







**ENERGY EFFICIENCY: Using Less, More Wisely**

## Warming trend slowly alters Arctic way of life

Small text block containing a news article snippet, partially obscured by the cartoon's elements.



6-3-05 PHILADELPHIA MORNING NEWS. UNIVERSAL PRESS SYNDICATE.

When it comes to Global Warming,  
the World's Indigenous Peoples ...

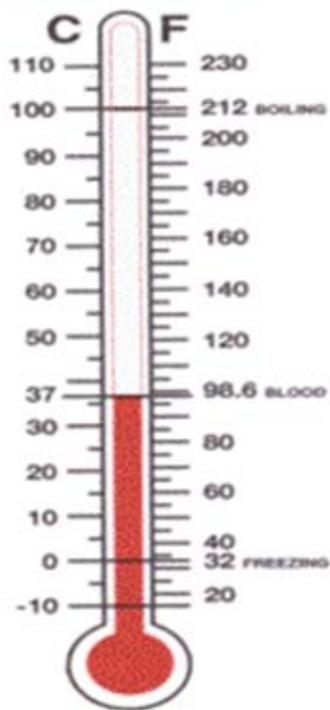


... are the First and Worst Hit,  
And responsible for none of it!!

## CLIMATE CHANGE 101:

Almost all living beings on the Earth flourish where they do because of the daily, seasonal and annual range of temperature and humidity.

Thermometer Comparisons



**Temperature: How Hot and Cold?**



**Humidity: How Wet and Dry?**

NATIVE PEOPLES-NATIVE HOMELANDS  
CLIMATE CHANGE WORKSHOP

- Final Report -  
Nancy G. Maynard, Editor

CIRCLES OF WISDOM

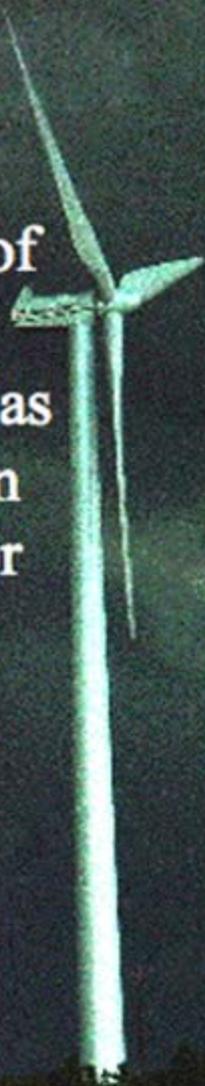


U.S. Global Change Research Program

OCTOBER 28 - NOVEMBER 1, 1998  
Albuquerque Convention Center  
Albuquerque, New Mexico

Sponsors:  
The National Aeronautics and Space Administration  
American Indian Chamber of Commerce of New Mexico  
City of Albuquerque

“Entering the 21st century, a prime Native strategy encourages the development of sustainable homeland economies to ensure survival as Nations and for the restoration of a more balanced climate for Mother Earth. The Strategy includes the protection of naturally diverse ecosystems and the use of renewable energy technologies.”



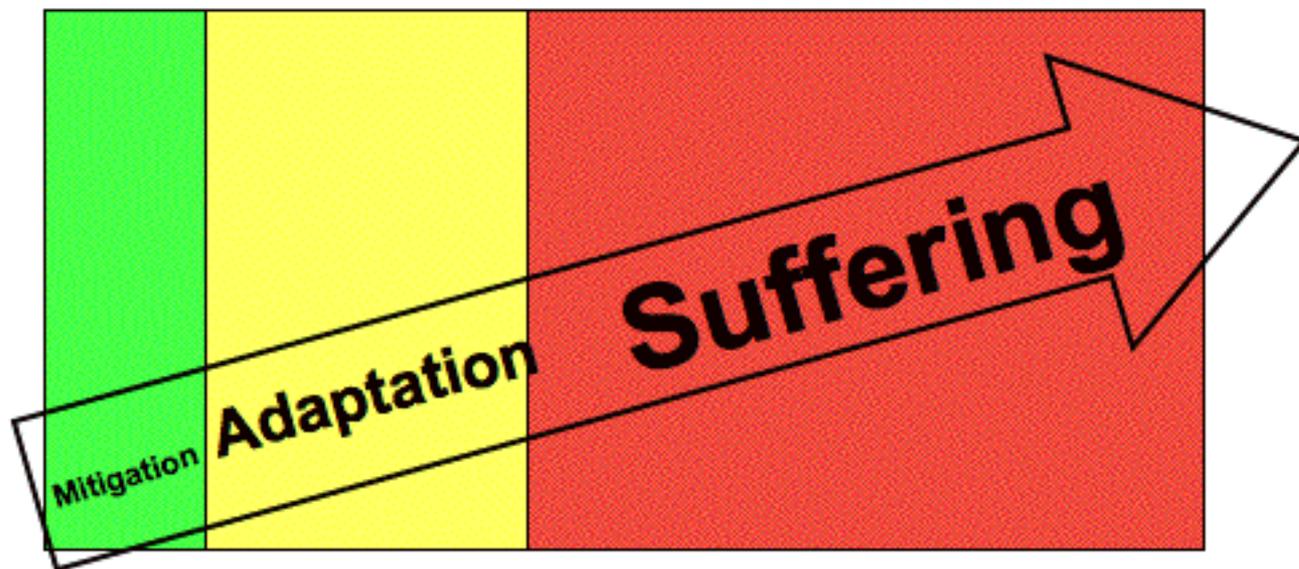
[www.usgcrp.gov/usgcrp/Library/nationalassessment/native.pdf](http://www.usgcrp.gov/usgcrp/Library/nationalassessment/native.pdf)

[www.EnergyIndependenceDay.org](http://www.EnergyIndependenceDay.org)



Intertribal Council On Utility Policy

# GLOBAL WARMING: THREE CHOICES



**Go slow ... Business As Usual Scenario**

“We basically have three choices: **mitigation, adaptation and suffering**. We are going to do some of each. The question is what the mix is going to be. The more mitigation we do, the less adaptation will be required and the less suffering there will be.”

John Holdren

Intergovernmental Panel on Climate Change (IPCC)

Meeting in Paris, January 2007:







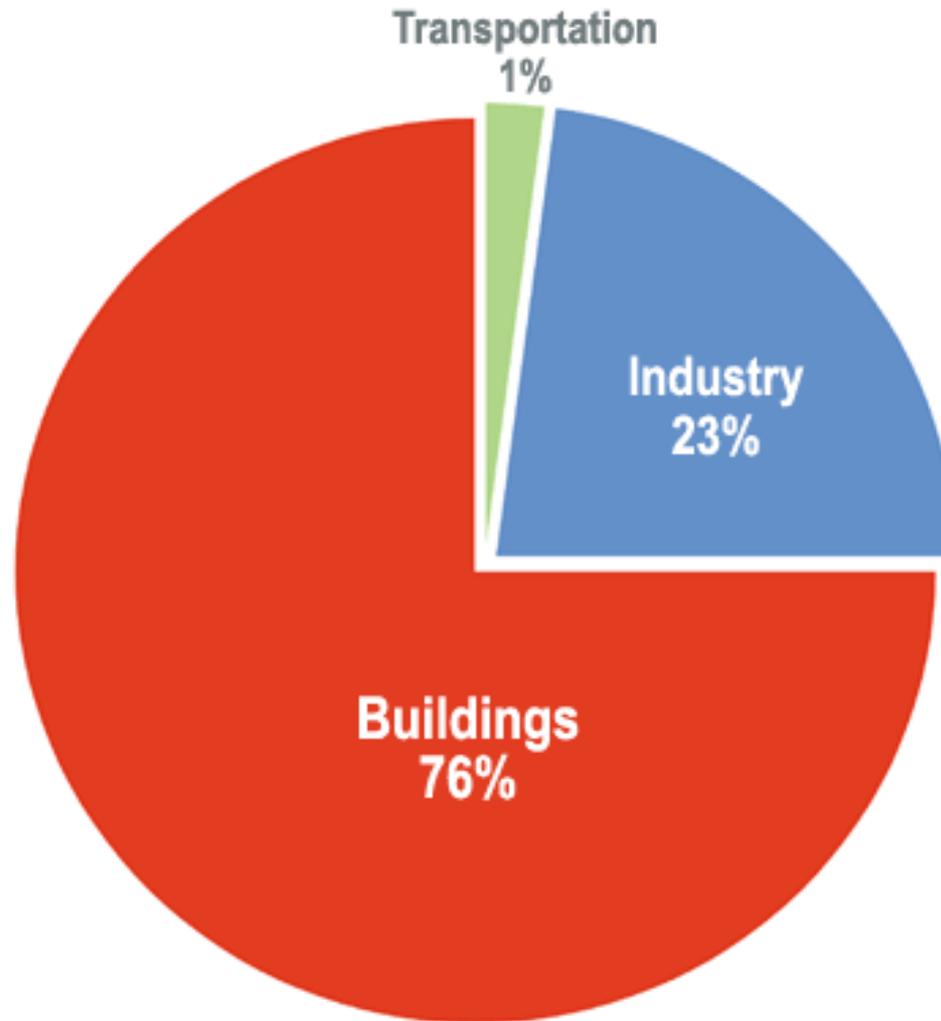
***Conservation + Energy Efficiency =***  
**NEGA-WATTS:**

**The Cheapest Form of Energy  
Is The Energy You Don't Use**

**The Road Forward:  
Energy Efficiency *and* Renewable Energy**



# Where does our electricity go?



# Nature's **Gold**: Shining, Baled and Blowing! Solar, Straw Bale and Wind Opportunities for Community and Economic Development in Indian Country



*Meeting Indian Country's Employment, Energy  
and Housing needs in a Climate Friendly Way!*

*Tribal communities increasingly depend upon carbon intensive energy and unhealthy building materials, but can again become more self-sufficient with greater use of local labor, healthier materials and clean natural resources and for energy and housing.*

# Cultural Traditions of Self-Constructed Housing of Natural Materials



Reconstructed  
Traditional Mandan  
Earthen Lodge

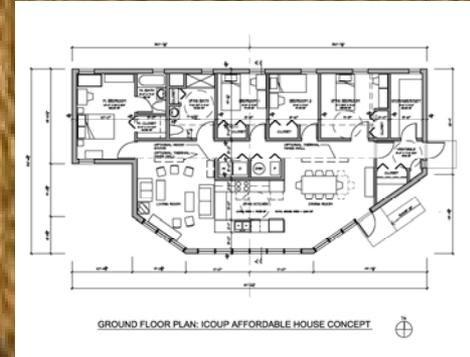
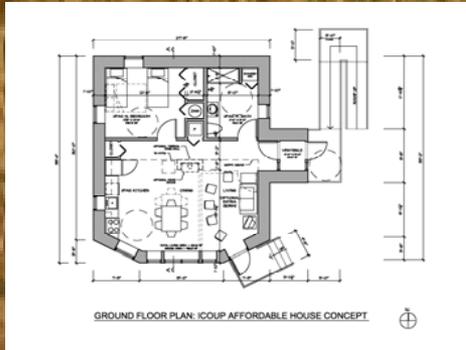
Traditional Plains  
Style Canvas Tipi



# **Conditions Are Ideal for Using Strawbale for Building Construction on Many U.S. Indian Reservations**

- Semi-arid climatic conditions on Northern Great Plains are ideal for construction and long-term maintenance of strawbale buildings**
- Great Plains Reservations are located in rural North American pasture & grain belt (Strawbale construction techniques originally developed in Nebraska)**
- Seasonal temperature swings of over 150 degrees F require housing designed for significant heating and cooling to maintain acceptable levels of comfort**

# Conditions Are Ideal for Using Strawbale for Building Construction on Many U.S. Indian Reservations



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# R VALUE COMPARISON

**Log Walls:**

**R 1.41 per inch**

**8" Wall x 1.41 = R 11.28**



**Straw Bale Walls:**

**R 2.1 per inch**

**18" Wall x 2.1 = R 37.8**



# HOUSING AT OGLALA



Over 900 mobile homes are located in Shannon County alone, with 73 in the Community of Oglala, representing about 1/3 of the occupied housing structures in the community, with 54 of the trailers originally located in the FEMA trailer park. Residents have reported “that the FEMA trailers which replaced the demolished homes of the recent tornado victims have very thin walls and are difficult to heat.”

# Home on the Range on Great Plains

One Hundred and Fifty Degree (150°)  
Seasonal Temperature Swing

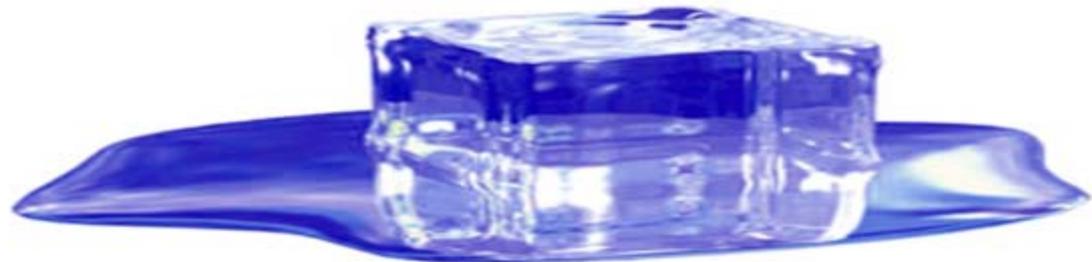
**Summer Highs**

**120°**

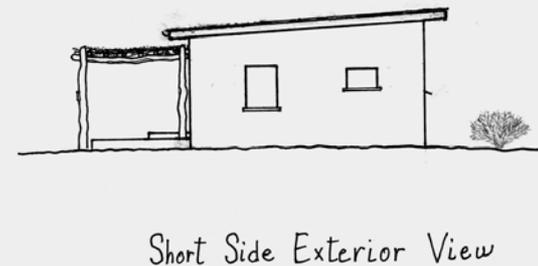
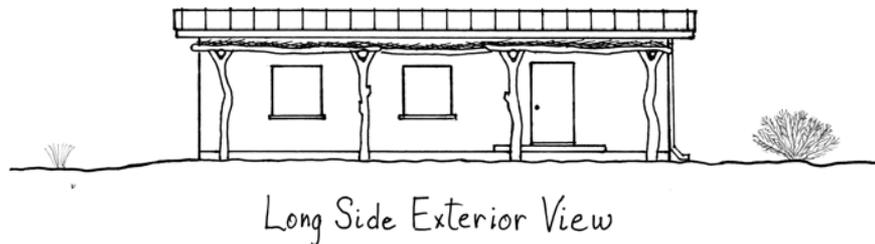
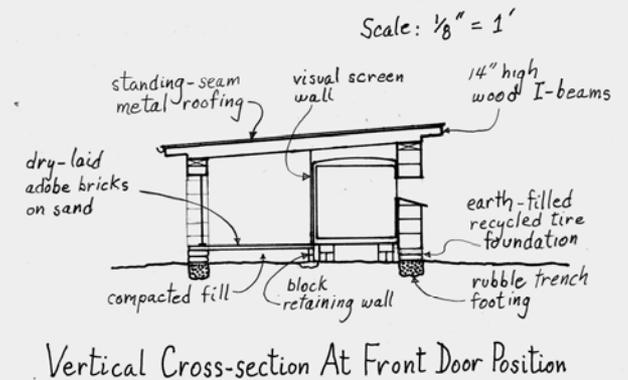
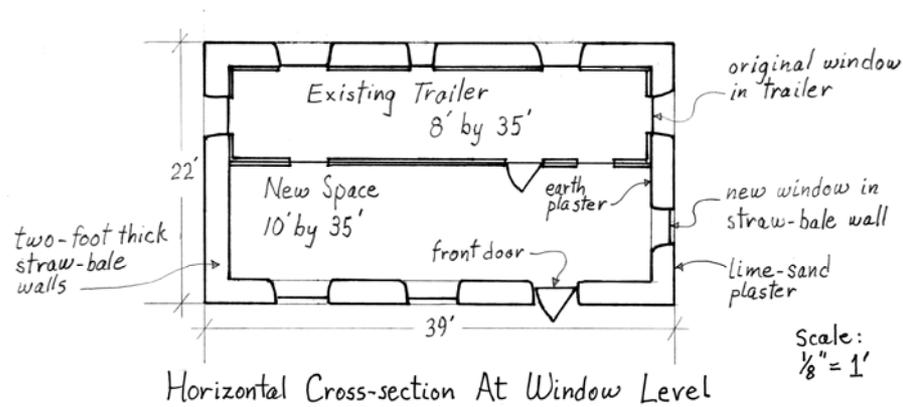
**Comfort Range:** — — 80°  
— — 60°

**Winter Lows**

**-30°**



# Trailer Wrap Design







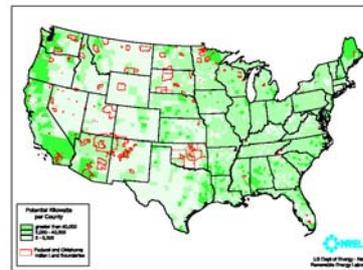
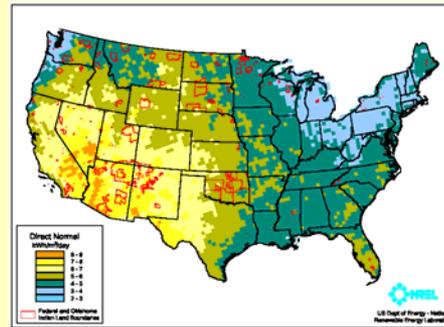
# TRIBES HAVE A WEALTH OF RENEWABLE RESOURCES

SR/CNEAF/2000-01  
April 2000

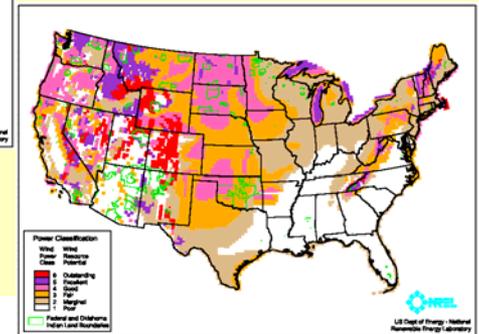
## Energy Consumption and Renewable Energy Development Potential on Indian Lands

This publication is available on the Web.  
(See instructions on inside title page.)

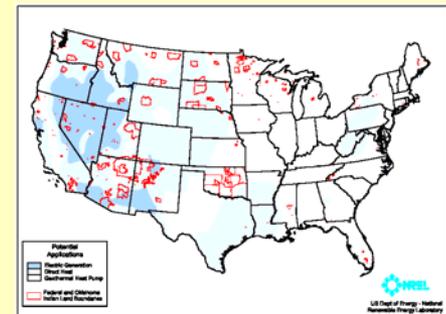
[www.eia.doe.gov](http://www.eia.doe.gov)  
**Energy Information Administration**



## Wind



## Geothermal



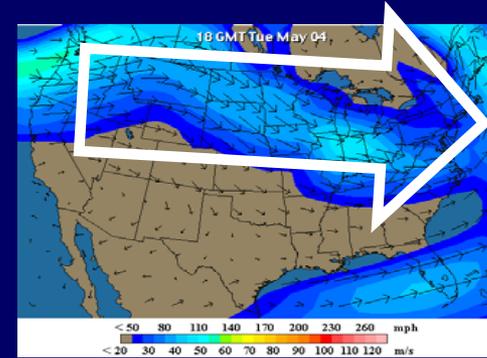
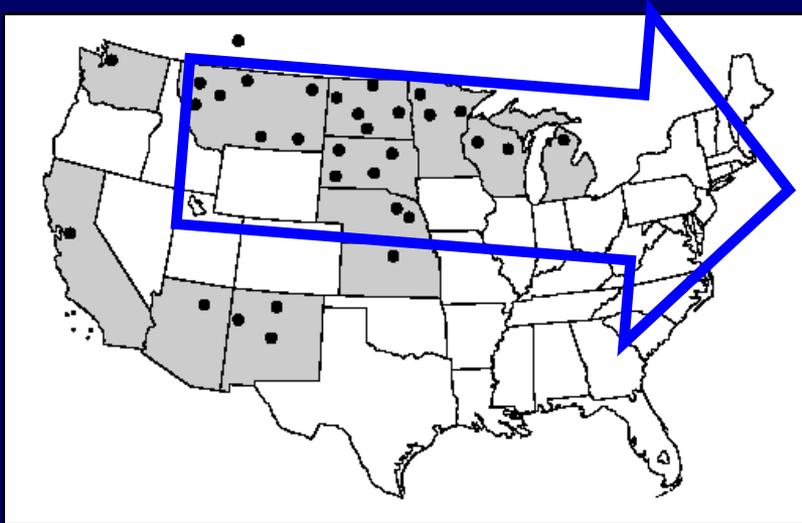
<http://www.eia.doe.gov/cneaf/solar.renewables/page/pubs.html>



[www.EnergyIndependenceDay.org](http://www.EnergyIndependenceDay.org)

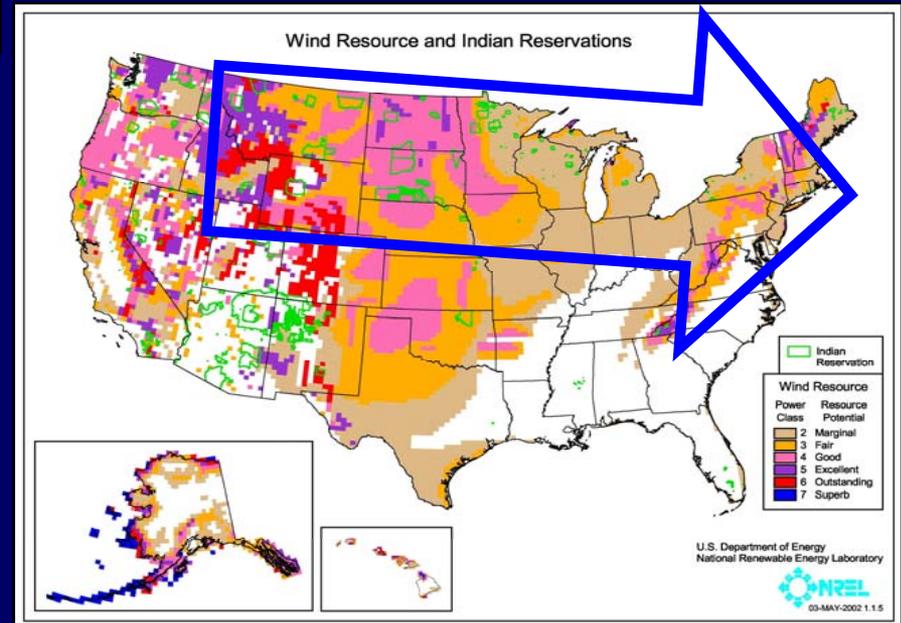
**Intertribal Council On Utility Policy**

# Tribal Colleges and Wind Resources



## Prevailing Windshed

- Climate/Natural Resource monitoring training/projects
- Meteorological Data Centers
- Wind Development Training courses for Reservation job creation and employment
- Wind Forecasting along the Windshed for value-add firm power sales into the market



QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

“The most environmentally sound, inexpensive and reliable power plant is the one we don’t have to build because we’ve helped our customers save energy.”

Jim Rogers, COE of Duke Energy

... Just a nice green sound bite or practical utility planning?

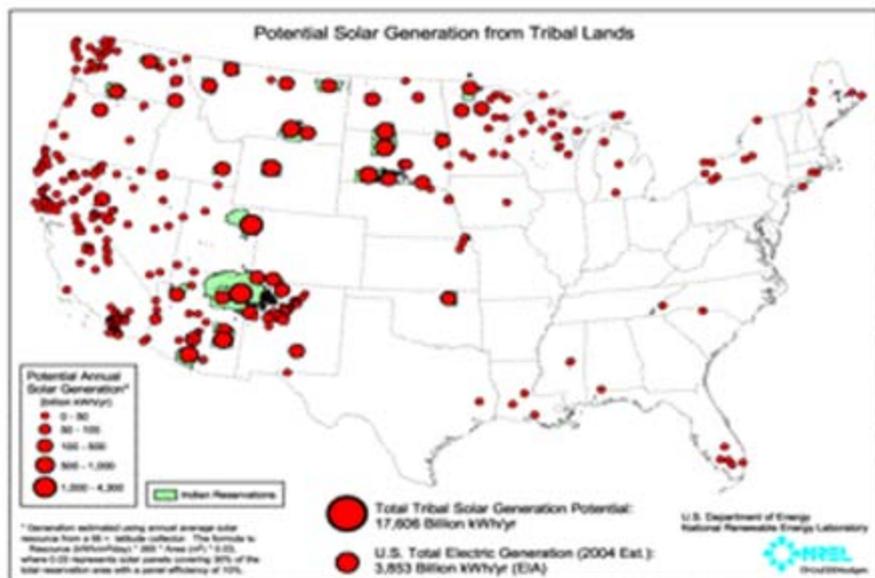
# GREAT RIVER ENERGY Withdraws from BIG STONE II

The four announced reasons for Great River Energy's withdrawal for the Big Stone II coal power plant are economically and environmentally prudent:

- 1) A lower electric demand than originally projected,
- 2) Dramatically increased project costs,
- 3) New state energy conservation and renewable energy requirements, and
- 4) Need for reduction of carbon dioxide and consideration of environmental impact.

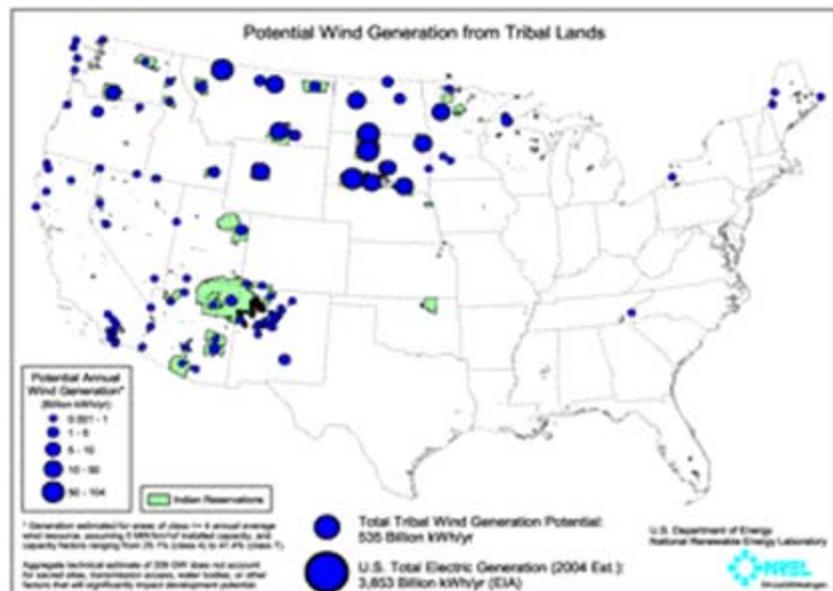
# Tribal Renewable Energy Resources

## Solar



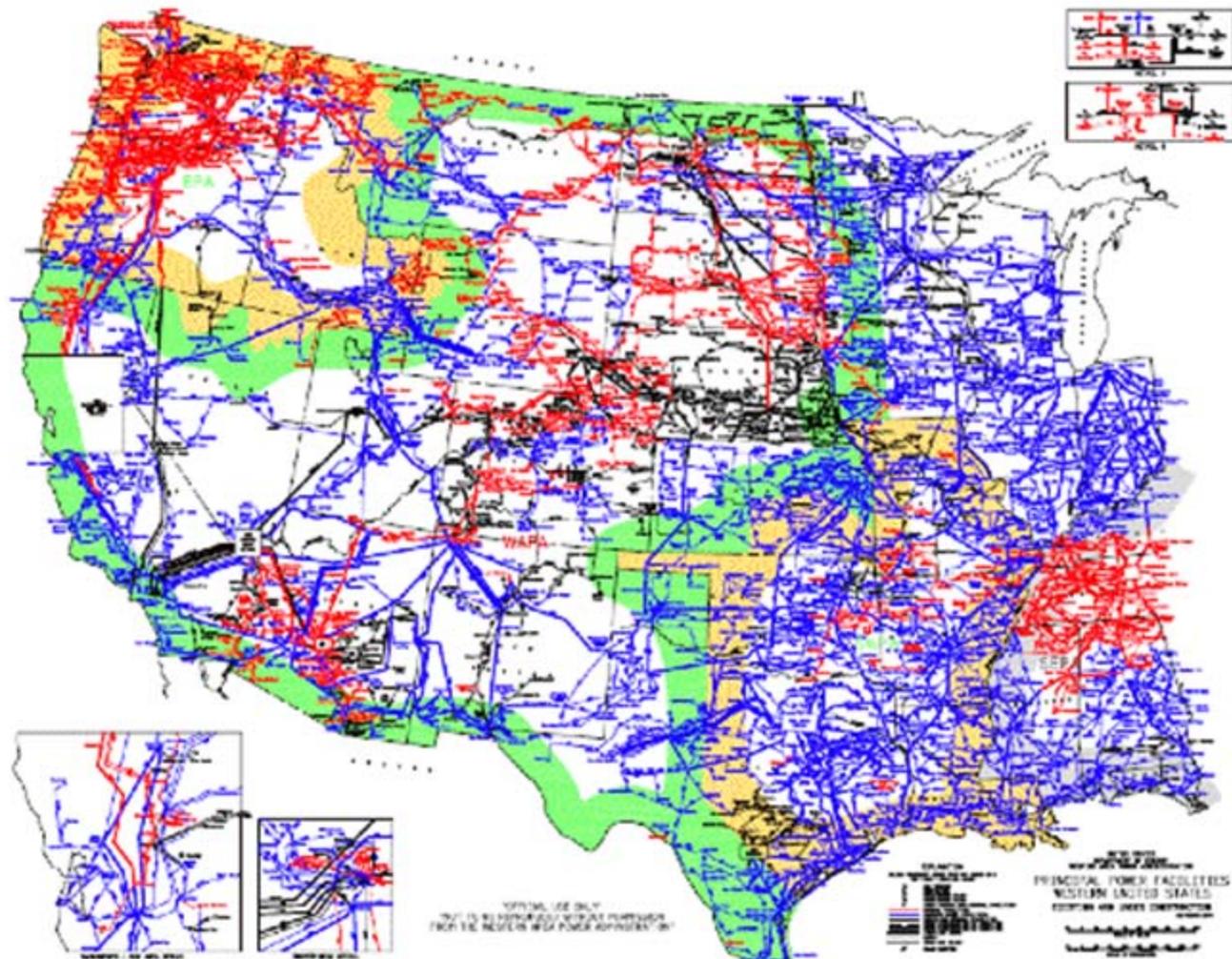
**~4.5 times U.S. annual generation  
at about 20 cents/kWh**

## Wind



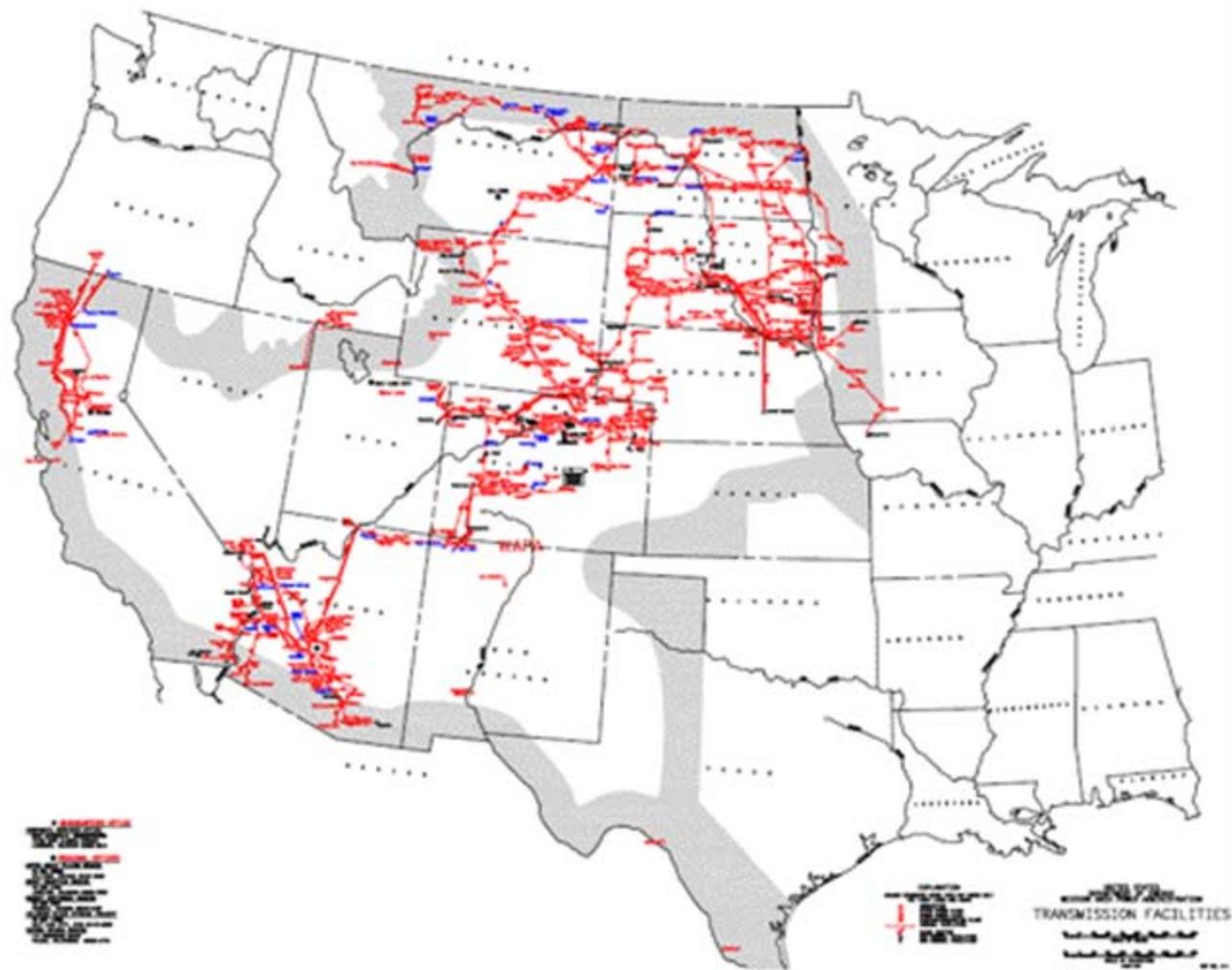
**14% of the U.S. annual generation  
at about 4 cents/kWh**

# Principal Power Transmission Facilities

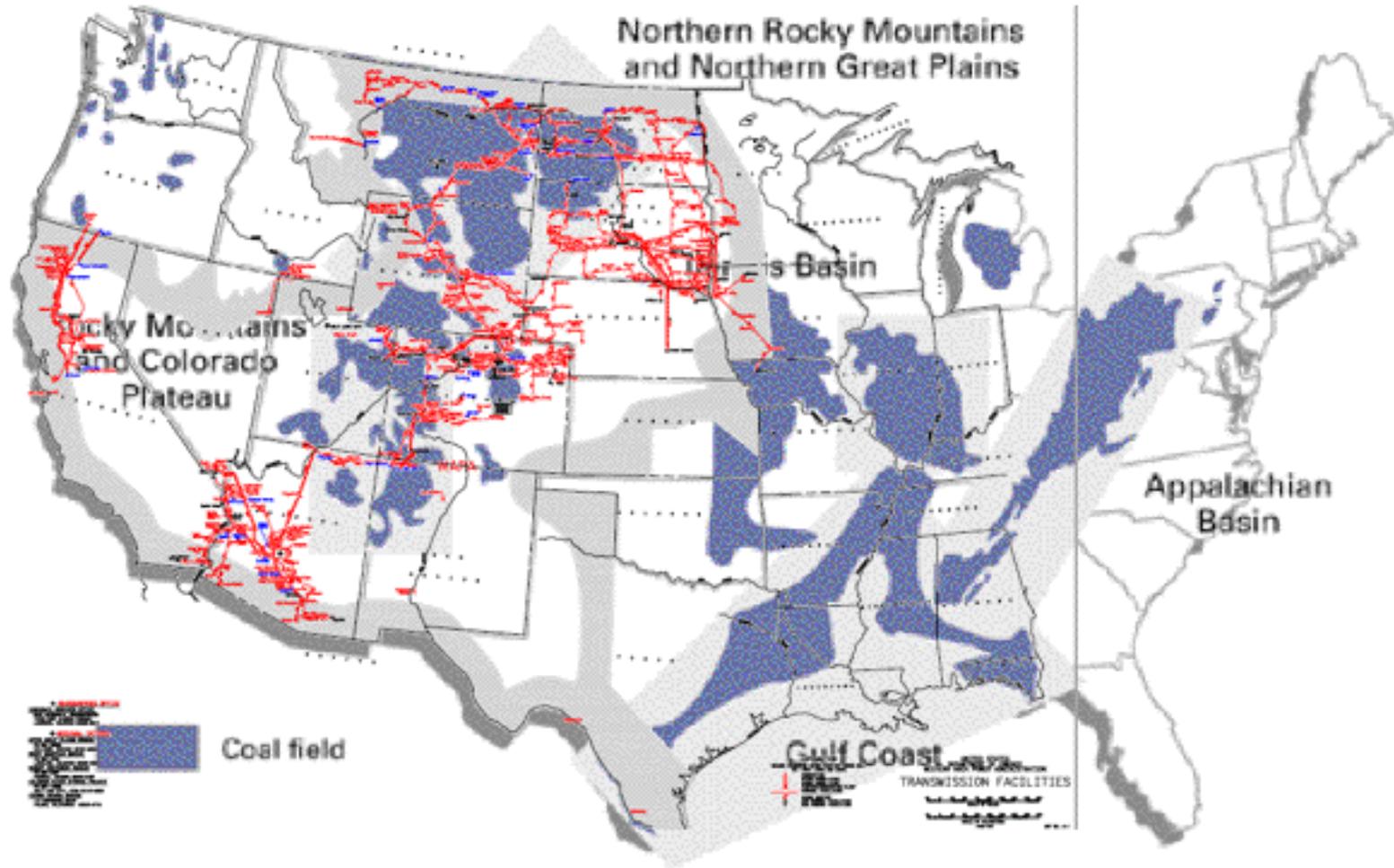


# WAPA: The National Renewable Energy Grid

## The Backbone of the Western Transmission System

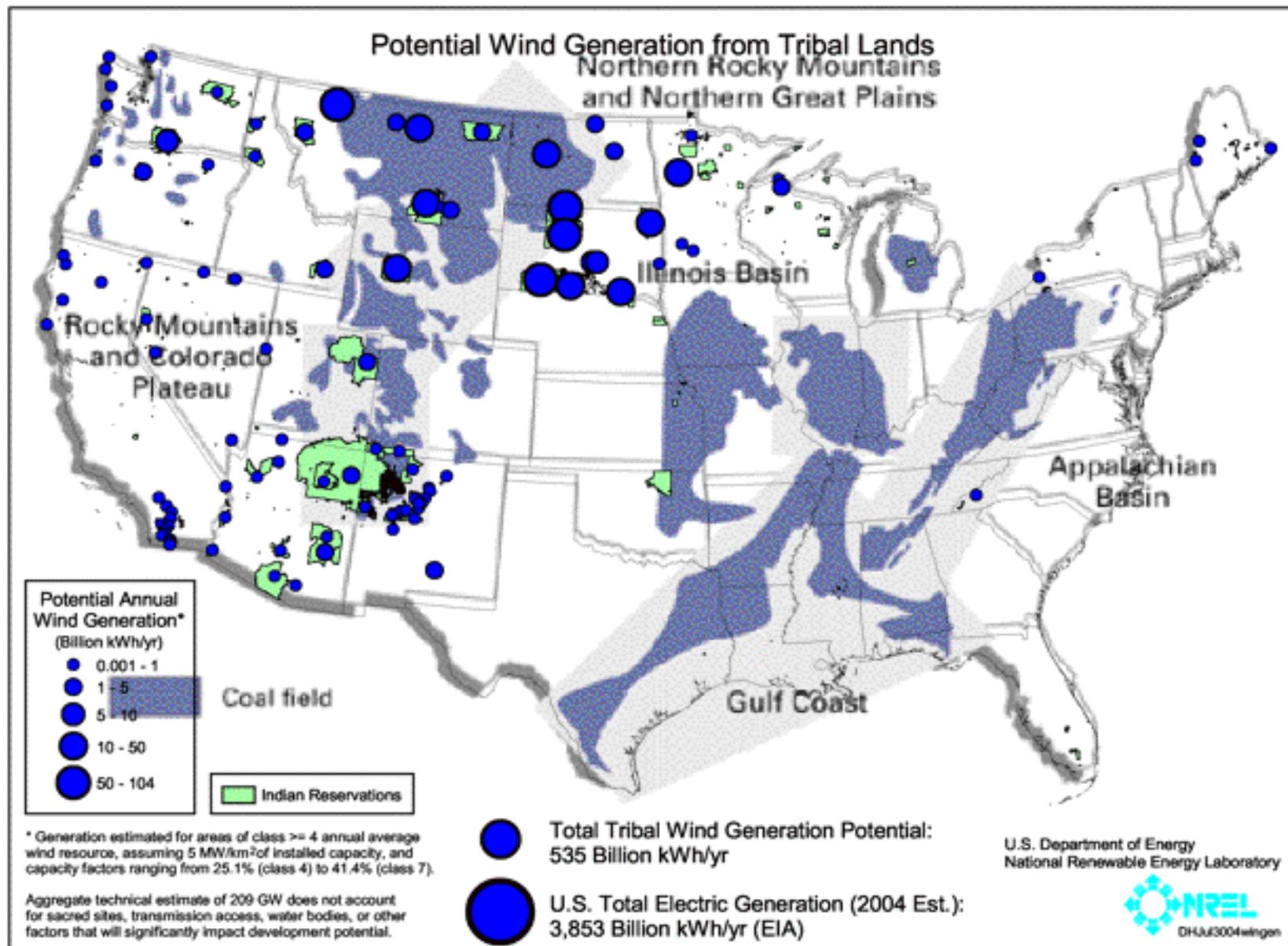


# Coal Fired Generation Has Gone from Using ZERO to 85% of the Capacity Federal Renewable Energy Grid

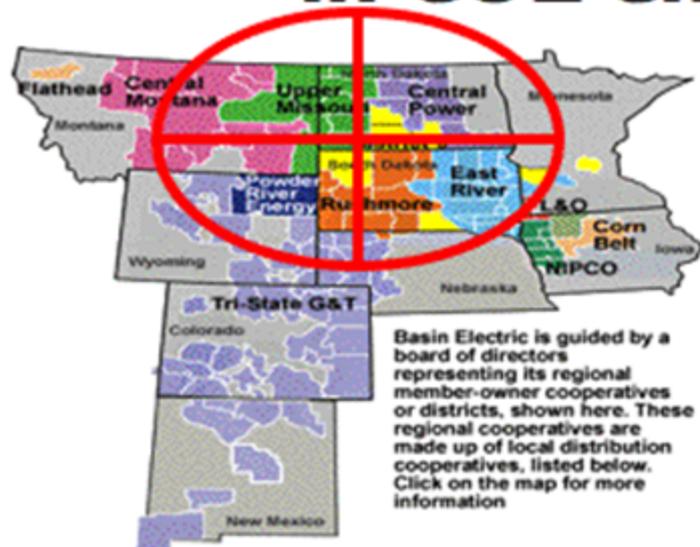


**U.S. COAL RESERVES**

# Tribal Wind Sitting Atop U.S. Coal Reserves

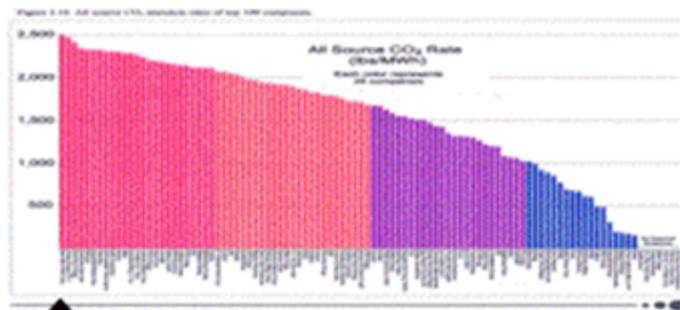


# COOP Electricity Generation Ranks #1 in CO2 emissions/MWhour



A recent study ranked the companies based on the amount of pollution produced relative to their power output. By that measure, Basin Electric Power Cooperative, a relatively small utility in Bismarck, ND, that relies primarily on coal-fired power plants to supply over 100 rural electric co-ops, was identified as producing the *highest output of carbon dioxide per megawatt-hour of electricity*. But the company contends that its plants are among the cleanest coal-burning plants in the nation.

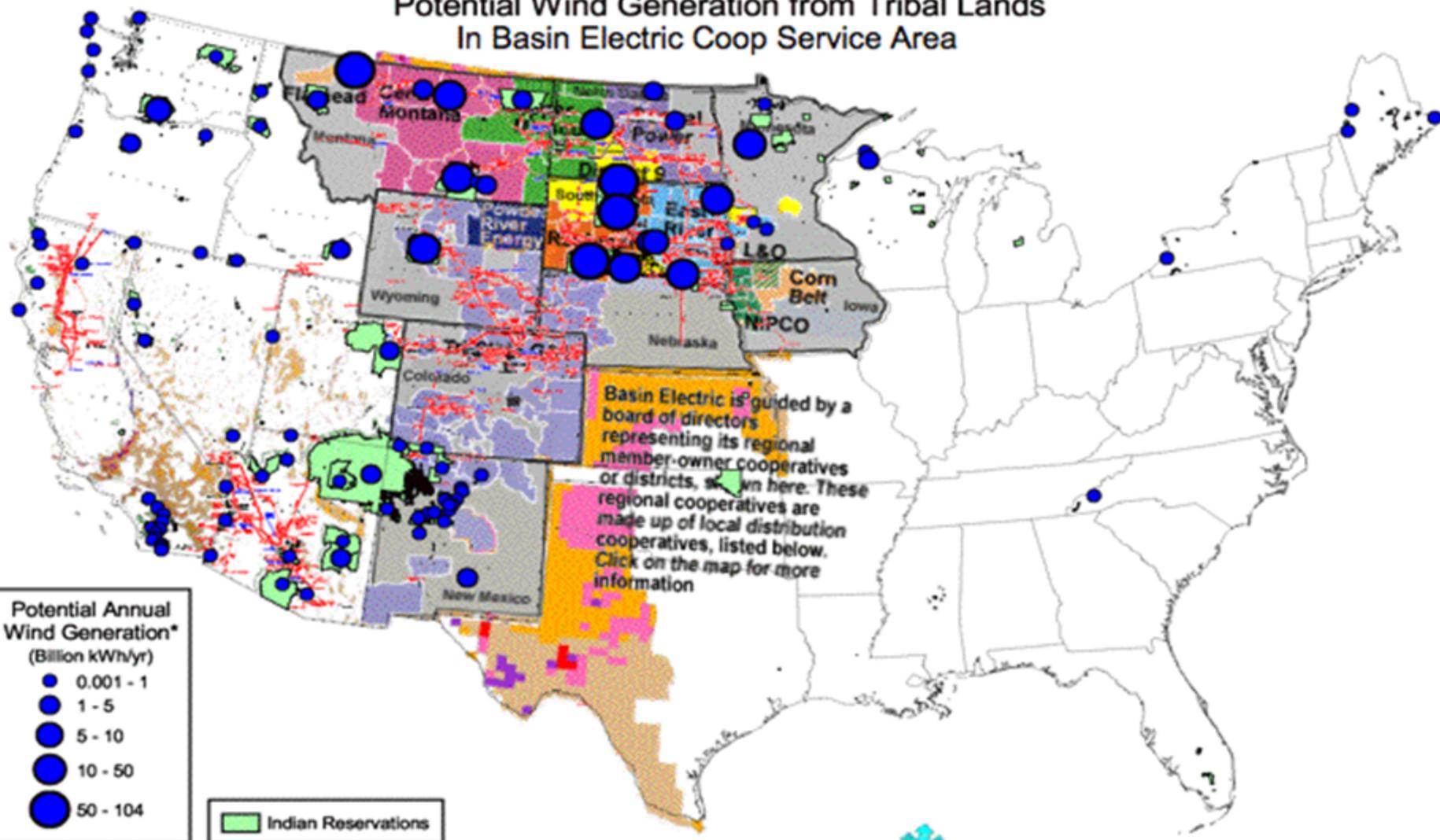
## Highest Output of CO<sub>2</sub>/MWh in the U.S



Basin Electric Assn. RANKS #1

**"Bench marking Air Emissions of the 100 Largest Electric Generation Owners in the U.S. - 2000."** Natural Resources Defense Council and Coalition for Environmentally Responsible Economies, and Public Service Enterprise Group (a Newark NJ utility). From "Study Ranking Utility Polluters Aims to Sway Emissions Debate", By NEELA BANERJEE, NYT, March 21, 2002

## Potential Wind Generation from Tribal Lands In Basin Electric Coop Service Area



\* Generation estimated for areas of class  $\geq 4$  annual average wind resource, assuming 5 MW/km<sup>2</sup> of installed capacity, and capacity factors ranging from 25.1% (class 4) to 41.4% (class 7).

Aggregate technical estimate of 209 GW does not account for sacred sites, transmission access, water bodies, or other factors that will significantly impact development potential.

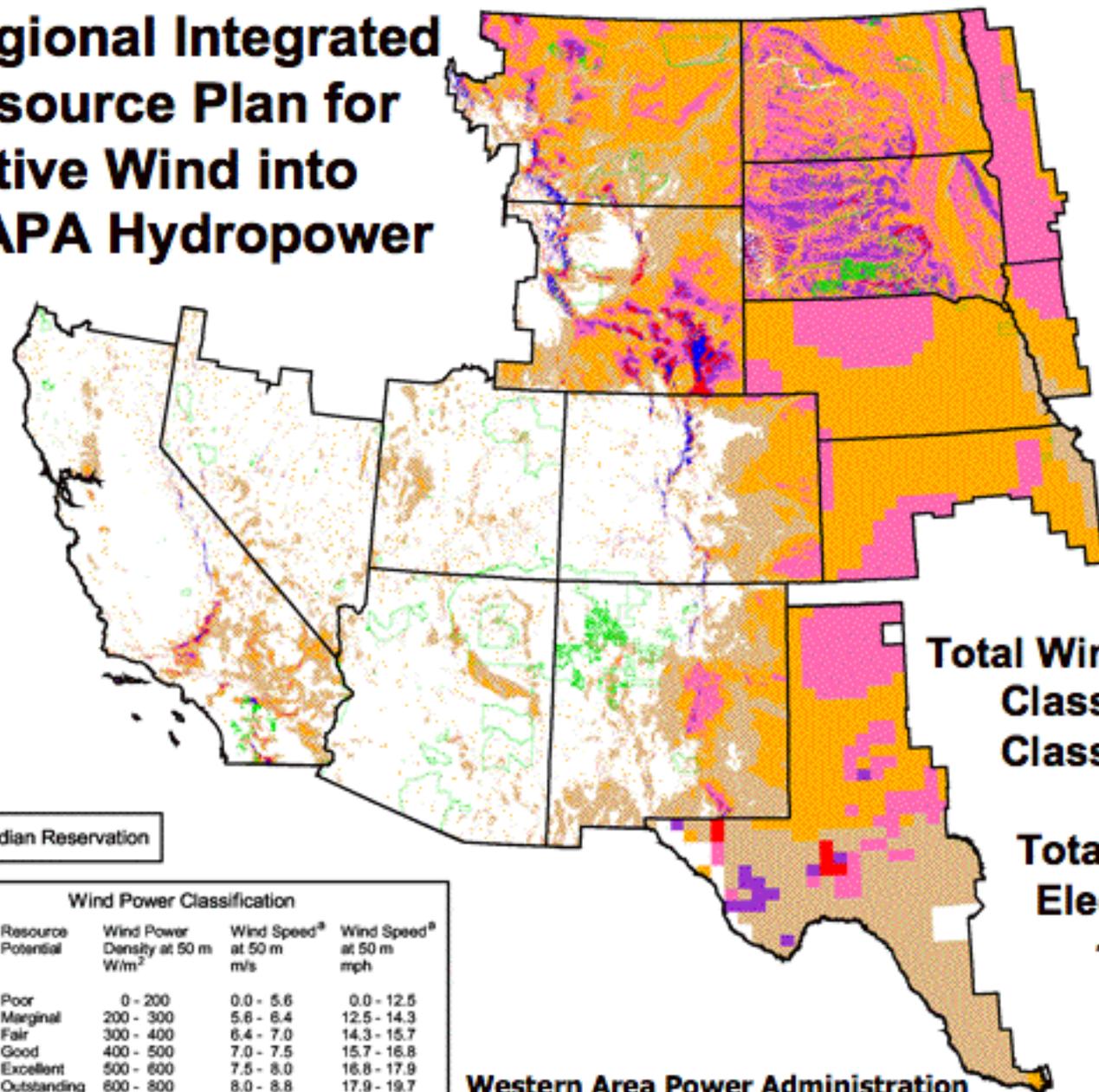
**Total Tribal Wind Generation Potential:**  
535 Billion kWh/yr

**U.S. Total Electric Generation (2004 Est.):**  
3,853 Billion kWh/yr (EIA)

U.S. Department of Energy  
National Renewable Energy Laboratory



# Regional Integrated Resource Plan for Native Wind into WAPA Hydropower



**Nine of the Top Ten Wind States in the U.S. are located in the WAPA Service Territory**

**WAPA's total hydro-power capacity is 17,474 MWs with 2,791 MWs UGPR**

**Total Wind Power Potential:  
Class 3+ 4,500 GWs  
Class 4+ 2,000 GWs**

**Total U.S. Installed Electric Capacity  
~ 800 GWs**

U.S. Department of Energy  
National Renewable Energy Laboratory



Indian Reservation

## Wind Power Classification

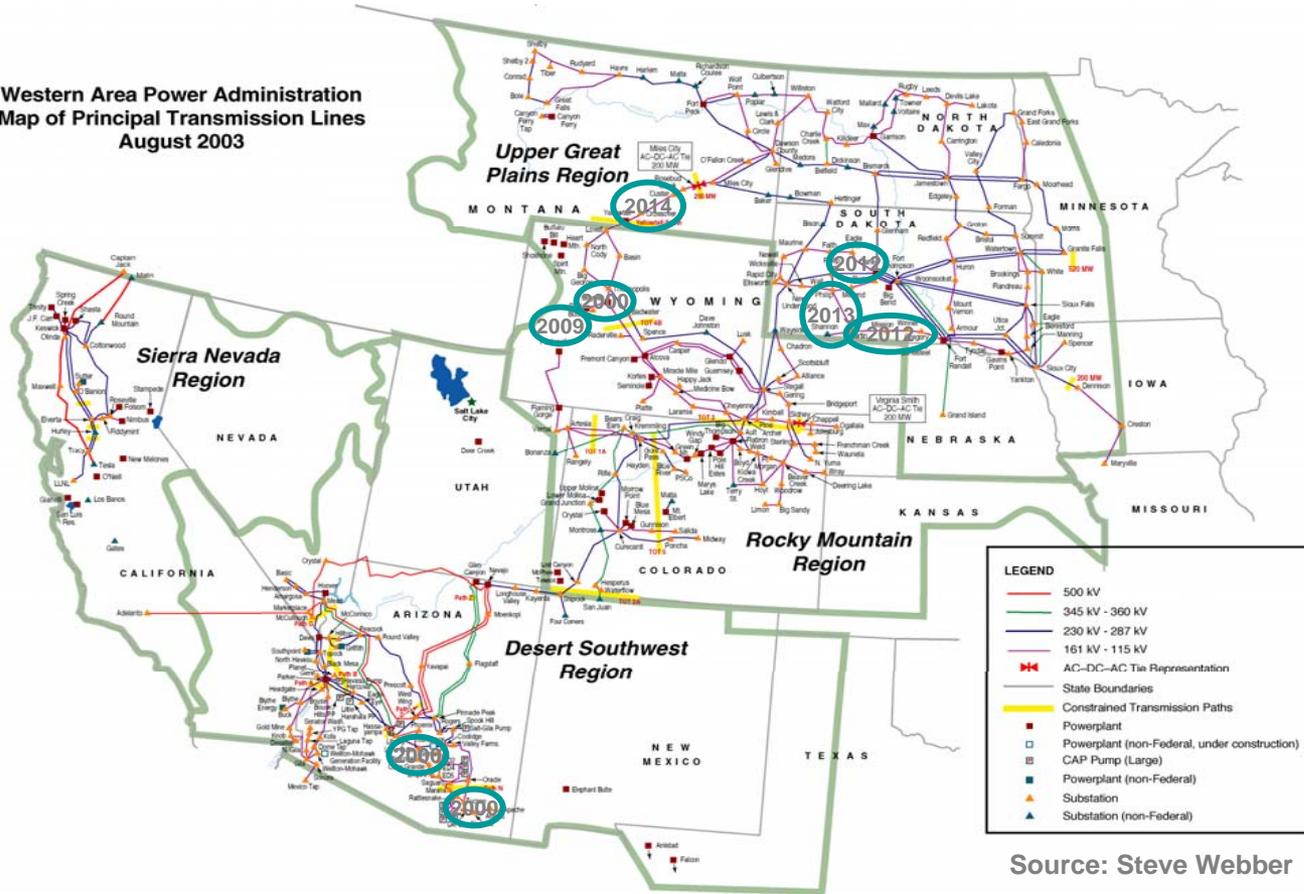
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m <sup>2</sup>	Wind Speed <sup>a</sup> at 50 m m/s	Wind Speed <sup>a</sup> at 50 m mph
1	Poor	0 - 200	0.0 - 5.6	0.0 - 12.5
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
6	Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7

<sup>a</sup>Wind speeds are based on a Weibull k value of 2.0

**Western Area Power Administration  
Wind Power Potential**

# Tribal Rights of Way Expirations (8) And Transmission Constraints

Western Area Power Administration  
Map of Principal Transmission Lines  
August 2003



Many more ROW issues (opportunities) between Tribes, IOUs, and Coops in coming decade.

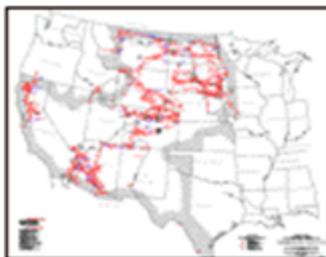
# Restoring and Recharging "The Federal Renewable Energy Grid"



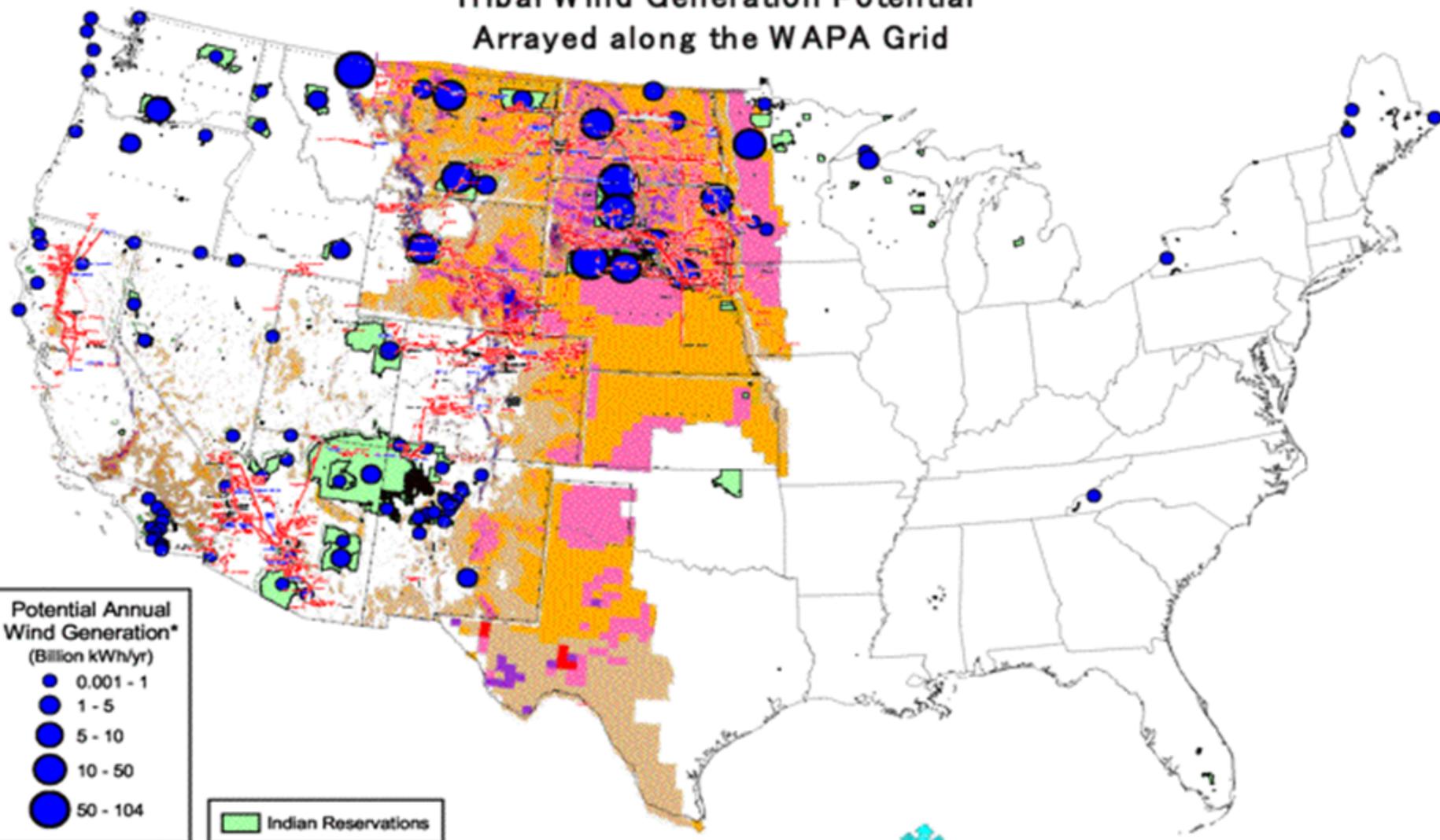
*Serving the West  
with Federal Hydropower*

## *... And Tribal Renewable Energy*

- Cities & Tribes are on WAPA grid as eligible WAPA "Preference Customers"
- Federal trust responsibility to Tribes
- Sustainable Homeland Economies
- Great Wind/Hydro Dynamo Potential
- Diminishing Hydropower Resource
- Clean Air Quality and Attainment
- Once 100% renewable, now only 20% hydropower and 80% coal
- Federal Renewable Energy Grid 20% hydro & 30% wind / 50% coal-gas



## Tribal Wind Generation Potential Arrayed along the WAPA Grid



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● Total Tribal Wind Generation Potential:  
535 Billion kWh/yr

● U.S. Total Electric Generation (2004 Est.):  
3,853 Billion kWh/yr (EIA)

U.S. Department of Energy  
National Renewable Energy Laboratory



# Western Area Power Administration's Goals for 2007:

“three key areas covered  
In the Energy Policy Act”

## Face to face with Western's new Administrator

*(Editor's note: As we look toward Western's future, the Closed Circuit sat down with Western's new Administrator, Tim Meeks, Jan. 9, to gain his perspectives on Western's future, as well as his goals and expectations for 2007.)*

CC: What goals do you have for Western and its employees this year?

Tim: As I shared with our customers at the MidWest Electric Consumers Association meeting, there are three key areas covered in the Energy Policy Act that we will be focusing on externally.

First is our duty as a transmission owner and provider. I think of **transmission as being the ultimate key to our future**. When you look at power marketing, we're here to deliver Federal hydropower. When you look at our long-term future, transmission and operations are services that are growing. Right now, the percentage of Federal hydropower we're providing our customers is decreasing, because our resources aren't growing and the customers' load requirements are. ...

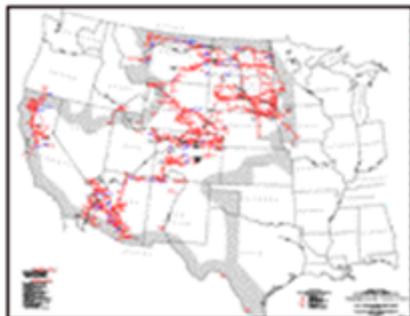
Another area we are focusing on is **integrating wind into the existing transmission system**. Wind energy is here. It's a renewable resource that is getting a lot of attention both from consumers and politicians. Wind energy is the world's fastest-growing energy technology. We need to do what we can physically to make it easier for wind generators to connect to the system.

Thirdly, I anticipate **expanding our partnership with Native American tribes to foster economic development on reservations**. I know that's a very hard thing to quantify for success tracking, but we're going to continue to reach out to the tribes. They are our customers and we need to ask them, "What do you value from us and how can we help you develop and grow economically?"



Tim Meeks

## Transmission



## Wind



## Native American Tribes



# A Few Statistics

**43% of all Native Americans in the lower 48 are in Western's service area**

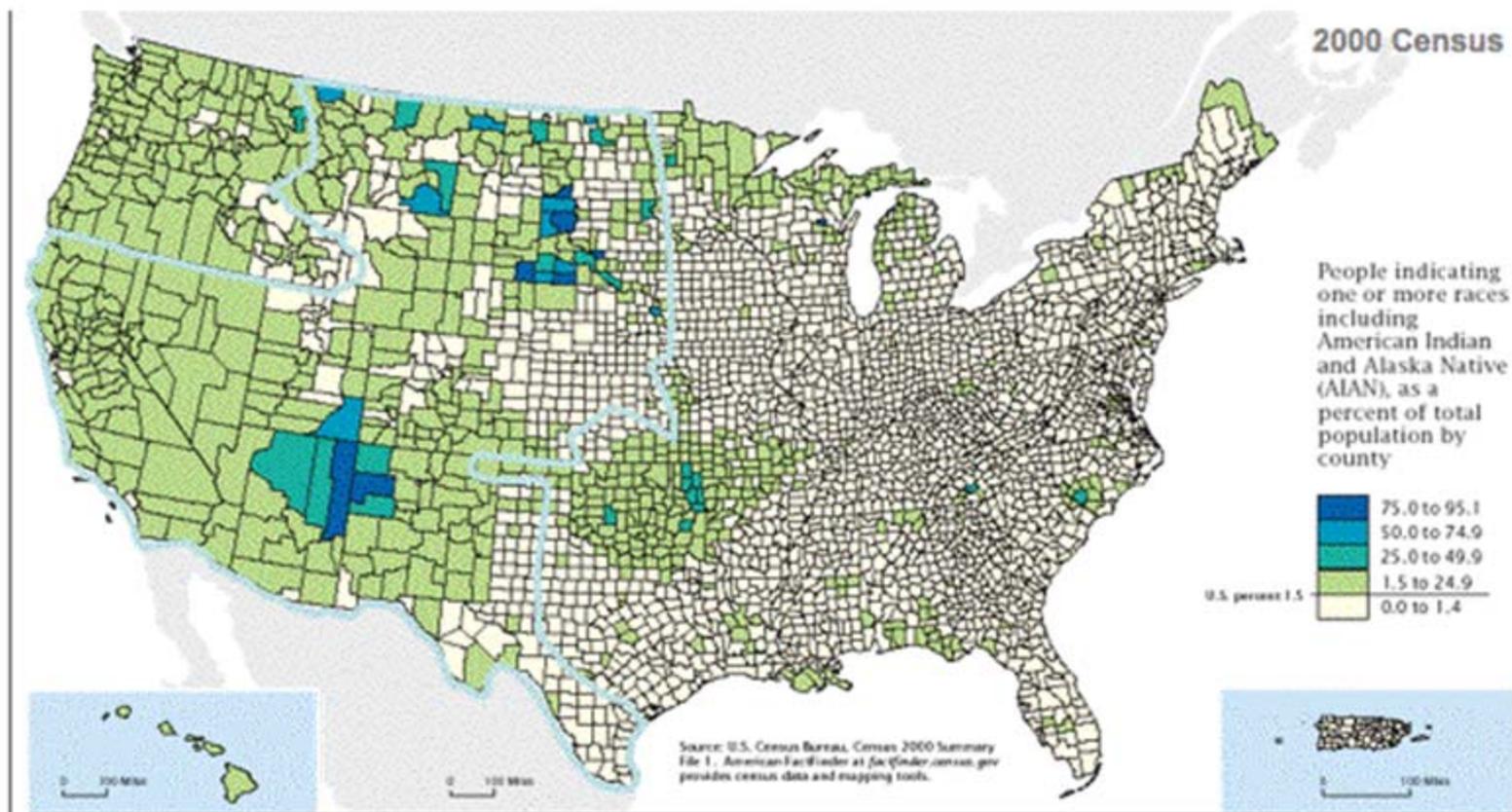
**29 counties where Tribal population > 25%**

**17 counties where Tribal population > 50%**

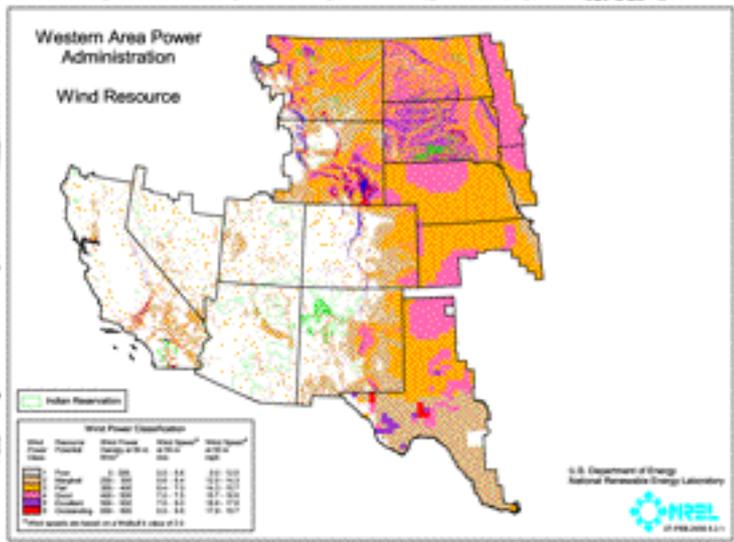
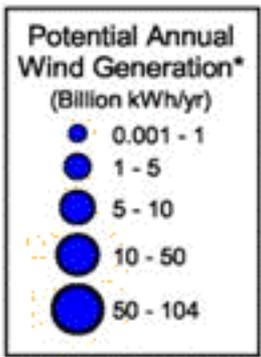
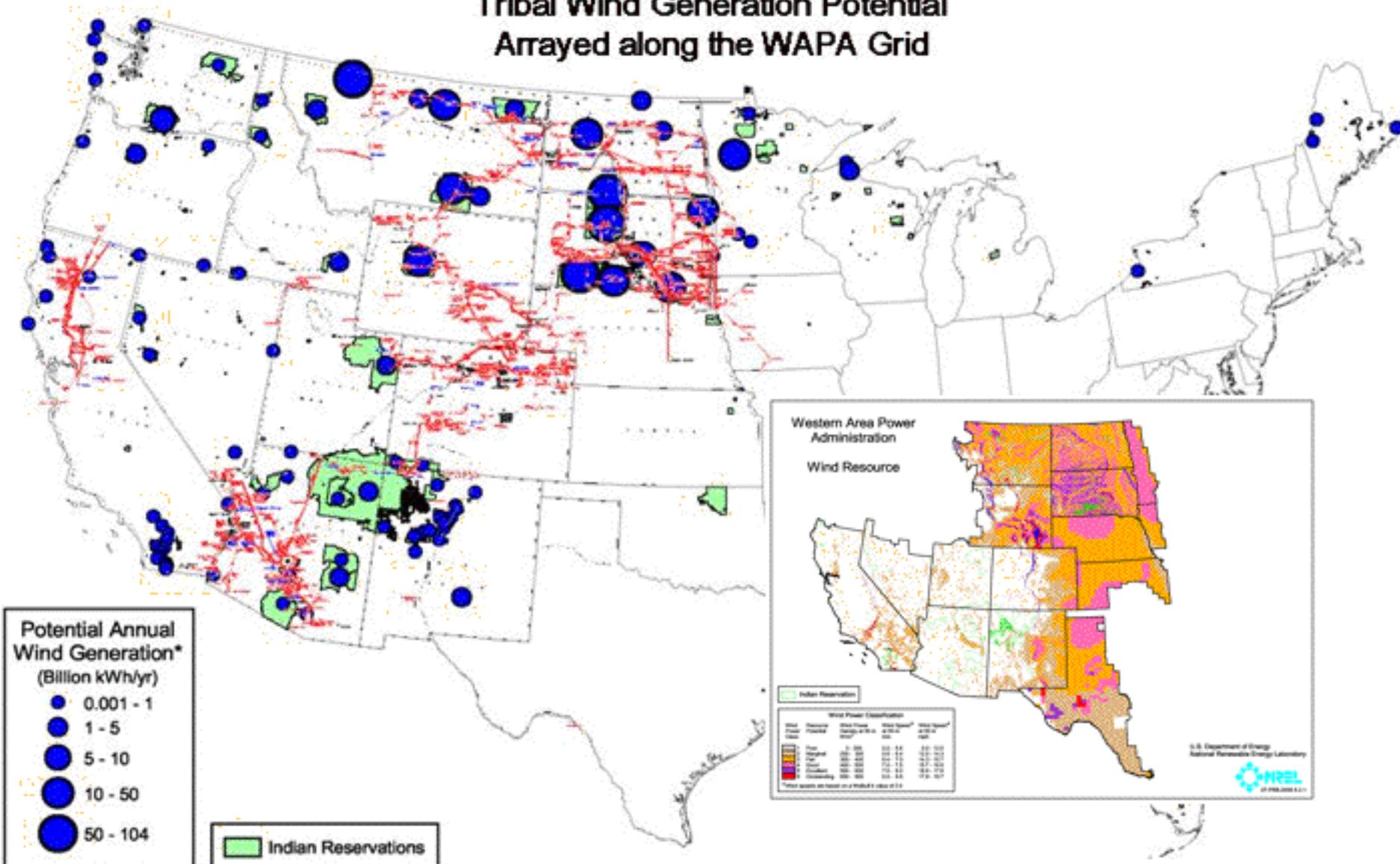
**300+ Tribes in Western's service area**

**1.96% of the population in Western's service area are Indian**

**1.2% of Western sales & revenue come from Tribes**



# Tribal Wind Generation Potential Arrayed along the WAPA Grid



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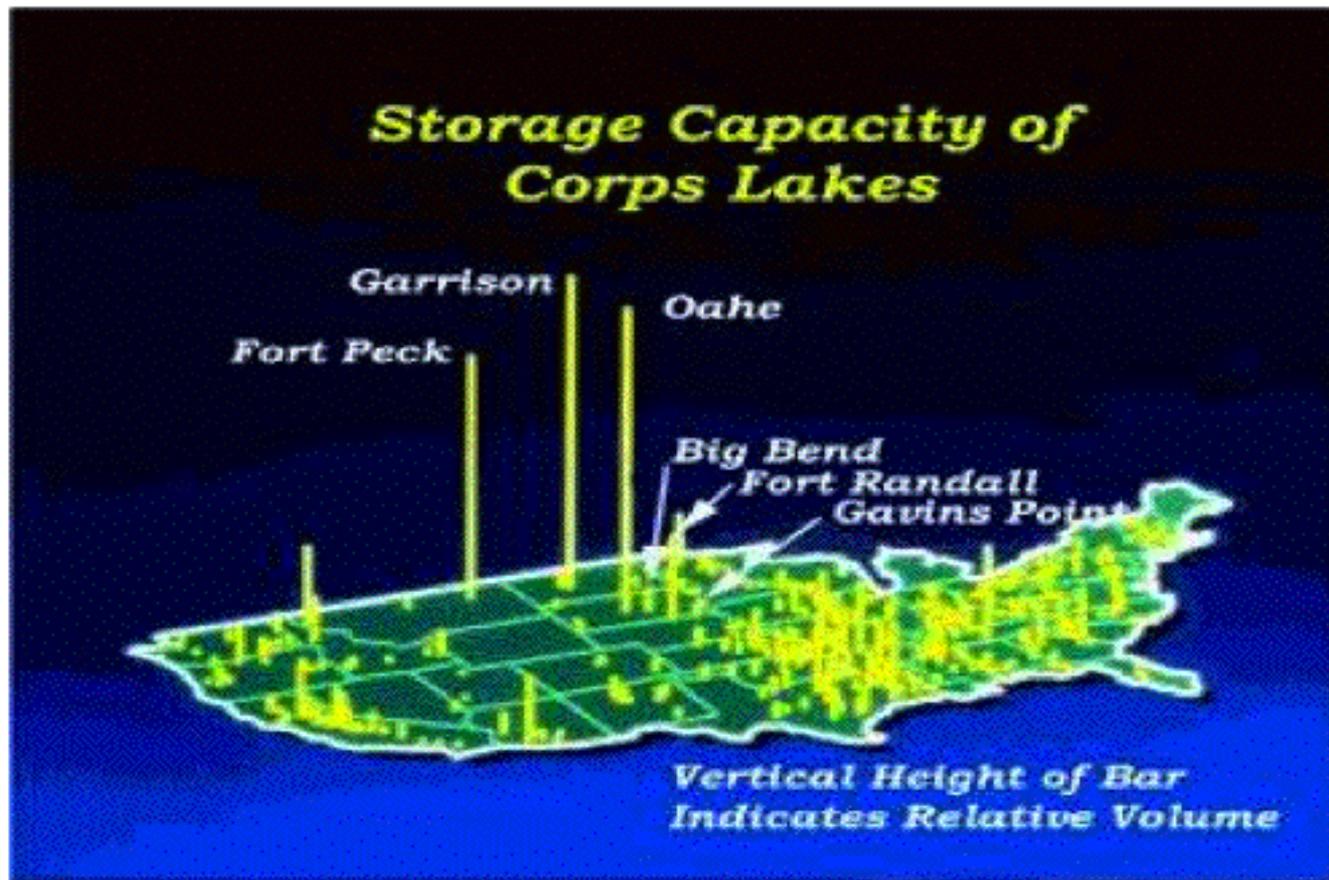
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U.S. Department of Energy  
National Renewable Energy Laboratory



# Missouri River Mainstem Dams Provide One of the Largest Hydropower Storage Capacity Systems in the World

The downstream dams at Big Bend, Fort Randall and Gavins Point depend upon utilizing the upstream flow from Fort Peck, Garrison and Oahe. Current climate trends have shifted precipitation from west to east of the dams with far less water entering into the Missouri River behind the dams.



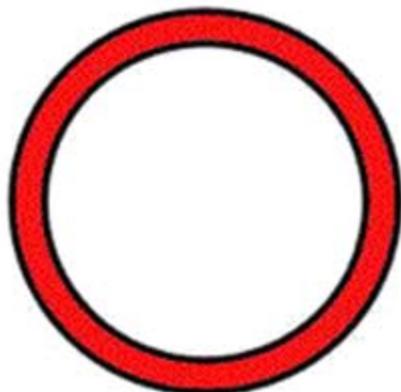
# Integrating Tribal Wind and Federal Hydropower

## Getting Past "Coal Wagging the Water"

Coal has been added to hydropower to meet increased demand



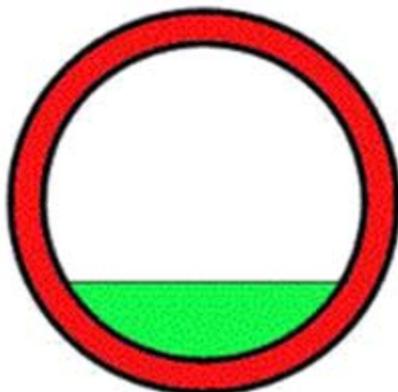
1. Think of grid as if completely open



Coal replaced diminishing hydropower capacity



2. Start w/ least dispatchable wind power



Base load coal diminishes hydro and now uses balance for peaking power



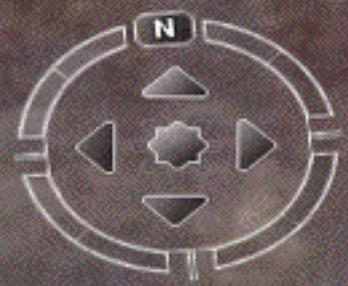
3. Firm up wind w/ available hydro



**Result:** There is no place on the grid for non-dispatchable wind power

4. Tweak with remaining hydro & IGCC peakers.





**“LITTLE SOLDIER”-- the first 100% tribally owned, utility scale wind turbine casts a long shadow across Indian Country.**



Rosebud's 750 kW Turbine produces 2.4 Mil kWh/yr.  
IntertribalCOUP.org



Ft. Berthold's 65 kW Turbine installed Sept 30, 2005  
IntertribalCOUP.org

# **Rosebud Sioux & Intertribal COUP**

## **Environmental Justice Revitalization Plan:**

**3,000 MWs of Tribally Owned Wind Power Across the Northern Great Plains  
Financed with Sale of Energy & Environmental Attributes ("Green Tags")**

### **Phase 1 (2003-05):**

**1st Tribally owned 750 kW Turbine on Rosebud Reservation  
Commissioned March 4th, Dedicated May 1st, 2003 (DOE/RUS/NE)**

**2nd Tribally owned 65 kW Turbine on Ft. Berthold Reservation  
Commissioned Oct 4, 2005 (DOE/NE)**

**3rd Tiospaye (Extended Family) owned 10 kW project on Pine Ridge (non-DOE)**

**4th Tribally owned 660 kW project planned for Flandreau Santee Sioux Tribe  
5th KILI Radio on Pine Ridge building a 50 kW turbine.**

### **Phase 2 (2004/7):**

**30 MW Wind Ranch on Rosebud Reservation (DOE)**

### **Phase 3 EJ Demonstration (2004/7):**

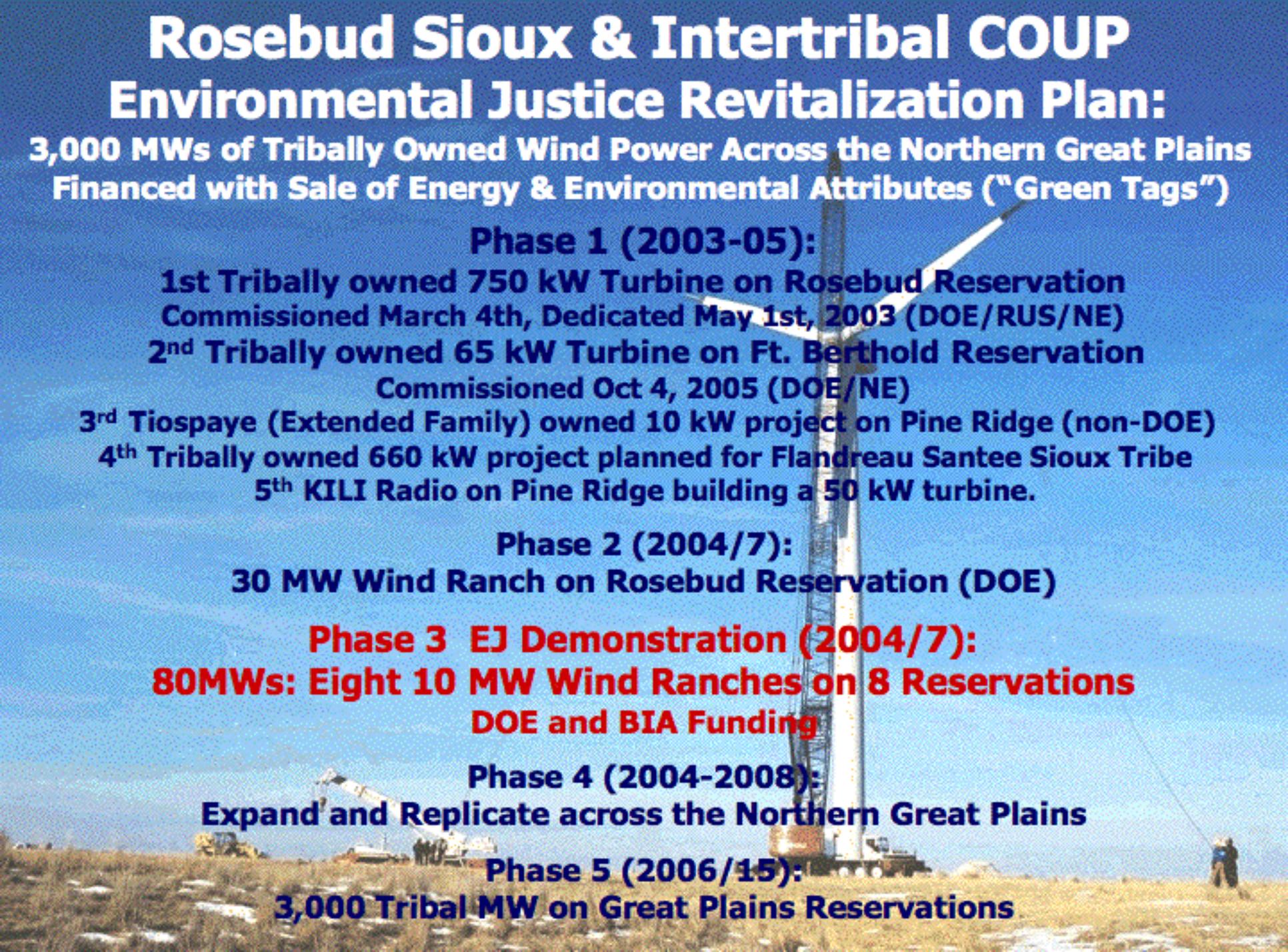
**80MWs: Eight 10 MW Wind Ranches on 8 Reservations  
DOE and BIA Funding**

### **Phase 4 (2004-2008):**

**Expand and Replicate across the Northern Great Plains**

### **Phase 5 (2006/15):**

**3,000 Tribal MW on Great Plains Reservations**

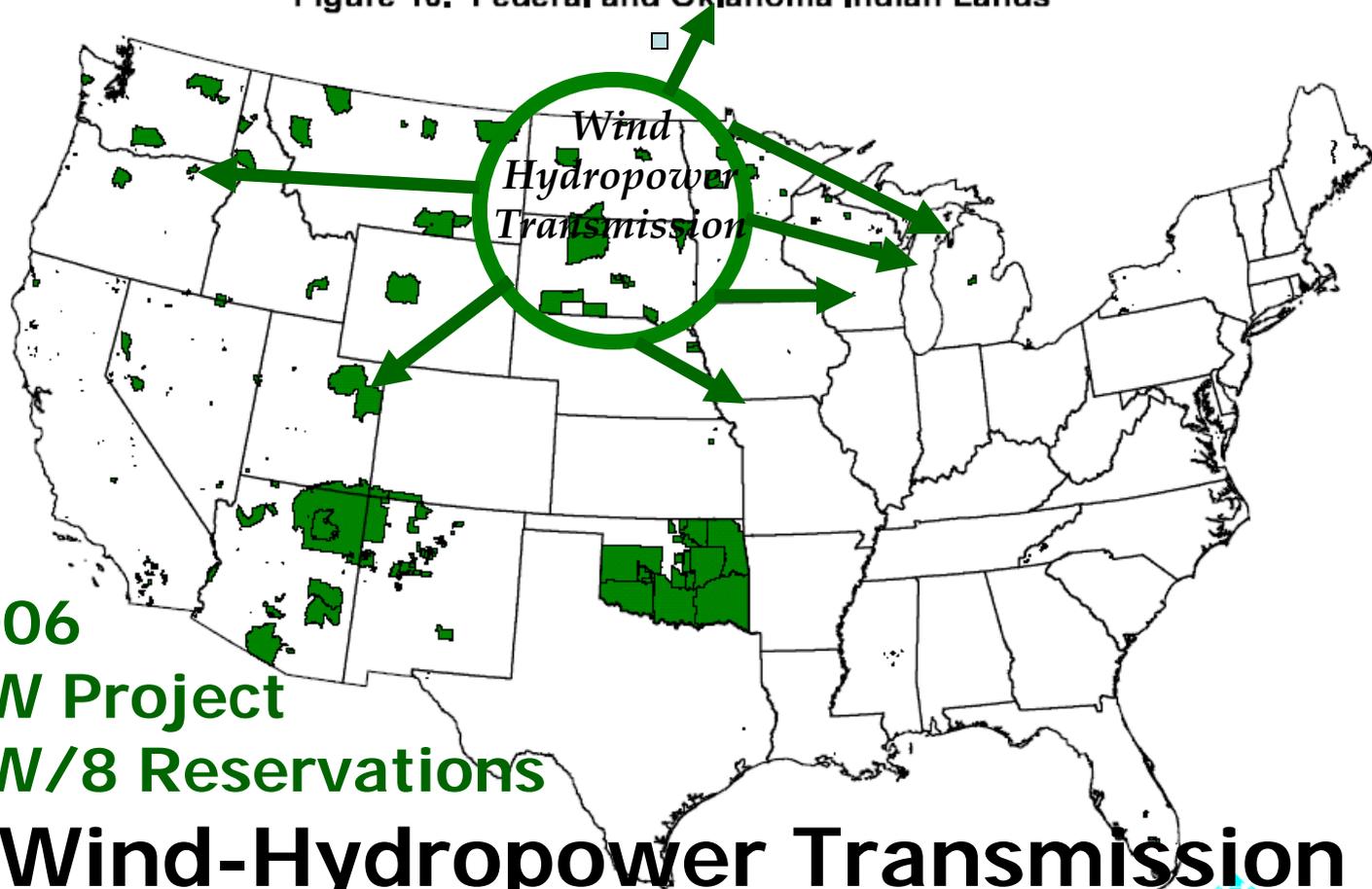


## The Rosebud/COUP intertribal wind plan is designed to:

- Create significant tribally owned generation to meet reservation energy needs.
- Gain experience, share risk and build tribal capacity.
- Pool tribal resources for economies of scale for export sales.
- Ease initial interconnection into a constrained federal grid system.
- Boost overall project capacity from distributed generation of 80 - 240 MW spread across several Great Plains states to supplement diminished hydropower and displace carbon dioxide intensive coal generation.
- Reduce opportunity costs for expansion from 10 or 20 MW to 150 MW.
- Use Green Tags or carbon offsets to overcome grid constraints by the sale of green offsets through [nativeenergy.com](http://nativeenergy.com) as a separate commodity from energy.
- Meet Green Power goals of U.S. ICLEI cities for climate protection and federal agencies from Indian country.

# Intertribal COUP Federal Demonstration Project

Figure 10. Federal and Oklahoma Indian Lands



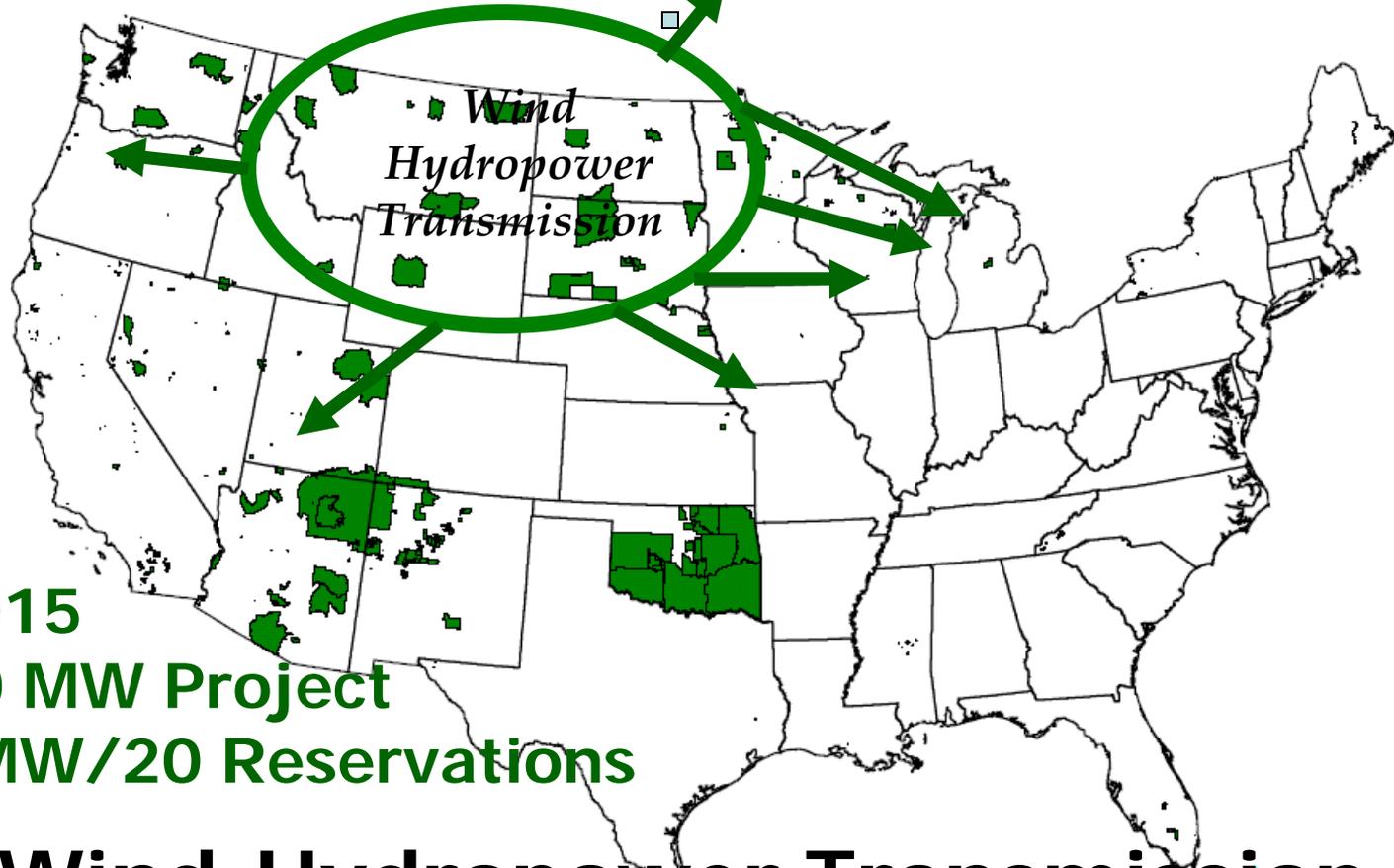
By 2006  
80 MW Project  
10 MW/8 Reservations

**Wind-Hydropower Transmission**  
COUP Wind EJ Demonstration



# Intertribal COUP Extended Demonstration Project

Figure 10. Federal and Oklahoma Indian Lands



By 2015  
3,000 MW Project  
150 MW/20 Reservations

## Wind-Hydropower Transmission

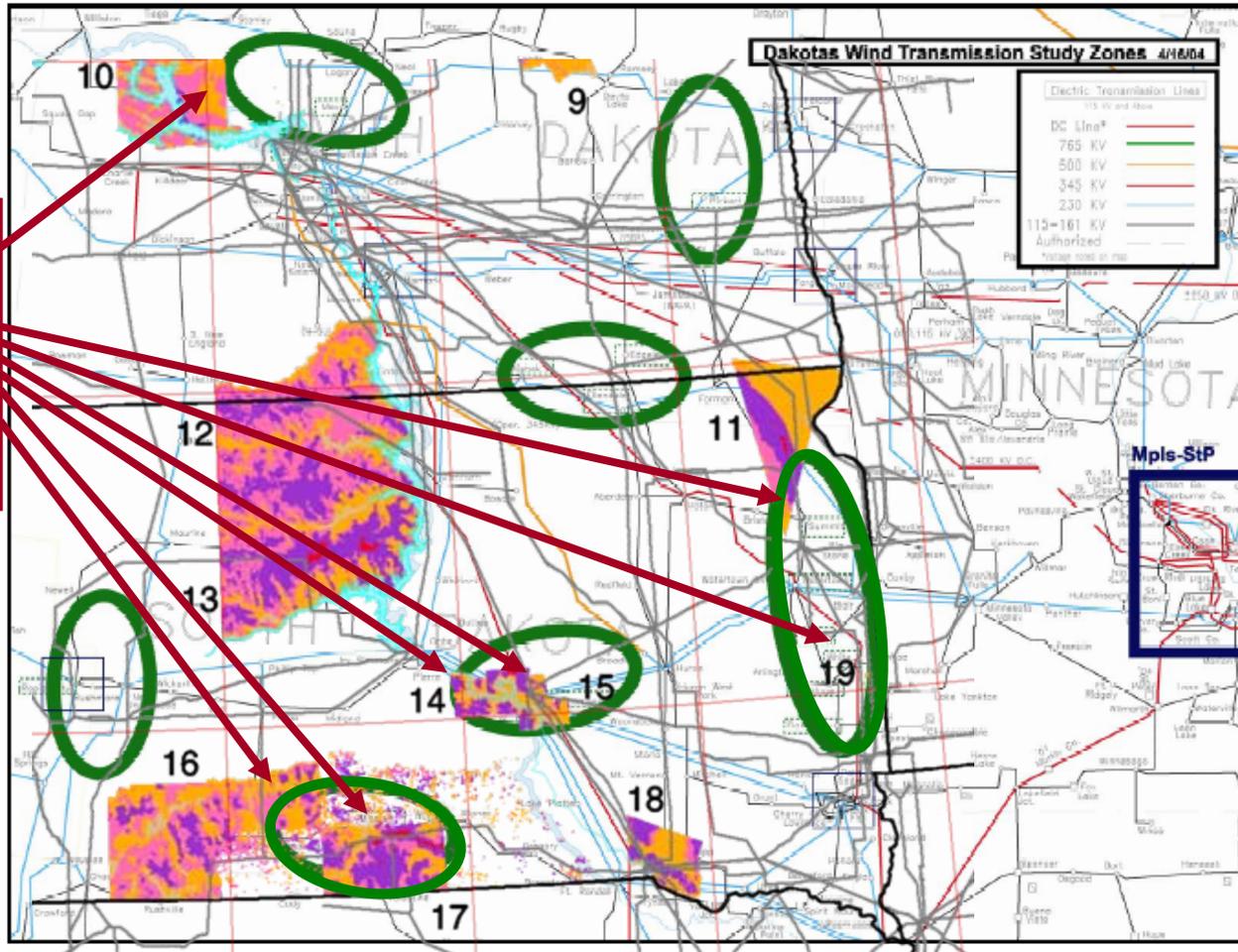
 Federal and Oklahoma Indian Lands

COUP Wind EJ Demonstration

US Dept of Energy - National Renewable Energy Laboratory

# WAPA / WIND INTEGRATION STUDY AREA

## Includes Several Reservation Interconnection Sites



COUP  
Proposed  
WAPA  
Wind Study  
Site Areas

<http://www.wapa.gov/ugp/study/DakotasWind/Zone%20Map.pdf>



# Intertribal Wind EJ Demonstration Project Plan Wins WORLD CLEAN ENERGY AWARD



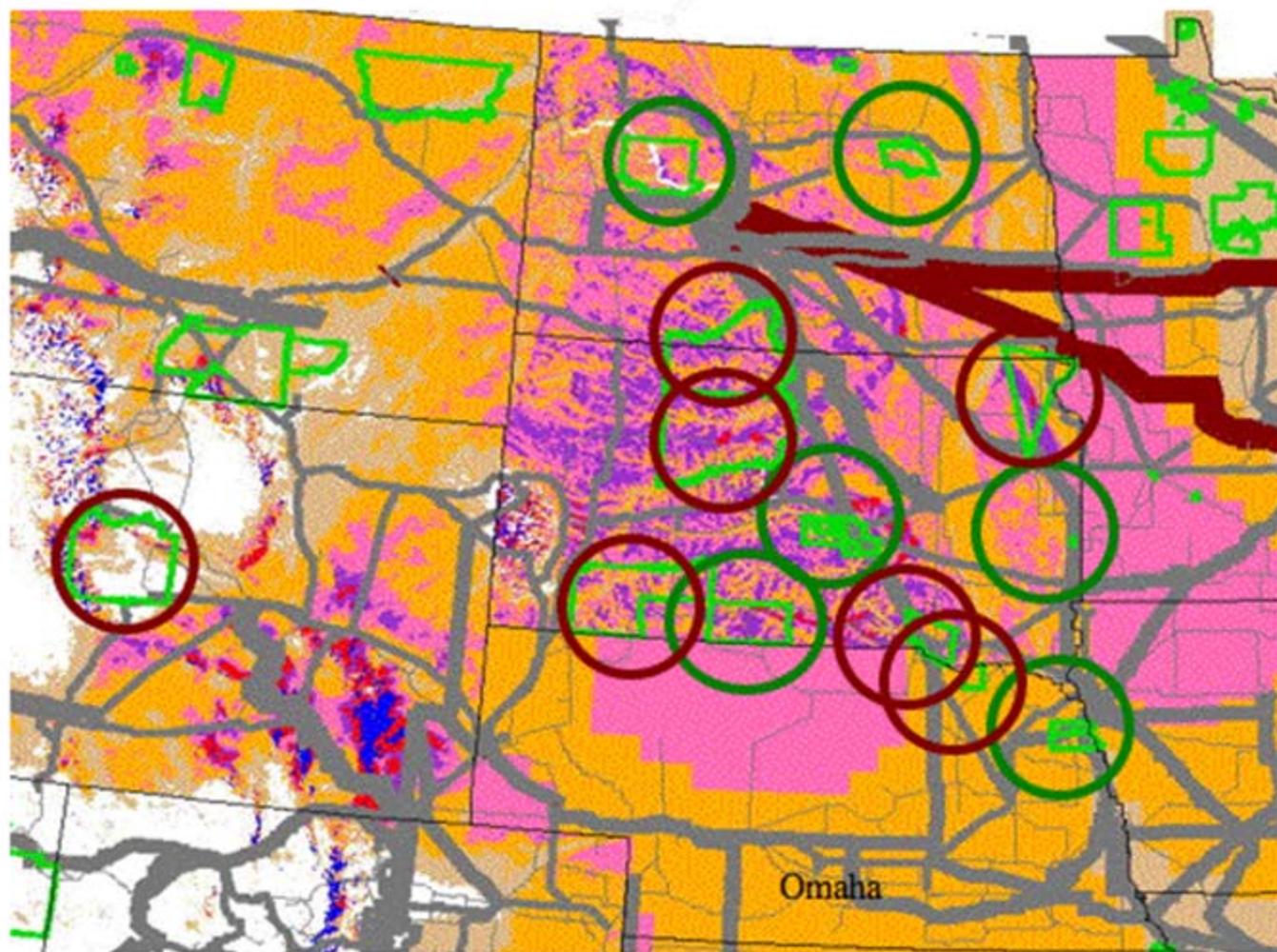
**NATIVEWIND**  
ENERGY INDEPENDENCE  
Intertribal COUP



## The Jury's Special Award for Courage

Patrick Spears (President) and Robert Gough (Secretary), Intertribal COUP, with the [Intertribal COUP/Rosebud Sioux Environmental Justice Revitalization Project: Tribal Wind Power Demonstration Project Plan](#), USA. The Sioux are investing in wind power. In doing so, they are generating clean energy, creating jobs and earning income for the tribe. This is happening in an environment which presents many obstacles to the development of renewable energies.

# Intertribal COUP Wind Demonstration Project

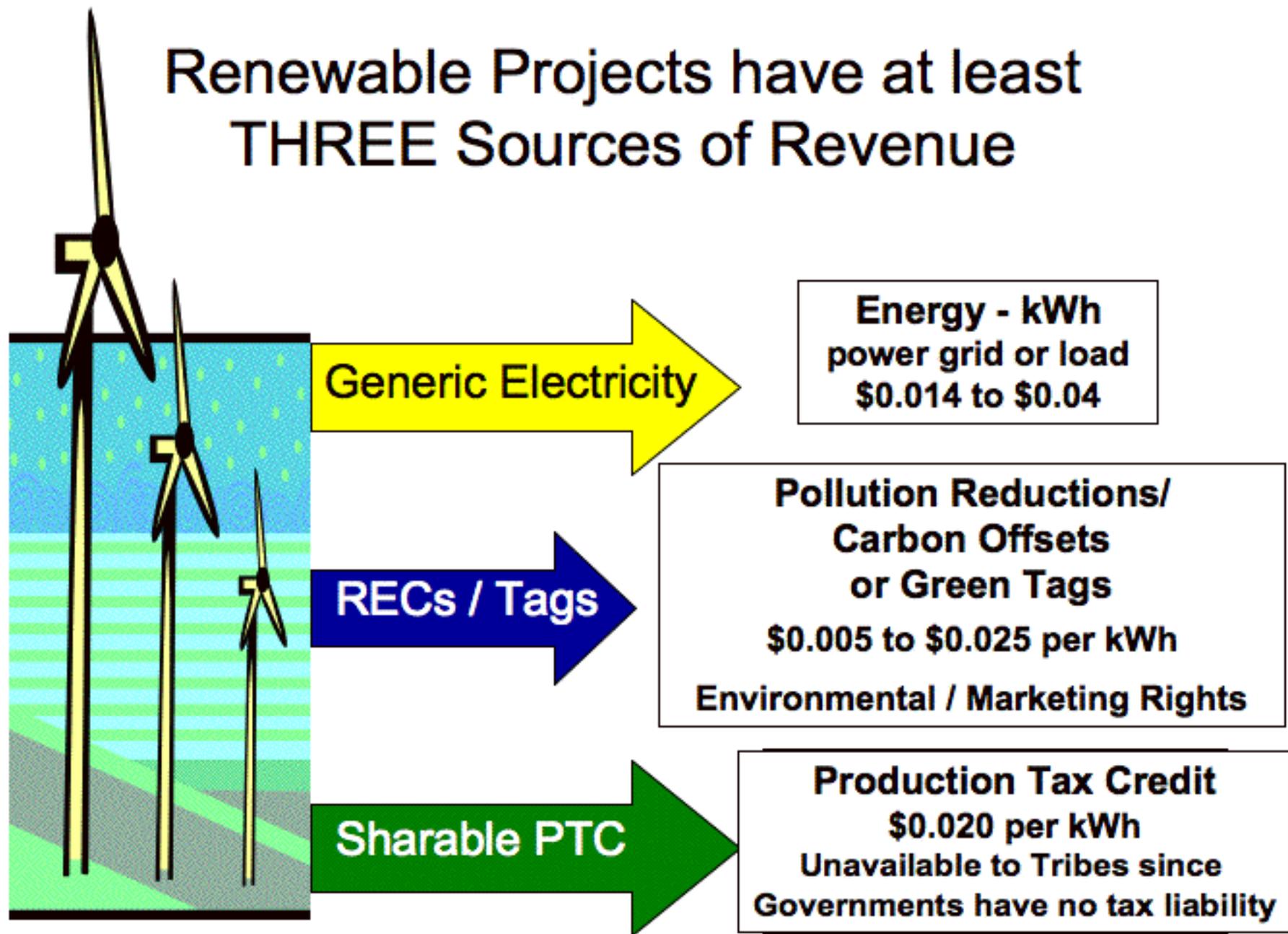


COUP Tribes have, by Resolution, signed on to participate in the Intertribal "80 MW" wind development demonstration project, with several more pending.

This tribally-owned, multi-MW intertribal project is to be built in 10-50 MW clusters on each participating COUP Reservation.

○ Planned  
○ Pending

# Renewable Projects have at least THREE Sources of Revenue



# Where do Green Tags come from?

Global Warming  
Green House Gasses

CO<sub>2</sub>

Air & Water Pollution

SO<sub>x</sub>, NO<sub>x</sub>  
Mercury, Particulates

Health and Environmental  
Costs of Pollution are  
**Externalized** by Utilities

ELECTRICITY

Clean Energy is  
Supported by  
Buyers of

Environmental  
Benefits

Green Tags,  
RECs, or  
Carbon Offsets

# ***NativeEnergy* is now Native-Owned!**



**Intertribal COUP Executive Council and the founders of *NativeEnergy***

**Intertribal COUP acquires majority stake in leading renewable energy marketer, on behalf of its member tribes.**

Rosebud, SD and Charlotte, VT (August 16, 2005) – *NativeEnergy*, a leading national marketer of Renewable Energy Credits (RECs) and greenhouse gas offsets, and the nonprofit **Intertribal Council On Utility Policy (COUP)**, announced today that COUP has acquired a majority interest in *Native...*

# Marketing Tribal Green Tags

## Reaching out to the marketplace...

LOSE 12 tons of carbon dioxide emissions - the kind of greenhouse gas that cause global warming. Join thousands who are fighting back against climate change, the most important environmental issue of our time.

Become a WinBuilder™ member today! You'll help build the first Native American-owned large-scale wind turbine. You'll have the same impact on global warming as if you powered and heated your home entirely with wind energy for a whole year. Most homes use electricity made by burning coal, natural gas and oil, which causes more CO<sub>2</sub> emissions than any other industrial source.

Sign Up Now!  
Go to [www.nativeenergy.com/123](http://www.nativeenergy.com/123)  
or call: 1-800-924-6826

**NativeEnergy**  
Bringing New Renewables To Market

\*The average U.S. household is responsible for 12 tons of CO<sub>2</sub> emissions each year.

Photos by Corbin Good, Shiloh

### They know how to fight global warming... Do you?

Students at the HoDeq School on the Round Bay Seaside Reservation understand the benefits of renewable energy sources. By helping build one wind farm, you will reduce consumption of fossil fuels and keep tons of carbon dioxide emissions out of the air - the kind of greenhouse gases that cause global warming. Join thousands who are fighting back against climate change, the most important environmental issue of our time.

Become a WinBuilder™ member today. You'll help build the first Native American-owned large-scale wind turbine, which will be located on the Round Bay Reservation. You'll have the same impact on global warming as if you powered and heated your home entirely with wind energy for a whole year. Most homes use electricity made by burning coal, natural gas and oil, which causes more CO<sub>2</sub> emissions than any other industrial source.

Sign up today and reduce CO<sub>2</sub> emissions!  
Go to [www.nativeenergy.com/Mojo](http://www.nativeenergy.com/Mojo)  
or call: 1-800-924-6826

**NativeEnergy**  
Bringing New Renewables To Market

\*The average U.S. household is responsible for 12 tons of CO<sub>2</sub> emissions each year.

### The First Native American Wind Turbine Now Stands Tall...

You can help build the next!

Take a meaningful step in the fight against global warming. With WinBuilder™ you'll help keep thousands of tons of global warming pollution out of the air.

Join our WinBuilder™ partners, including the Timberland Co., Ben & Jerry's, Dave Matthews Band, Stonyfield Farm, CDF Inc., Shalco Corporation, INCC, MusicMatters Co-op, America's Clean Air-Cool Planet and many more businesses and individuals across the nation.

They all helped build the first Native American owned large scale wind turbine to fight global warming. You can help build the next.

Joining WinBuilder™ is fast, easy, and costs only pennies a day!

**NativeEnergy**  
Bringing New Renewables To Market

Take Action Today  
by visiting:  
[www.nativeenergy.com/Mojo](http://www.nativeenergy.com/Mojo)  
or call: 1-800-924-6826

Photo by Ken Spier. The first Native American owned large scale wind turbine stands tall on the Round Bay Seaside Reservation on the HoDeq School campus.

## ...fighting global warming!

**NativeEnergy**  
Bringing New Renewables To Market

[www.NativeEnergy.com](http://www.NativeEnergy.com)



[www.EnergyIndependenceDay.org](http://www.EnergyIndependenceDay.org)

Intertribal Council On Utility Policy

Offset Now

[WindBuilders<sup>SM</sup>](#)

Products & Services

[CoolHome<sup>SM</sup>](#)

In The News

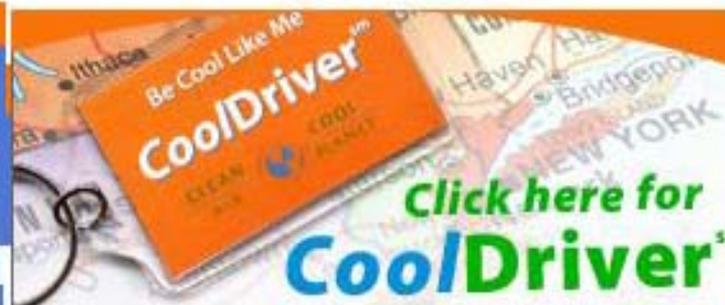
About Us

Privacy Promise

Carbon Calculator



**Syriana**  
becomes  
**Climate Neutral**  
with  
**NativeEnergy!**



## Welcome to **NativeEnergy!**

We're here to help you fight global warming and climate change. Take a few minutes to help build a new wind farm or a renewable farm methane project today, and enjoy a climate neutral lifestyle.

**New Projects!** *WindBuilders<sup>SM</sup>* helped build [MHA Nation Single Turbine Project](#), and *CoolHome<sup>SM</sup>* helping build the [Schrack Family Dairy Farm Methane Project](#).

**You'll be in good company –** [see who's joined](#) us to fight global warming.

**Give a special gift** that saves a [ton of CO<sub>2</sub>](#)

**[Offset your Travel Today!](#)**

**CREATING SUSTAINABLE  
COMMUNITIES** JUNE 8-10  
CLICK HERE FOR MORE



"Ben & Jerry's is excited to support the development of the Rosebud Wind Turbine. By working with *NativeEnergy* we are able to address our global warming impact and provide important social and environmental justice benefits to the Rosebud Sioux Tribe."

Andrea Asch,  
Manager of Natural Resources  
Ben & Jerry's Homemade

What are other leaders saying about NativeEnergy?

[Click here](#)

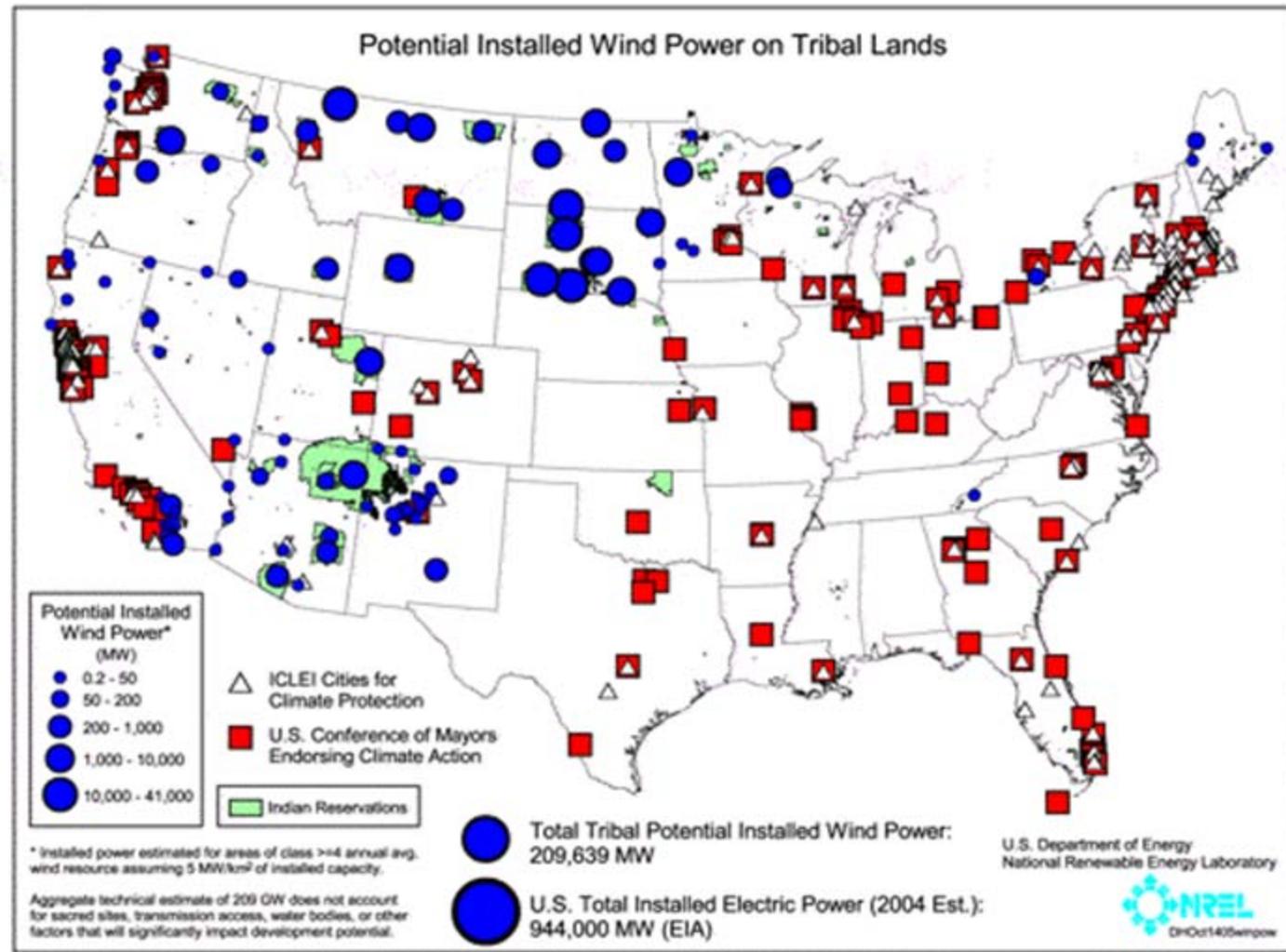
# COUP/ICLEI ~ Tribal City Partnership ICLEI and U.S. Conference of Mayors



**NATIVEWIND**  
ENERGY INDEPENDENCE  
RENEWAL COUP



Council Of Utility Policy  
Policies Building Sustainable Renewable Economies



# Renewable Electricity Production Tax Credit

The Renewable Electricity Production Credit (REPC) is a per kilowatt-hour tax credit for electricity generated by qualified energy resources. Enacted as part of the Energy Policy Act of 1992, the credit expired at the end of 2001, and was subsequently extended in March 2002 as part of the Job Creation and Worker Assistance Act of 2002 (H.R. 3090). The tax credit then expired at the end of 2003 and was not renewed until October 4, 2004, as part of H.R. 1308, the Working Families Tax Relief Act of 2004, which extended the credit through December 31, 2005. The Energy Policy Act of 2005 (H.R. 6) modified the credit and extended it through December 31, 2007. In December 2006, the credit was extended for yet another year (through December 31, 2008) by Section 207 of the Tax Relief and Health Care Act of 2006 (H.R. 6111).

# Renewable Electricity Production Tax Credit

Section 710 of the "American Jobs Creation Act of 2004" (H.R. 4520), expanded REPC to include additional eligible resources - - geothermal energy, open-loop biomass, solar energy, small irrigation power, landfill gas, municipal solid waste combustion, and refined coal -- in addition to the formerly eligible wind energy, closed-loop biomass, and poultry-waste energy resources. The Energy Policy Act of 2005 (EPAct 2005) further expanded the credit to certain hydropower facilities and Indian coal (coal reserves owned by an Indian tribe or were held in trust by the U.S. for the benefit of an Indian tribe). Note that as a result of EPAct 2005, solar facilities placed into service after December 31, 2005, are no longer eligible for this incentive.

# Renewable Electricity Production Tax Credit

- The REPC provides a tax credit of 1.5 cents/kWh, adjusted annually for inflation, for wind, closed-loop biomass and geothermal. The adjusted credit amount for projects in 2005 is 1.9 cents/kWh. Electricity from open-loop biomass, small irrigation hydroelectric, landfill gas, municipal solid waste resources, and hydropower receive half that rate -- currently 1.0 cent/kWh.

# Renewable Electricity Production Tax Credit

The duration of the credit is 10 years. However, open-loop biomass, geothermal, small irrigation hydro, landfill gas, and municipal solid waste combustion facilities placed into service after 10/22/2004 and before enactment of the Energy Policy Act of 2005 (8/8/2005) are eligible for the credit for a five-year period. Refined-coal facilities will receive \$4.375 per ton (indexed for inflation) for a 10-year term. Indian coal production facilities will receive an increase in tax credit during the 7-year period beginning January 1, 2006, in the amount of \$1.50/ton through 2009, and \$2.00/ton after 2009.

# Renewable Electricity Production Tax Credit

Form <b>8835</b>	<b>Renewable Electricity, Refined Coal, and Indian Coal Production Credit</b>	OMB No. 1545-1362 <b>2006</b> Attachment Sequence No. <b>95</b>
Department of the Treasury Internal Revenue Service	Attach to your tax return.	
Name(s) shown on return	Identifying number	

## Section A. Electricity produced at qualified facilities placed in service prior to October 23, 2004

1	Kilowatt-hours produced and sold (see instructions)	0.019	1
2	Phaseout adjustment (see instructions)	\$	2
3	Credit before reduction. Subtract line 2 from line 1		3
<b>Reduction for government grants, subsidized financing, and other credits:</b>			
4	Total of government grants, proceeds of tax-exempt government obligations, subsidized energy financing, and any federal tax credits allowed for the project for this and all prior tax years (see instructions)		4
5	Total of additions to the capital account for the project for this and all prior tax years		5
6	Divide line 4 by line 5. Show as a decimal carried to at least 4 places		6
7	Multiply line 3 by line 6		7
8	Subtract line 7 from line 3		8
9	Section A, renewable electricity production credit from partnerships, S corporations, cooperatives, estates, and trusts		9
10	Add lines 8 and 9. Cooperatives, estates, and trusts, go to line 11; partnerships and S corporations, report this amount on Schedule K; all others, report this amount on Form 3800, line 1h		10
11	Amount allocated to patrons of the cooperative or beneficiaries of the estate or trust (see instructions)		11
12	<b>Cooperatives, estates, and trusts.</b> Subtract line 11 from line 10. Report the credit on Form 3800, line 1h		12

## Section B. Electricity and refined coal produced at qualified facilities placed in service after October 22, 2004, and Indian coal produced at facilities placed in service after August 8, 2005

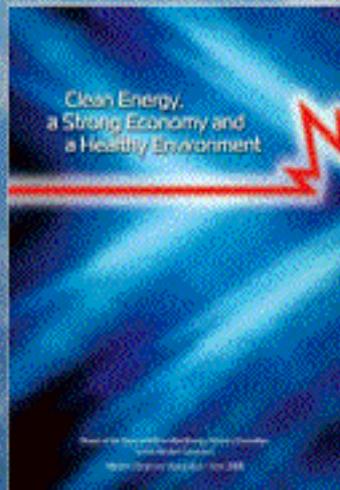
### Part I Current Year Credit

<b>Electricity produced at qualified facilities using wind, closed-loop biomass not modified for co-fire purposes, geothermal, and solar</b>			
1	Kilowatt-hours produced and sold (see instructions)	0.019	1
<b>Electricity produced at qualified facilities using open-loop biomass, small irrigation power, landfill gas, trash combustion, and hydropower</b>			
2	Kilowatt-hours produced and sold (see instructions)	.01	2
3	Add lines 1 and 2		3
4	Phaseout adjustment (see instructions)	\$	4
5	Subtract line 4 from line 3		5
<b>Refined coal produced at a qualified refined coal production facility</b>			
6	Tons produced and sold (see instructions)	\$5.679	6
7	Phaseout adjustment (see instructions)	\$	7
8	Subtract line 7 from line 6		8
<b>Indian Coal produced at a qualified Indian coal production facility</b>			
9	Tons produced and sold (see instructions)	\$1.50	9
10	Credit before reduction. Add lines 5, 8, and 9		10
<b>Reduction for government grants, subsidized financing, and other credits:</b>			
11	Total of government grants, proceeds of tax-exempt government obligations, subsidized energy financing, and any federal tax credits allowed for the project for this and all prior tax years (see instructions)		11
12	Total of additions to the capital account for the project for this and all prior tax years		12
13	Divide line 11 by line 12. Show as a decimal carried to at least 4 places		13
14	Multiply line 10 by the lesser of 1/2 or line 13		14
15	Subtract line 14 from line 10		15
<b>Electricity produced at qualified closed-loop biomass facilities modified to co-fire with coal, other biomass, or both</b>			
16	Thermal content of closed-loop biomass used in the facilities		16
17	Thermal content of all fuels used in the facilities		17
18	Divide line 16 by line 17. Show as a decimal carried to at least two places		18
19	Kilowatt-hours produced and sold (see instructions)	0.019	19
20	Multiply line 19 by line 18		20
21	Phaseout adjustment (see instructions)	\$	21

2.0 cents/Kwh adjusted for inflation each year and can be worth about 3.4 cents/Kwh produced as credit on Form 8835

- Turbines must be placed in service and produce electricity before the expiration date of the PTC then in effect.
- NPV value is worth about 33% of capital cost of a typical project
- PTC gets IRS “haircuts” for project subsidies such as:
  - state credits
  - tax exempt financing
  - some other kinds of credits

## Western Governors Unanimously Adopt CDEAC Report Recommendations



Western Governors set forth several National Policy Recommendations, including the following:

**Renewable Energy:** Extend the long-term (10 years) production tax credit and investment tax credit across all clean energy technologies, **provide for partnership sharing of tax credits for certain entities such as tribes**, extend and raise the cap on new clean energy bonding authority for non-profits (public power) and Native American tribal authorities, and raise the cap on the residential investment tax credit to \$10,000. (Bold emphasis added)

<http://www.westgov.org/wga/press/plenary1-pr.htm>  
and  
<http://www.westgov.org/wga/publicat/CDEAC06.pdf>



NATIONAL CONGRESS OF AMERICAN INDIANS

The National Congress of American Indians  
Resolution #SAC-06-030

TITLE: Support for Alternative Energy Tax Credit Program for Indian Tribes  
and Indian Organizations

**NOW THEREFORE BE IT RESOLVED**, that the NCAI does hereby urge the United States Congress to adopt legislation that will create a Production Tax Incentive that will allow federally recognized Indian tribes to develop alternative energy sources in an economically feasible manner, by amending the Section 45 of the Internal Revenue Code as follows:

Add a new paragraph at the end of Section 45(d)(3) of 26 USC 45 (relating to additional definitions and special rules) to read as follows:

***PTC Sharing Allowed within a Tribal Joint Venture:***

*In the case of a qualified facility as defined in 26 USC 45 (c)(3) in which one or more of the persons with an ownership interest is an Indian tribe or tribes, the tribal owner or owners may allocate their share of the renewable electricity production credit among the other, non-tribal, taxpaying owner or owners of the production in the gross sales from such facility; and*

**BE IT FURTHER RESOLVED**, that the NCAI urges the U.S. Congress to appropriate the authorized funding to complete the necessary studies for the federal Internal Wind Demonstration Project for wind-hydropower integration; and

## ***110th CONGRESS 1st Session H. R. 1954***

### **SECTION 1. TRANSFER BY INDIAN TRIBAL GOVERNMENTS OF CREDIT FOR ELECTRICITY PRODUCED FROM RENEWABLE RESOURCES.**

#### **“(B) SPECIAL RULE FOR INDIAN TRIBAL GOVERNMENTS -**

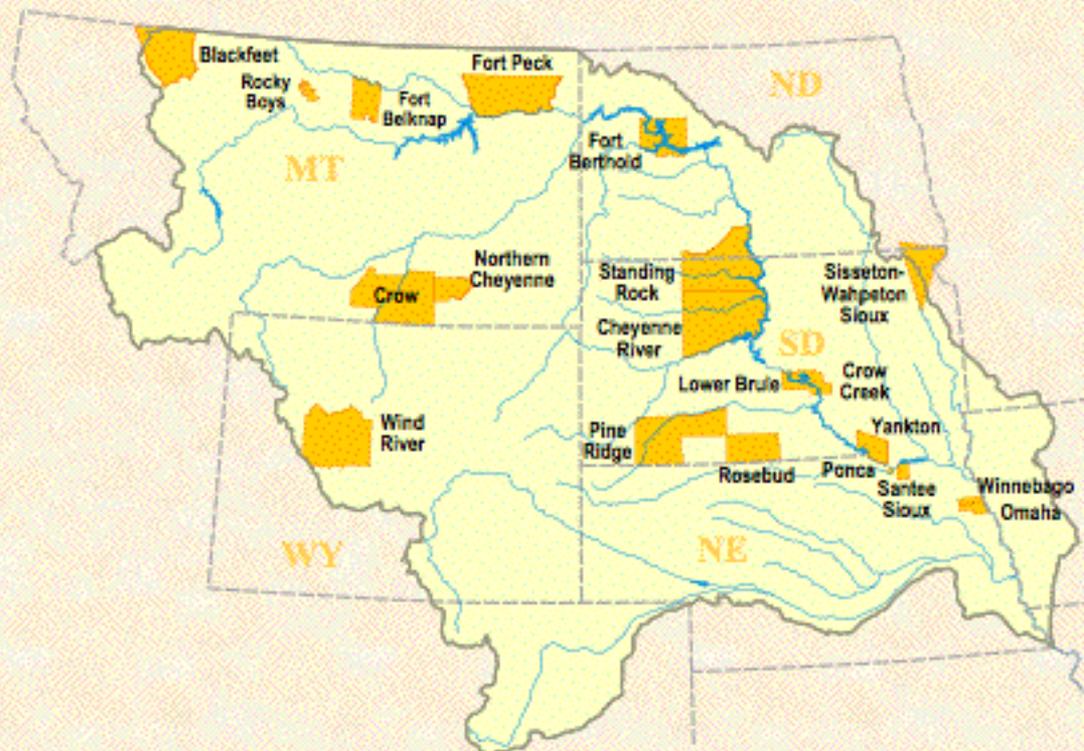
**In the case of a facility described in subparagraph (A) in which an Indian tribal government (within the meaning of section 7871) has an ownership interest in the gross sales from such facility, such government may assign to any other person who has such an ownership interest in such facility any portion of the production from the facility that would (but for this subparagraph) be allocated to such government. Any such assignment may be revoked only with the consent of the Secretary and shall be made at such time and in such manner as the Secretary may provide.**

# Intertribal Wind Development

*"As Individual Fingers We Can Easily Be Broken,  
But Together We Make a Mighty Fist."*



*Sitting Bull*



*So ... "Let Us Put Our Minds Together and  
See What Life We Will Make for Our Children."*



**NATIVEWIND**  
ENERGY INDEPENDENCE  
INTERTRIBAL COUP

# **NATIVEWIND**

**NATIVE WIND POWERING AMERICA**

**[WWW.NATIVEWIND.ORG](http://WWW.NATIVEWIND.ORG)**

American Indian Tribes in the nation's heart land are involved in an unprecedented effort to harness the inexhaustible wind resources of the Great Plains to generate renewable power.

## **Energy Independence Day Campaign:**

- **Cities and Tribes Partnerships to Reduce CO2 Emissions**
- **Recharging the National Renewable Energy Grid (WAPA)**