indian policies. Under the IRA, tribes were encouraged to “reorganize” by adopting new boilerplate constitutions to become valid if approved by the Secretary of the Interior. The IRA model typically consisted of a strong executive office that chaired an elected council of eight to 15 members. IRA constitutions rarely provided for a system of courts and delineated no separation of powers.

As Vine Deloria, Jr. noted at the turn of the era, since the 1950s “the situation in Indian Affairs has bordered on the irrational. There have been few changes on the Congressional committees, the [BIA] has changed little, [while] tribes and the general public have been more vocal about their problems.” Today, courts still fail to acknowledge the U.S. policy shift to tribal self-determination and, in many instances, still compel a federal approval process before changes in tribal institutions can be implemented. Even where consultation policies are mandated by federal, international, and local law, federal agencies habitually fail to comply. Adding insult to injury, because many tribes have retained U.S.-imposed institutions to implement development programs, the development programs that do get off the ground often fail.

Despite these impediments, “the fact is that Indian nations took the government at its word” and are finding methods to “give teeth” to the policy where federal agencies have failed. When Native nations set their own priorities and manage systems, programs, and dollars in their own way, responsibility rests with the tribe itself and decision makers are held accountable to their own citizens instead of the federal government. Accountability means legitimacy; it means that rewards and penalties bound in social sentiments are triggered by the social networks of a tribe in ways that give definition via those accountable institutions. Like trying to impose a monarchy in the United States—or a democracy in Iraq, for that matter—alien systems of governance in Indian country have consistently lacked support, legitimacy, and effectiveness. Whereas imposed systems only needed to work well enough to keep the money flowing in, a sovereign nation accountable to its own citizens requires capable institutions to administer tribal affairs, keeping the money inside once it arrives.

**Practical Sovereignty:** State and federal governments often are pressured to stifle Native nations’ assertions of practical sovereignty because of the political consequences involved. For example, in the current economic climate tribal governments are under a constant attack from insolvent states attempting to tax tribes’ outwardly successful government-run enterprises. From the state and federal governments’ perspective, so the argument goes, letting tribes run their own institutions without outside influence upsets the balance of (economic) power within the system—and if tribes fail the non-Indian government will be left footing the bill. However, it is abundantly clear at this point that this approach
has only led, in the long run, to larger burdens on taxpayers and more poverty in Indian country. In fact, no current incident of continued economic development has been found where a tribe is not making their own decisions about resource use, internal organization, or development strategies.

In short, practical sovereignty is necessary to sustainable economic development. Cornell and Kalt have identified two reasons for this: first, “practical sovereignty puts the development agenda in native hands.” This means that tribes themselves set the agenda—rather than outsiders (who reflect foreign cultures, interests, and perceptions)—reflecting tribal culture, perceptions, and interests. As a result, these strategies are best suited to address local needs, conditions, and values. As a practical matter, sovereignty places resources directly in the hands of the native nation, which translates to an increased sense of possession over resources. Second, “self-governance means accountability.” Practical sovereignty weds decisions to consequences, resulting in improved resolutions because tribes themselves have the principal stake in the outcome. The result is more efficient access and use of capital; improved probability of sustainable economic development; more successful defense of sovereignty; and societies that mesh politically, socially, culturally, and economically.

Cultural Match: The history of Native America is beleaguered with exploitation, fraud, and outright racist policies. This has led to wariness in tribal governments of outside business interests and the “‘get rich’ development scheme that is going to ‘save’ the reservation.” Some tribal leaders, faced with the problem of appearing as “sell outs,” take the stand that “the capitalist model does not fit the culture of many Indian people, and that business and who Indians ‘are’ is in conflict.”

However, as many successful tribal development planners have noted, “developing reservation economies is vital to sustaining and developing Native American cultural identities.” Indeed, solid economic research shows that those tribal leaders who oppose “the assimilation of the foreign in the logics of the familiar” may be damaging, rather than assisting, their tribe. By deciding how to partake in the global financial system, what types of businesses to permit on their lands, and what economic ventures a community will support, tribal governments are, in fact, asserting sovereignty—a necessary step to economic development—rather than losing it. Professor D. Champagne, for example, has argued that “[m]arket competition forces the Indian communities to consider and engage in market enterprise, but they wish to do it under their own terms, which means subordinating capitalist accumulation to collective goals of community and cultural and political enhancement and preservation.”

What is important for tribal developers to emphasize is that, while tribes do not seek to defend a static culture, neither do they wish to embody the “non-Indian, Hollywood version of iconic culture.” In fact, some argue that perhaps the most menacing threat to Native sovereignty is the perspective of non-Indians that tribal
governments can never be legitimate because what a “real government” is and what a “real Indian” is are mutually exclusive—that Native nations lose their “Indianess” as they become more conventional.\textsuperscript{46} This contention is false. The U.S. public—but especially judges and lawyers\textsuperscript{47}—must be re-educated about the sovereign status of Native nations.\textsuperscript{48} The key to getting there is to use traditional knowledge to inform the future of Native nations, so that the tribe’s identities are not those of “poor Indian,” or “casino-rich Indian,” but sources of self-conception and awareness that serve to support the lives of Native persons.\textsuperscript{49} By providing the resources to achieve cultural integrity and self-determination, escalating economic development on tribal lands supports tribal culture rather than damaging it.\textsuperscript{50}

The question then arises: how are tribes to develop economically without throwing away their tradition and culture? The first step is to realize that economic development and native culture are not diametrically opposed. Rather than fighting against development, tribes must redefine development for themselves in a way that matches their own tradition and culture, embracing all outcomes and approaches.\textsuperscript{51}

One Native nation may imagine a community and economy heavily integrated into the market-oriented activities of the neighboring society. Another may imagine a community made up largely of subsistence hunters and trappers. Yet another may envision a hybrid economy that mixes customary and market-based activities with continuing transfers from other governments that are fulfilling their treaty obligations.\textsuperscript{52}

Defined in this way, economic development is “the process by which a community or nation improves its economic ability to sustain its citizens, achieve its sociocultural goals, and support its sovereignty and governing process.”\textsuperscript{53}

It is incumbent upon tribal governments and non-Indians alike to realize that there is no single conduit to successful economic development. Rather than being an impediment to successful development, cultural match—developing strategic and realistic connections between existent cultural values and standards and those required of economic development—is a solution to the disparity that exists in Indian country. Indeed, it is a solution to which every Native Nation possesses and has abundant access.\textsuperscript{54} The fundamental concern is that any enterprise that the tribe embarks on—be it an economic development project or setting up a new governing institution—should match the tribe’s current Indigenous ideas, be they remnants from older traditions or products from a tribe’s contemporary experience. Development fails where cultural match is low, but thrives where cultural match is high.\textsuperscript{55}

\textit{Solar Energy}

This section will discuss the general benefits that tribes may acquire by implementing solar projects as well as the maintenance of sustainable economic
development vis-à-vis solar. The section will conclude by asserting that solar projects not only sustain but also are conduits for capable institutions, practical sovereignty, and cultural match.

**General Benefits:** We shall turn to such general benefits as environmentalism, extending electricity to rural areas, investment security, and economic advantages.

*Environmentalism:* Conventional electricity generation, the largest source of air pollution in the United States, causes substantial damage to human health, and, as an industry, is the largest contributor to global warming in the country. Native peoples are “directly and disproportionately affected” by the by-products of conventional energy as well as the attempts to mitigate its effects. Examples include: many reservations have been targeted as nuclear waste dumps, by individual energy producers and the federal government; electrical generation facilities on waterways have interfered with tribes’ treaty right to fish in “usual and accustomed areas”—and the fish that are caught are often contaminated with mercury; offshore fossil-fuel development also has obstructed tribal fishing; mines have had devastating impacts at all levels of the energy cycle—from respiratory illness caused by coal-fired power plants and oil refinery emissions to cancer from radioactive mining waste; the toxins left by uranium and fossil-fuel development in Indian country are likely to persist indefinitely. On a larger scale, tribes are already noticing the effects of climate change. Tribes in Alaska are losing their properties as their homes and villages are literally falling through the ice. In the Lower Colorado, shorter winters and earlier springs are affecting the animals’ migration and hibernation patterns; many animals are heading north, while tribal hunting rights are fixed to a particular area.

Solar energy is around 10 times less carbon intensive than conventional energy and is far more efficient than traditional energy uses. Although it has been argued by some that solar energy is unsustainable because of the amount of water it uses, if this is a concern to tribes, it can be sidestepped by implementing photovoltaic projects rather than thermal solar projects. When implemented domestically, considerable amounts of greenhouse polluting gases are avoided. For the case of a domestic water-heating system, for example, the greenhouse saving, compared to a conventional system, is about 75 to 80 percent. In the case of space heating and hot water systems, the greenhouse saving is about 40 percent. In all, by promoting solar technologies, which displace conventional types of electricity generation, tribes would substantially decrease harm to their citizens and the environment.

*Rural Areas without Electricity:* Because small-scale solar energy projects are highly cost-effective, particularly to provide power for lighting, irrigation, refrigeration, and communication, poor and remote areas on tribal lands that are not served by electricity would benefit directly from solar projects. Used to provide night lighting, for example, in rural areas solar light systems are “100 times more efficient than kerosene and 500,000 times more efficient than candles.”
phenomenon has already taken place in China, where the Chinese are using photovoltaic energy to respond to the basic services needed by its rural citizens.\textsuperscript{71} These systems also are being used to supply power to rural areas in Africa and Costa Rica.\textsuperscript{72} In China, this has led to an increased demand for photovoltaic cells—so much so that “China has moved ahead of its competitors in the race to become the dominant player in the development of energy technologies.”\textsuperscript{73} Although initial costs are high,\textsuperscript{74} the price of photovoltaic panels has been declining since the late 1990s.\textsuperscript{75} When properly installed and maintained, these systems require modest attention and are a major source of locally generated power.\textsuperscript{76} When developed locally, these small-scale solar developments also can supply income for tribes that have access to the grid as they can sell their excess power to traditional utilities.\textsuperscript{77} In Costa Rica, for instance, power generated by private solar developments accounts for about 12.3 percent of the total power put into the grid.\textsuperscript{78}

Security of Investment: In 1935, the federal government created the Federal Power Commission to set the electricity rates such that power-generating utilities would receive an assured profit. As part of this regulation, each utility company was given exclusive control of a service area but had a requirement to guarantee against blackouts, serve everyone, and assure a reasonable rate relative to the cost of distribution and production. By the mid-1960s, due to technological and financial plateaus realized by then-current monopolies, alternative providers began seeking entry into the market, in some cases offering cheaper and better energy. In reaction, the Carter administration introduced the National Energy Act,\textsuperscript{79} which encouraged increased energy efficiency, stimulated conservation, modernized utility rate-making, and aided the creation of a new market in electricity by requiring utilities to buy from non-utility-owned small power production facilities and to pay what it would have cost them to generate the power themselves. As a result, there was a “trend in the electric utility industry toward increased reliance on generation by independent producers. . . .”\textsuperscript{80} Today, independent energy producers are able to generate as much energy as they can, use what is needed for themselves, and sell the rest to utilities—and traditional utilities are legally obligated to buy their power.\textsuperscript{81} As far as distribution, the Energy Policy Act of 1992 made it even easier for independent energy producers to enter the market by requiring traditional utilities to charge themselves the same rate they charge competitors for transmission, that is, even though traditional energy providers have a monopoly over transition lines, independent producers can use the traditional utility’s lines to get into the grid at no disadvantage.\textsuperscript{82} Further, because it allows them to maintain control of the market, utilities fully welcome independent producers.\textsuperscript{83}

The solar market is an exceptionally safe investment. First, it has been projected that more solar energy strikes the earth in one hour than all of the energy used by the planet in an entire year.\textsuperscript{84} Yet power produced by solar technologies provides less than 0.1 percent of world electricity.\textsuperscript{85} The market appears ripe for the picking. Solar energy is abundant, free, clean, widely available, and relatively simple to extract—as
opposed to traditional energies, the cost of which will rise as electricity demand grows and the availability of fossil fuel declines. Investors have virtually limitless potential to tap the energy of the sun and convert it to money. Second, as noted above, the Obama administration actively supports the implementation of solar projects as an economic development tool for tribes. Experts have confirmed that U.S. demand for solar energy will continue to rise as the government tries to fulfill its commitment to reduce greenhouse gases, and tribes will likely continue to have a large role in the government’s plan because photovoltaic technology is extremely viable in much of Indian country. It is so viable, in fact, that a growing number of large energy companies are establishing systems there each year. Third, solar projects are relatively uncomplicated. Recent innovation has made installing some solar panels as easy as putting on a decal. Dow Chemical recently has introduced a line of “solar shingles” that can be nailed to a roof just like ordinary shingles by regular roofers. The shingles look like regular shingles from afar and cost “30 to 40 percent less than other solar-embedded building materials and 10 percent less than the combined costs of conventional roofing materials and rack-mounted solar panels.” Fourth, carbon offsets are an extremely profitable market and are likely to continue to be so. Solar projects are able to sell—internationally or domestically—offset credits to government agencies, individuals, or companies looking to neutralize their own emissions from fossil-fuel consumption, greenhouse gas emissions, and electricity use. Increasing international attentiveness to “green energy” has led analysts to predict that the offset market will become particularly lucrative. In 2009, for example, “the global carbon market reached $136 billion . . ., up from $56 billion in 2007, and offset roughly 8.2 billion tons of carbon emissions.” Finally, there is a high likelihood that the federal government will soon establish a national “renewable portfolio standard” (RPS), which mandates that electric utilities acquire a definite percentage of their electricity “from renewable resources or purchase renewable energy credits” via independent energy producers. Although RPS has not made it into law yet, RPS legislation has passed the Senate three times since 2002, the House more recently in 2007, and many states have independently implemented their own RPS laws. Support for RPS legislation remains. In all, even without regard to the environmental benefits, solar projects have proven to be safe investments.

**Economic Advantages:** Tribes that organize companies to carry out tribal development projects as “an arm of the tribe so that its activities are properly deemed to be those of the tribe” have legal advantages. Tribes can create a tribally chartered entity (i.e., a tribal utility) or a section 17 corporation to generate revenue while taking advantage of their situation as a sovereign entity.

First, because tribes are independent sovereign nations, neither states nor the Federal Energy Regulatory Commission (FERC) can block solar projects. As noted above, states are currently failing to site the number of power plants needed to meet the country’s projected energy demands.
is the bureaucratic process whereby states (and in some circumstances local governments) are able to deny power projects; states have the right to block generation expansion projects (efforts to build new plants) unless they “provide a significant in-state benefit, no matter how large a benefit the proposed plant may provide on a regional basis.”

Non-Native renewable energy projects are particularly hard to implement. First, renewable energy plants must be sited where the resource is located; in non-Indian country these are often highly valued public areas that voters are unwilling to sacrifice. “Not in my backyard” and “tragedy of the commons” collective action problems loom large here. Second, again, because of location, these projects are likely to fall under the jurisdiction of land stewards such as the Bureau of Land Management (BLM) or the U.S. Forest Service, requiring a federal review under the National Environmental Policy Act (NEPA), which can take years and cost millions. The typical Environmental Impact Statement required in many NEPA analyses, for example, “can cost millions of dollars to produce” and can take up to 12 years to complete. Finally, tribes themselves ironically are often an impediment to these projects. In exercising their Treaty, trust, and other consultation rights, tribes often have legal standing to object to projects on federal lands. In October 2010, for example, the Quechan Tribe of the Fort Yuma Indian Reservation brought suit against the BLM for violating a number of federal laws in approving the Imperial Valley Solar Project in which tens of thousands of mirrored energy-producing dishes would produce power for the city of San Diego. At this time, no decision has been issued on the suit.

Solar projects on tribal lands, however, are not subject to many of these encumbrances. Decisions about development and siting in Indian country are fully up to the tribe. As a part of its federally mandated “right of consent” a tribe or tribally controlled corporation may choose to develop its own project, or to negotiate with outside investors, uninhibited by state/federal constraints in most instances. The only time that the federal government may interfere with the project is if it affects a federal trust resource (i.e., minerals, water, etc.) or if a lease or sale to a non-tribal entity for a period of more than seven years is involved. In that case, the tribe must obtain federal approval, where the “federal action” requires the proper agency to determine that the proposed project “is consistent with all environmental protection statutes as well as historic and archeological protection statutes.” The sun is not a trust resource, but reservation land is, and any large-scale solar facility will likely require the encumbrance of federal land not only for the panels themselves, but also for ancillary facilities as well as rights-of-way to provide access for installation and maintenance. This may trigger NEPA because the Bureau of Indian Affairs Realty Office needs to “take action” regarding use of land held in trust, although each situation is different. But even where NEPA and other federal laws do apply, the BLM has pledged only to take into account the most essential factors. The BLM also has made clear
a commitment to streamlining the NEPA analysis by employing intergovernmental (i.e., tribal-federal) cooperation. Of course, if an entity of the tribe wants to use tribal land for only tribal purposes—working without an outside partnership—then federal regulation does not apply. Where the energy goes is of no consequence either, since no “federal action” is required in the sale.

A very viable paradigm would be a photovoltaic (PV) panel-system on the roofs of buildings throughout the community. Further, in accordance with 25 C.F.R. 224.52, a Tribal Energy Resource Agreement (TERA) may address development of all or just a portion of a tribe’s energy resources and provide for the tribe to assume all or some of the activities normally carried out by the Department of the Interior. NEPA does not apply to a project once a TERA is in place. Although at this point there are no TERAs in place with the Department of the Interior, TERAs do offer a huge advantage over non-Native developers.

Second, tribes have advantages in government contracting. In the late 1960s, Indian scholars recognized that if tribes “can work out the basic programs for contracting, they may be able to push into new areas which have been unserviced or only partially serviced in the past.” By 2010, it is undisputed that contracting has become an important sovereignty-expanding tool for Native Nations. Particularly influential in this aspect is a system known as the 8(a) program. Under the 8(a) program, tribes are able to obtain sole source federal contracts as affiliates or under the larger tribal corporate umbrella, if they can show a social and economic disadvantage—which is almost always met. Another advantage is that there is no capped dollar amount for sole source contracts obtained through the 8(a) program (whereas non-Indian contractors are limited in award amount when granted non-competitively). Tribes can use the 8(a) program to secure contracts for the development of solar projects on federal lands.

Many of the tribes that have taken advantage of the 8(a) program have seen remarkable results. One example of 8(a) success is the Coeur D’Alene Tribe in northern Idaho’s $400-million contract with the U.S. Army. Another is HoChunk, Inc., a multi-million dollar corporation owned and operated by the Winnebago Tribe of Nebraska that has a host of subsidiary companies participating in the 8(a) program, including a computer hardware provider, an IT service, a marketing and advertising agency, a general contractor, and a telecommunication technology and manufacturer of computer hardware. In Oklahoma, Chickasaw Nation Industries, Inc. operates contracts with the U.S. Department of Defense, the U.S. Department of Energy, and the U.S. Department of Health and Human Services. The Salish and Kootenai Tribes have developed S & K Aerospace, Inc., which has obtained a $325-million eight-year contract to track service parts for U.S. Air Force F-15 fighter aircraft all over the world. Were the federal government to put out bids for solar projects, the 8(a) program puts tribes at a huge advantage.

Finally, the Energy Policy Act of 2005 authorized federal agencies to provide a preference for the purchase of any energy product or by-product from a business
entity that is majority-owned by an Indian tribe.\textsuperscript{126} Solar power generated by a tribal venture qualifies as one of these products.\textsuperscript{127} Also under this act, a tribal development project will receive Clean Renewable Energy Bonds if it is acting as a political subdivision of the tribe itself, as a sovereign entity.\textsuperscript{128} The Act was “intended to provide support to tribal governments in the development of energy resources on Indian lands, . . . to provide incentives for partnership with tribes that want to develop their resources”\textsuperscript{129} and to “authorize individual Indians and tribal governments to enter into energy development leases or business agreements without Federal review. . . .”\textsuperscript{130} Although the statutory provision has not yet been implemented by agency regulation, it is likely that the Secretary of Energy, in conjunction with the Office of Tribal Energy, will soon take this step.\textsuperscript{131} At a minimum, the framework for the administration to take further action is readily available. For example, the Department of Energy has already indicated that, in regard to fulfilling the mandates of the Act, they are “very committed to government-to-government relationships.”\textsuperscript{132}

\textbf{Capable Institutions:} Capable institutions are the basis for sustained economic growth as well as the indispensable key to long-term community development. In order to be effective and accountable, institutions must have the ability and capacity to deliver programs and services to their own people. This means stability and the ability to make binding decisions in a timely fashion and a bureaucracy that can get things done.\textsuperscript{133} The strength of a nation’s institutions is often tied to energy. According to a recent study by Garrick Pursley and Hannah Wiseman, “[w]ithout abundant energy, economies do not move, progress slows, and inspiration stagnates.”\textsuperscript{134} Because of the legal obstacles in place against traditional energy development in Indian country, power may be a large part of the problem faced by tribal governments in more way than one. The implementation of solar projects in Indian country can help change this tide.

If implemented correctly, solar projects can be a rallying point, allowing tribes to come together collectively to pursue their own objectives in their own way, promoting cultural awareness and creating a self-image that has been missing in many communities for years. As tribes institute or take over the management and maturity of solar projects, they create a knowledgeable workforce of their own.\textsuperscript{135} If a tribe chooses a joint venture with an outside investor, the project can be structured to build tribal capacity over time, with a goal of creating tribal jobs at all levels of implementation and management. In addition, the joint venture might be planned to augment tribal responsibility, with the opportunity for tribal buy-out in the future. Education, technical training, and hands-on experience opportunities can be made available to tribal citizens in a way that supports conventional strategies of solar development as well as integrating the tribe’s traditional knowledge and the cultural norms of the community. In this way, tribes also are able to take control of decision making and institution making in their own way, teaching strategic use of
capital, location, resources, and other assets that make economic ventures sustainable and successful—in a manner that matches culturally.\textsuperscript{136}

For example, in May of 2008 Honor the Earth\textsuperscript{137} hosted a solar panel installation and training session at Little Earth of United Tribes, in Minneapolis, Minnesota.\textsuperscript{138} “Over 15 Native community members took part in the two day training that included workshops on conservation, wind and solar power.”\textsuperscript{139} This training session, intended to be the community’s first step toward building a renewable future, has already sparked the creation of the “Indigenous Green Jobs Task Force,” an advocacy group promoting “a green economy and green collar jobs in Minnesota’s Native communities.”\textsuperscript{140}

**Practical Sovereignty:** Of real benefit to tribes with solar developments is energy independence.\textsuperscript{141} In the past, outside investment in tribal energy resources have spawned promises of great economic success. But these projects have done nothing to advance tribal sovereignty: “tribes are consistently shortchanged in the deals, earning pennies on every dollar that goes to the mining firms and electric utilities whose operations are fully dependent upon the reservations. . . .90 percent of what tribes pay for their energy leaves the reservation.”\textsuperscript{142} This lack of an economic base makes it nearly impossible to reinvest in a tribe’s infrastructure. However, it is likely that federal, state, and local government’s energy policy shift from fossil fuels to renewable resources will provide the long-needed impetus for expansive policy changes concerning tribal energy resources. Tribally owned/operated solar energy developments “change the energy paradigm in Native communities from one of exploitation to one of equity . . . and from one that undermines the earth-based cultures of Indigenous peoples to one that nurtures cultural revitalization.”\textsuperscript{143} As an additional bonus, if a tribe chooses to invest in a power-generating plant on-reservation, the tribe will be insulated from the swell in costs of energy that has affected the global market participants where long-distance transportation is needed.

Tribes already have some of the framework available. In 1988, Congress enacted the Tribal Self-Governance Demonstration Project Act to allow tribes to “compact” with the federal government to receive block grants similar to those distributed in other areas of federal allocations. These grants allow tribes to receive a lump-sum from the federal government for all services that a tribe chooses to manage. Tribes can then reallocate funds across the range of services that they choose to administer. This means that, although there may still be many impediments to a tribe’s decision to provide its own services in its own way, where a tribe is providing services to its own people the federal government has made a commitment to step out of the way. By building the capacity and aptitude to further provide services to its people through a solar project, tribes are able to take full advantage of this policy.

**Cultural Match:** The tribes of North America are, and have always been, diverse. Although some tribes may share similar traits, there exists no such thing as
a monolithic pan-Indian culture. That being said, it is possible to “generalize somewhat, and to summarize common traits” when it comes to their relationship with the sun and its energy-creating capacities—whether it is for the production of crops, the signaling of weather change, how long to stay at sea for purposes of subsistence fishing, the movement of game, or as inspiration for entertainment. As one professor of international affairs has noted, “[i]t is ironic that [those who seek sustainable development] must rediscover principles that Native Americans . . . knew almost intuitively.” Until now, these principles were readily discounted as “a system of myths conceived by superstitious and irrational minds.” It has become apparent that Western energy economics may have been packed with myths of its own, the results of which have played a role in the current energy crisis. Consequently, tribes are finding themselves at the forefront of the renewable energy trend and are embracing alternative energy resources on their land.

Non-Native projects have failed in the past because local needs were not properly met. Understanding this threat, tribes are in a unique situation to address community participation and local-needs assessment in project design. Because of most tribes’ more localist approach, tribal officials, project funders, trainers, educators, maintenance personnel, technical operation staff, suppliers, engineers, architects, and project designers are more apt to meet community needs effectively and to contribute to local assessment efforts.

This is not to say that all tribes will be a perfect fit with solar power; rather, that if a tribe chooses to take this route because it matches with their vision of the future, solar projects are more likely to be successful in Indian country than elsewhere. Indeed, in a recent article by G. Pursley and H. Wiseman, the authors argue that insulated smaller governments are indeed the best match for the implementation of solar projects. This is because, in these areas, “renewables fit an energy production model that has existed for thousands of years; energy is consumed close to its source.” Further benefits noted by the article are that these governments are less likely to be targeted by utility and carbon fuel lobbies that resist a push for solar projects; state roadblocks can be bypassed; local governments are more likely to be more sensitive to local conditions (federal implementations lose this sensitivity at the deployment stage); and the great degree of variation from local decision making is likely to stimulate innovation in technologies—bringing local governments to the forefront of the “green energy” movement.

**Measures of Success**

Obama’s hopes of a “clean energy economy” will not be realized unless the current distribution of energy regulation is upset. Currently, state and federal governments have a virtual monopoly over the allocation of energy policy making and the regulation of alternative energy projects. This article has argued that
Native Nations have a very significant role to play in the transition to renewable energy. Further, the implementation of solar projects in Indian country constructs and sustains capable institutions, supports practical sovereignty, and matches culturally—and are thus very likely to be a kickstart to a sustainable economic development in Indian country.

Tribes traditionally have had difficult relations with states. In 1832 the Supreme Court established that tribes are “distinct communit[ies] occupying their own territory, . . . in which the laws of [the states] have no force.” State officials, however, often act under the assumption that states have jurisdiction and responsibility over all activities that occur in Indian country. Typically, the states’ contention is generated by land use policies for adjacent property, taxation, and unclear jurisdictional difficulties involving business and environmental laws. Siting, grid interconnection, and other land use concerns will likely fuel the state-tribal conflict if steps are not taken to eradicate the situation up-front. To truly empower tribal governments to exercise regulatory authority and discretion in the method necessary to realize the potential of solar projects in Indian country, the assumed power of state governments to preempt or interfere with tribal affairs must be eliminated—at a minimum in the context of energy regulation. This will likely necessitate explicit federal preemption. This preemption should be unique in that it should preempt states from interfering in tribal energy affairs but should not restrict those affairs. It would require an explicit federal recognition of tribal sovereignty again, at a minimum, in the context of energy regulation.

In other words, federal, state, and local governments need to view indigenous cultures as an asset, rather than an obstacle, to economic development. All too often the viewpoint is: “you are poor because your culture gets in the way.” However, as we have seen, this is not the case. Usually, a federal agency controls economic projects (or, at least, these projects are only approved if based upon a “Western model” of management). Typically, neither the economic design nor the asset management principles employed are based on Indian cultures. In result, if a project works, a large majority of revenues, benefits, employment, and profits derived from tribal resources go to external investors. If the project does not work, Native nations are left footing the bill. Native nations rarely have a say. In order to change the tide, the federal government must allow Native nations to develop their own projects, in their own way, using their own customs and traditions. In order to do this, federal agencies must go beyond the Administrative Procedures Act’s mandated public comment system and, instead, find substantive methods for tribal involvement in decision making. Although rarely actively asserted, “[t]he federal Indian consultation obligation arises from numerous federal statutes, regulations, and presidential orders; case law; and international legal norms,” and creates a trump card that tribes may play if the federal government fails to stop, look, listen—and hear—tribal concerns.
Tribes should not become dependent on federal funds for daily operations of the project. Funding dependency holds decision making and answerability hostage to the source of funds, making it difficult for tribal governments to pursue long-term strategic goals for a project. This will lead to project failure. Instead, tribes should use startup funds from other enterprises, such as gaming, that are already in place. Further, independent funding allows Native nations to take full advantage of their legal status—being exempt from federal and state income taxes, able to levy their own taxes on the projects, and having an exempt status from most state and federal economic regulation. Granted, because of the frustrating status of the tribal/corporate model and the situation of real property in Indian country, startup income is extremely hard to come by. Nonetheless, tribes should make efforts to wean themselves of federal funding as soon as possible, and look to alternative means of startup capital.

One of the largest obstacles that lies in the way of getting a solar project off of the ground is internal: “often dissent comes from community members who for political reasons do not want the project to proceed.” This type of vacillation pushes away potential investors, can undermine the project (sometimes before it even comes to fruition), and can lead to financial and political ruin. There are, however, steps that tribes can take to ameliorate this risk. In order to carry out the day-to-day operations of a solar project, an institution should include, in one form or another, the following. (1) Stability, meaning regulations and rules, should not be changed frequently and, if by chance they do need to be changed, they must change only by prescribed procedures. (2) There should be protection from political interference. Project managers who are familiar with the venture and who have only to benefit from the success of the project should make project decisions. (3) A dispute resolution mechanism should be set up in such a manner to take the politics out of project decisions, and should send an obvious message to citizens and outsiders that their investments and claims will be dealt with fairly. (4) Turning to reliability, the institution should be able to make management decisions reliably and effectively execute them. K. Grant and J. Taylor also have suggested the following: well-designated checks and balances, clear and predictable rules, staggered terms, civil service professionalism, and independent dispute-resolution mechanisms.

Tribal politics, by way of councils and chairs, can often get in the way of a tribe’s economic ventures. Often, when these situations arise, it is because the corporate structure has backpedaled into a muddle of politics and business, despite a strong beginning. But tribes can take organizational steps to assure that this does not take place. First, on the council and chair levels, tribes should set clear business objectives and focus intently on those objectives. Attempting to juggle different purposes and roles without the proper foundation will permit leadership to alter mandates as changes in personnel take place, resulting in a situation where nothing gets finished. This results in a situation where the rules of the game are
unstable—a place where nobody (i.e., investors, grant-approvers, leaders, entrepreneurs, joint-venture partners, etc.) would want to invest. Further, business objectives should be set in a manner that addresses long-term community goals, such as community cohesiveness and self-identification, rather than the immediate need for income and jobs. A fixed connection to a societal value or community priority can help reduce incentives for unproductive political intrusion. Tribes further should insist on transparency in all levels of council matters in order to ensure the trust that is necessary to prevent erosion of the corporate institution. On the corporate/management level, membership should include a mixture of insiders and outsiders where positive dissent is encouraged. In this way, objective guidance is more likely. Putting elected leaders on project boards is likely to weaken enterprise performance and should be done with caution, if at all.

Haphazardly implemented or designed solar projects will not succeed. Because solar is still a relatively new technology, tribes should take advantage of every feasibility model or study that is available to them in the hopes of finding a model that works with the tribe’s specific governmental structure and matches culturally. A recent World Bank/Global Environment Facility study may be a good place to start. The study addressed the implementation of domestic solar projects in rural communities across the world and concluded that in order to be successful, the following barriers universally needed to be addressed.

Lack of established market. Without an established market, many commercial firms are reluctant to enter the solar home system business and commercial financiers are uncertain about the profitability and viability of this type of business.

Lack of successful business models. As yet there are no clearly successful business models for delivery of solar home systems in developing countries, so any solar home system business is by nature experimental.

Lack of business financing. Solar home systems businesses may have difficulty obtaining business financing from commercial banks, which may be uncertain about the profitability of this type of business and may be unfamiliar with the technology.

Lack of business skills. Small solar home systems firms in developing countries may lack sufficient business skills for obtaining business financing, marketing, service, and management.

Unwillingness of utilities to provide off-grid electricity services. Without government regulation, utilities accustomed to servicing urban and rural grid-based electricity may be unwilling or unable to provide off-grid electricity services, such as with solar home systems, for a variety of reasons.

High transactions costs. Project identification may be expensive and time consuming, especially for urban-based PV companies or financiers. Numerous small-scale installations may make project implementation challenging. Pre-investments risks associated with the costs of marketing, contracting, and information collection may be high. Costs of credit collections may be high if customers live in very dispersed and remote areas.
High first cost and affordability. Solar home systems represent an initial capital investment that reduces or eliminates a stream of future payments for fuels and batteries. But the high “first cost” of this capital investment may make affordability an important constraint.

Lack of consumer financing. Credit can improve affordability but there may be a lack of credit access and credit delivery mechanisms. Financiers may perceive the credit-worthiness of rural households as insufficient. Lack of practical collateral or legal enforcement of contracts may inhibit financing.

Uncertain technological track record. There may be an insufficient technological “track record” to dispel misconceptions about the costs, benefits, and performance of solar home systems among users, financiers, and dealers. Experience may exist elsewhere, but must become accessible, visible, and credible to a specific locality.

Uncertain or unrealistic grid expansion plans. Unrealistic political promises for future electric grid expansion can reduce demand for solar home systems if households believe “the grid is coming.” But such promises may lack substance or financial backing. The lack of coordination between solar home systems market development and rural electrification programs and policies can impair markets.

Other policy constraints. Conventional-fuel subsidies, inappropriate tariff structures, import duties for renewable energy equipment, lack of attention to environmental externalities, and other policy conditions can be serious obstacles.

Lack of objective market, business, and quality information. Information may be lacking about the financial condition and business track record of entrepreneurs, or about the technical characteristics and quality of their systems. Market information may be needed about potential households, their incomes, their interest in solar home systems, and their current expenditures on candles, kerosene, and other forms of energy. Information about solar resources may also be lacking.\(^{192}\)

This is not to say that the barriers are insurmountable. In fact, as we have seen, many of these obstacles are already being addressed by the federal government, while others place tribes in a comparative advantage. What is necessary, however, is that tribes choosing to implement a solar project take a proactive position on these issues in order to assure that the advantages available are utilized to their full potential, and, likewise, that the disadvantages are minimized. Indeed, with this criterion in mind, it is important that tribal governments design their own energy plans.\(^{193}\) This allows tribes themselves to set the stage for success—evaluated on the basis of their own criteria.\(^{194}\) Only when long-term plans are in place do projects become sustainable on reservations.\(^{195}\) Thus, it is essential that tribes pay ongoing and prior attention to the power and structure of their energy management system.\(^{196}\) This should include an assessment of both the internal and external markets, as well as the overall cultures and norms of the community.\(^{197}\) These plans likely will include cooperative agreements with off-reservation parties, reducing conflict and increasing government-to-government consultation, while at the same time “acknowledging the sovereign powers of the on reservation government.”\(^{198}\) In exercising their sovereignty, tribes should analyze their current culture and past traditions in order to decide what type of business model to implement, as these
projects can be entrepreneurial, collective, or both.\textsuperscript{199} For example, the Mississippi Choctaw’s strategy of establishing community-owned businesses flows from a long history of such economic organization.\textsuperscript{200} Likewise, the Salish and Kootenai Tribes have cared deeply about the environment and have comported themselves in a way to manage such assets from time immemorial.\textsuperscript{201} However, some tribes, like the Crow Nation of Montana, have histories rooted in entrepreneurial self-sufficiency and individual economic decision making and planning.\textsuperscript{202} The models that flow from these organizations can range from large native Nation-owned corporations formed under tribal LLC codes that supply energy to the grid\textsuperscript{203} to individual solar entrepreneurs.\textsuperscript{204} Whatever type of project the tribe chooses to implement, the economic model that it opts for should match culturally.

\textit{Conclusion}

Only time will tell whether the Obama administration’s shift in energy priorities will provide an impetus for long-needed changes involving American Indian law and policy. What tribal attorneys, council members, and federal entities charged with the promotion of tribal interests can be sure of, however, is that the opportunity for economic development via the implementation of solar projects is ripe. In 2009-2010, the global economy is facing a tough fiscal course. Now is the time for federal and state policies to integrate tribal economies and resources into the equation, expanding and developing opportunities to create revenue and jobs in a sustainable manner. Tribes and governmental agencies should keep a keen eye turned toward tribes like the Jemez Pueblo, the Augustine Band of Cahuilla Indians, the Oglala Sioux, the Navajo and Hopi Nations, and the Rincon Indian Band of Mission Indians, who are implementing these solar projects. In this way, developers and policy makers may gain a sense of what works, what needs improvement, and what model of development may work for them. Most importantly, it is essential for tribes that resolve to pursue a solar project to become active in the federal bureaucratic process and \textit{vigorously} assert their sovereignty by insisting that these projects come to fruition. As Dean Suagee has noted,

\begin{quote}
\textsuperscript{205} since the marketplaces in which energy goods and services are bought and sold have been shaped by governmental policies, unless tribal governments plan and implement policies to ensure tribal communities participate in the green energy revolution, I am afraid they will get left out.
\end{quote}

Solar projects on tribal lands present an opportunity to seize the day when it comes to the “green energy revolution” as well as an opportunity to diversify a tribe’s investment portfolio and assure development that is \textit{sustainable}—both environmentally and economically. Tribes should take steps to assure that they are not left out.
NOTES

Editorial advisory: The citation system used here follows the accepted legal style.


4This was done in response to Secretarial Order No. 3285, Secretary of the Interior (March 11, 2009), available at http://solareis.anl.gov/documents/docs/soenergy.pdf.


7A recent study by Cornell and Kalt reveals why the commitment to Native American economic development through self-determination policies has thrived – with support from both the political left and the political right – in the past forty years. See Stephen Cornell & Joseph P. Kalt, “American Indian Self-Determination: The Political Economy of a Policy that Works,” (HKS Faculty Research Paper Series, John F. Kennedy School of Government, Harvard University, Working Paper No. RWP 10-043, 2010). In recent years, however, as many tribes have become successful, the political right has abandoned much of their support for self-determination policies in favor of a “special rights” mythology. See id. at 27 (“We might well predict that the next change to Republican control of the U.S. Congress will signal an end to policies of self-determination.”); Courtenay W. Daum & Eric Ishiwata, From the Myth of Formal Equality to the Politics of Social Justice: Race and the Legal Attack on Native Entitlements, 44 Law & Soc’y Rev. 843, 844 (“[C]onservative activists have reframed equality to support their claim that … native entitlements bestow special rights on the basis of racial categorization, an act they alleges is unconstitutional[,] using the myth of a single playing field…. .”).

8This includes Larry Echo Hawk as Assistant Secretary of the Interior for Indian Affairs; Yvette Roubideaux as Director of the Indian Health Service; Mary Smith as Assistant Attorney General for the Department of Justice; Hilary Tomkins as Solicitor of the Department of Interior; Jodi Gillette as a member the White House Intergovernmental Affairs staff; Kim Teehee as White House Domestic Policy Council; and Wizipan Garriott as the Administration’s First Americans Public Liaison, just to name a few.


21See *id.* (“Perhaps like trying to impose a monarchy on the United States today, foreign systems of government in Indian country have generally lacked legitimacy and support—and therefore effectiveness.”).


24See e.g. California Valley Miwok Tribe v. U.S., 515 F.3d 1262, 1263 (D.C. Cir. 2008) (stating that “it has been a bedrock principle of federal Indian law that every tribe is ‘capable of managing its own affairs and governing itself.’... But tribes that want federal benefits must adhere to federal requirements. The gateway to some of those benefits is the Indian Reorganization Act of 1934.”) (internal citations omitted).

26 Cornell & Kalt, supra note 17, at 451.

27 STATE OF NATIVE NATIONS, supra note 20, at 19.

28 Id.

29 Stephen Cornell & Joseph P. Kalt, Two Approaches to the Development of Native Nations: One Works, the Other Doesn’t, in REBUILDING NATIVE NATIONS: STRATEGIES FOR GOVERNANCE AND DEVELOPMENT 14 (Miriam Jorgensen, ed., 2007) [hereinafter Two Approaches].

30 See e.g. Confederated Tribes of Chehalis Reservation v. Thurston County Bd. of Equalization, Slip Copy, 2010 WL 1406524 (W.D. Wash.).

31 Cornell & Kalt, Two Approaches, supra note 29 at 15.

32 Id. at 22.

33 Id. at 21.

34 Id.

35 Id.

36 Id.

37 Id.

38 Id. at 30.


41 Id. at 1301; but see Duane Champagne, Tribal Capitalism and Native Capitalists: Multiple Pathways of Native Economy, in NATIVE PATHWAYS: AMERICAN INDIAN CULTURE AND ECONOMIC DEVELOPMENT IN THE TWENTIETH CENTURY 308, 309 (Brian Hosmer & Colleen O’Neill, eds., 2004) (defining “tribal capitalism” as an approach to development that seeks a balance between “community and cultural protection and the enhancement of tribal sovereignty” on one side of the scale, and “material gains” on the other).


State of Native Nations, supra note 20, at 13. Cornell and Kalt define “culture” as “1) the cognitive paradigms through which people define and communicate the proper and the possible, and 2) the corresponding informal norms and implicit contracts by which groups of people reward and penalize each other for the group-affecting behavior they engage in.” Cornell & Kalt, supra note 17, at 453.

State of Native Nations, supra note 20, at 372.


Jacqueline Johnson, Defending Tribal Sovereignty, in State of Native Nations, supra note 20, at 373.

State of Native Nations, supra note 20, at 13.


Id. at 36.

Id.


Indigenous Peoples’ Global Summit on Climate Change, Thematic Sessions, http://www.indigenoussummit.com/servlet/content/Thematic%20sessions.html (last visited March 23, 2010); State of Native Nations, supra note 20, at 179, 188.


Id.


Id.

Id.


See generally Judith Alazraque-Cherni, Renewable Energy for Rural Sustainability in Developing Countries, 28 BULL. SCI. TECH. & SOC’Y 105 (2008).

Richard L. Ottinger & Rebecca Williams, Renewable Energy Sources For Development, 32 ENVTL L. 331, 333 (2002); see also Howard A. Lerner, Cleaning, Greening, and Modernizing the Electric Power Sector in the Twenty-First Century, 14 TUL. ENVTL. L.J. 277, 279 (2001) (noting that “the cost of clean renewable energy is also plummeting as ... solar power technologies have improved dramatically.”).

Ottinger & Williams, supra note 70 at 338.


De Groot, supra note 72, at 163.


Nandwani, supra note 72, at 689.

Pub. L. Nos. 95-617 to 95-621, 92 Stat. 3117-3411 (codified as amended in scattered sections of 5, 12, 15, 16, 19, 23, 26, 31, 33, 40, 42, and 49 U.S.C.); see also CRC HANDBOOK OF ENERGY EFFICIENCY 671 (Frank Kreith & Ronald E. West eds., 1997).


Under the National Energy Act’s Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered sections of titles 15, 16, 30, 42, and 43), utilities must conserve electricity, use energy resources efficiently, and encourage equitable rates. Congress granted the Federal Energy Regulatory Commission (FERC) the authority to implement these requirements through regulations. 16 U.S.C. § 824(a) (1988). FERC then passed these responsibilities on to the states, who pass them to local utility commissions. See id. at §824(b)(1). U.S. public utility commissions require that utilities meet customer demands at all times.

Joseph P. Tomain, The Past and the Future of Electricity Regulation, 32 ENVTL. L. 454-55 (2002). In other words, independent producers can use the traditional utility’s lines to get into the grid, at no disadvantage. Id.

See generally Kalis, supra note 80.

Indigenous Peoples’ Global Summit on Climate Change, supra note 57.


92 NATIONAL WILDLIFE FEDERATION, supra note 90, at 16.


96 See Ottinger & Williams, supra note 70, at 349 (noting that RPS laws have been implemented in Arizona, Connecticut, Maine, Massachusetts, Nevada, New Jersey, Texas, and Wisconsin – as well as the UK, Denmark, Germany, and Japan); Fershee, supra note 93, at 52 (noting that over “twenty-five states and the District of Columbia have RPS programs in place, including the nations three most populous states: California, Texas, and New York.”).

97 Fershee, supra note 93, at 52, 77.

98 See Richard Ottinger & Mindy Jayne, Global Climate Change Kyoto Protocol Implementation: Legal Frameworks for Implementing Clean Energy Solutions, 18 PACE ENVTL. L. REV. 19, 86 (2000) (... noting that “energy savings are so compelling that they should be undertaken just to save money, regardless of whether the scientific community is right about the risks of global warming.”).


101 A Section 17 corporation is a federally chartered corporation, under 25 U.S.C. § 477. Under a Section 17 corporate umbrella, the tribal corporation becomes a separate legal entity from the (section 16) governmental entity. The tribal corporation has the powers to contract, to pledge assets, and to be sued. However, Section 17 corporations are disadvantageous in that they do not allow the flexibility to create subsidiary corporations; all contracts, leases, and loans are subject to BIA oversight and approval; the charter’s “sue and be sued” clause has been interpreted to waive tribal sovereign immunity; and the corporate charters cannot be amended without BIA approval. Eric F. Facer, Taxation Issues, in THE GAMING INDUSTRY ON AMERICAN INDIAN LANDS at 205, 210-12 (PLI Corporate Law & Practice, Course Handbook Series No. B4-7077, 1994).

102 These corporate forms are preferable to state chartered corporations, where state property taxes may apply. See Confederated Tribes of Chehalis Reservation v. Thurston County Bd. of Equalization, Slip Copy, 2010 WL 1406524 (W.D.Wash.) (holding that a casino enterprise, with 49 percent outside ownership, must pay state property taxes). The ability to collect those taxes, however, is in question. See Oneida Indian Nation v. Madison County, 05-6408-cv (L); 06-5168-cv (CON); 06-5515-cv (CON) (2nd Cir. Apr. 27, 2010) (holding that while a tribe might owe taxes in some instances, the courts have no ability to enforce collection remedies).
Tribal Energy Self-Sufficiency Act and the Native American Energy Development and Self-Determination Act, Hearing Before the Comm. on Indian Affairs, 108th Cong. 144 (2003) (statement of Affiliated Tribes of Northwest Indians – Economic Development Corporation) (noting that tribes “have always had siting decisions on tribal lands.”) [hereinafter TESSA Hearing]. However, if a tribe chooses to connect into the grid, in order to sell excess energy, FERC’s interconnection rules will likely apply. See Rusty Haynes & Chuck Whitaker, Connecting to the Grid: A Guide to Distributed Generation Interconnection Issues (5th ed., 2007).


See Robert D. Khan, Siting Struggles: The Unique Challenge of Permitting Renewable Energy Power Plants, 13 ELECTRICITY J. 21 (2000) (arguing that “renewable developers have a more difficult time securing their permits than fossil fuel project developers have obtaining theirs.”).

Id. at 23.

Id. at 26-29.


Memorandum from the Director of the Bureau of Land Management to all Field Officials, Solar Energy Development Policy, Instruction Memorandum No. 2007-097 (Apr. 4, 2007).
Id.; see also BUREAU OF INDIAN AFFAIRS, NEPA HANDBOOK 8 (2005).


119 Taylor, supra note 115.

120 About Tribal Energy Resource Agreements, http://teeic.anl.gov/aboutter/a/index.cfm (last visited Apr. 12, 2010); see also STATE OF NATIVE NATIONS, supra note 20, at 165 (discussing the advantages of the TERA).

121 VINE DELORIA, JR., CUSTER DIED FOR YOUR SINS: AN INDIAN MANIFESTO 142 (1969).


123 Id.

124 Id.

125 Id.


129 TSSA Hearing, supra note 127 (statement of Senator Daniel K. Inouye, Vice Chairman, Comm. of Indian Affairs).

130 Id. (statement of Theresa Rosier, Counselor to the Assistant Secretary for Indian Affairs, Department of the Interior).


132 TESSA Hearing, supra note 103, at 78 (statement of Craig Thomas, U.S. Senator from Wyoming).


Alyce S. Adams, Andrew W. Lee, & Michael Lipsky, Governmental Services and Programs: Meeting Citizens’ Needs, in Rebuilding Native Nations: Strategies for Governance and Development 240-41 (Miriam Jorgensen, ed., 2007); Stephen Cornell, Miriam Jorgensen, Joseph P. Kalt, & Katherine Splide Contreras, Seizing the Future: Why Some Native Nations Do and Some Don’t, in Rebuilding Native Nations: Strategies for Governance and Development 310-11 (Miriam Jorgensen, ed., 2007) [hereinafter Seizing the Future]. This is not to say, though, that tribes should be insular in all aspects of governance. See Cornell & Kalt, supra note 17, at 462 (noting that, in some instances, “insularity of the tribe seems to have a negative effect on economic growth.”).

STATE OF NATIVE NATIONS, supra note 20, at 121.

See Honor the Earth, 2008 Annual Report 21 (2009) (“Honor the Earth is a project of the Tides Center, a non-profit 501(C)(3) that provides human resource and financial management and administration.”).

Id. at 25; see also e.g. De Groot, supra note 72, at 166 (discussing a similar education program in Africa); Debby Tewa, Native Sun: Solar Power and the Southwest Sun (June 27, 2009), available at http://www.nmai.si.edu/motherearth/2009/files/DeborahTewa.pdf (discussing a similar education program in Southwest Arizona).

Honor the Earth, supra note 137, at 25.


Honor the Earth, supra note 137, at 31.


See Travis Hudson, Georgia Lee, & Ken Hedges, Solstice Observers and Observatories in Native California, 1 J. Cal. & Great Basin Anthropology 38 (1979).

Williamson, *supra* note 144, at 303.


Williamson, *supra* note 144, at 303; Rebecca Adamson, *Indigenous Economics: Ancient Knowledge Inspires Economic Reform of Capital Markets*, *The Canadian*, Jul. 1, 2009; but see Indigenous Peoples Global Summit on Climate Change, *supra* note 57 (“Too often attempts to compare and contrast traditional ecological knowledge... with scientifically acquired data imply that the Indigenous people’s way of knowing is inadequate in contrast with science.”).


See generally Pursley & Wiseman, *supra* note 139.

*Id.*

*Id.*

*Id.*

See *e.g.* U.S. v. Kagama, 118 U.S. 375, 384 (1886) (“Because of the local ill feeling, the people of the states where they are found are often their deadliest enemies.”).


31 U.S. at 520.

State of Native Nations, *supra* note 20, at 70.

*Id.*

Cornell & Kalt, *Two Approaches, supra* note 29, at 12.

Adamson, *supra* note 150.

*Id.*

*Id.*

See Cornell & Kalt, *Two Approaches, supra* note 29, at 9 (noting that “in general, where there is a match between the approach a tribe pursues and the social organization and culture of the tribe, the odds of successful development increase.”).


See generally Gavin Clarkson, *Accredited Indians: Increasing the Flow of Private Equity Into Indian Country as a Domestic Emerging Market* (University of Michigan Law Sch., John M. Olin Center for Law & Econ. Working Paper Series, Working Paper No. 82, 2008), available at http://law.bepress.com/uminich/wps/olin/art82 (noting that because tribes are not explicitly mentioned in the list of allowable accredited investors, tribes, as corporate entities formed under state, federal, or tribal law, are still excluded “from all sorts of investment opportunities, including private equity funds.”).


Cornell, Jorgensen, Kalt, & Spilde, *Seizing the Future*, *supra* note 135, at 297. Financial transaction experts have suggested, for example, the tribal adoption of a secured transaction code as an element of a tribe’s program to encourage the availability of consumer and commercial credit. See Bruce A. King, *The Model Tribal Secured Transactions Act and Tribal Economic Development*, 61 CONSUMER FIN. L.Q. REP. 804 (2007). The Lummi Tribal Nation and Tulalip Tribes of Washington State have already incorporated secured transaction laws into their tribal codes. A copy of the Model Tribal Secured Transactions Act is available at www.nccusl.org.

Interview with Andrew Moore, Project Director, T’Sou-ke Nation, in Sooke, B.C. (Nov. 12, 2009); see also Tyler Hamilton, *Burn or Turn?*, *Toronto Star*, Dec. 5, 2009, available at http://www.thestar.com/printarticle/734281 (noting that convincing the Navajo to switch to a renewable energy plan has been “a hard sell” because the “Navajo tribal council continues to be obsessed with its coal prospects.”).

Cornell & Kalt, *Two Approaches*, *supra* note 29, at 23.


Grant & Taylor, supra note 178, at 186.

Id. at 187.

See Robert J. Miller & David D. Haddock, Can a Sovereign Protect Investors from Itself? Tribal Institutions to Spur Reservation Investment, 8 J. Small & Emerging Bus. L. 173, 201-02 (2004) (finding that new elections can cause such extreme changes in tribal economic policies that a tribal council may work against investors it had once worked with – and vice versa. When this occurs, both Indian and non-Indian investment in Indian Country is chilled).

Cornell & Kalt, Sovereignty and Nation-Building, supra note 179, at 196-97.

Grant & Taylor, supra note 178, at 187.

Id. at 188.

Id. at 188-89.

Taiiaake Alfred, Peace, Power, Righteousness: An Indigenous Manifesto 65 (1999) (noting that Native nations today “are so polarized between Indian and white that no one dares criticize an Indian leader publicly, so we let them get away with murder.”).

Grant & Taylor, supra note 178, at 190.

Removing business from direct council control is associated with a fourfold improvement in profitability rates. Cornell & Kalt, Reloading the Dice, supra note 177, at 26-27.

Ferrey, supra note 99, at 541.


Id. at 21.


Cornell & Kalt, Reloading the Dice, supra note 177, at 5.
Id. at 12.

Id.


*Sate of Native Nations*, *supra* note 20, at 105. Good examples of land-use planning in other areas are the Swinomish Cooperative Land Use Program, the Gala River Indian Community’s Use Planning Department, the Confederated Salish and Kootenai Tribes of The Flathead Reservation’s Use-Plan, and the Navajo Nation’s grazing rights arrangements. *Id.*, at 105-06.

See generally *Champagne*, *supra* note 41.


*Id.*


This type of economic organization seems to be the predominant model among Native Nations – which is beneficial to many tribes, considering the legal advantages available to tribes who organize in this manner. See *Champagne*, *supra* note 44, at 60 (noting that “Native communities tend to share similar holistic understandings of the cosmos. Consequently, tribal capitalism, rather than individual entrepreneurship embodies Native cultural understandings and preferences.”). One example of such a project, although yet to be fully implemented, is Native Spirit Solar Energy, a tribal LLC made up of a confederation of Southwest tribes. See Southwest Tribal Energy Consortium, Renewable Energy Feasibility Study Leading to Development of the Native Spirit Solar Energy Facility: Final Report (2008), http://apps1.eere.energy.gov/tribalenergy/pdfs/morongo06final.pdf (last visited Mar. 22, 2010).


Suagee, *supra* note 193.