

Big Stone II

Rising Risk

Lowered Water

Agency Village SD
*March 10, 2008**

By Mary Jo Stueve

Clean Water Action

State Program Coordinator



About Clean Water Action

National organization of more than 1.2 million

of diverse people and groups working together for:

- ❑ **Clean Water** – Assuring supplies of clean, safe and affordable water for all Americans, now and for the future.
 - ❑ **Protecting Health** – Preventing health-threatening pollution at its source.
 - ❑ **Creating Jobs** – Building an economy based on environmentally safe jobs and businesses.
 - ❑ **Making Democracy Work** – Empowering people to take charge of our environmental future.
-



Overview

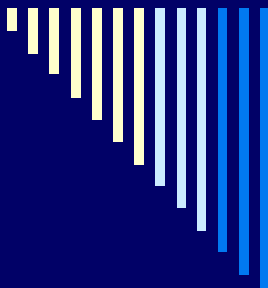
- **Background**

- **Key Issues**

- MERCURY
- CO2 / GLOBAL WARMING
- WATER

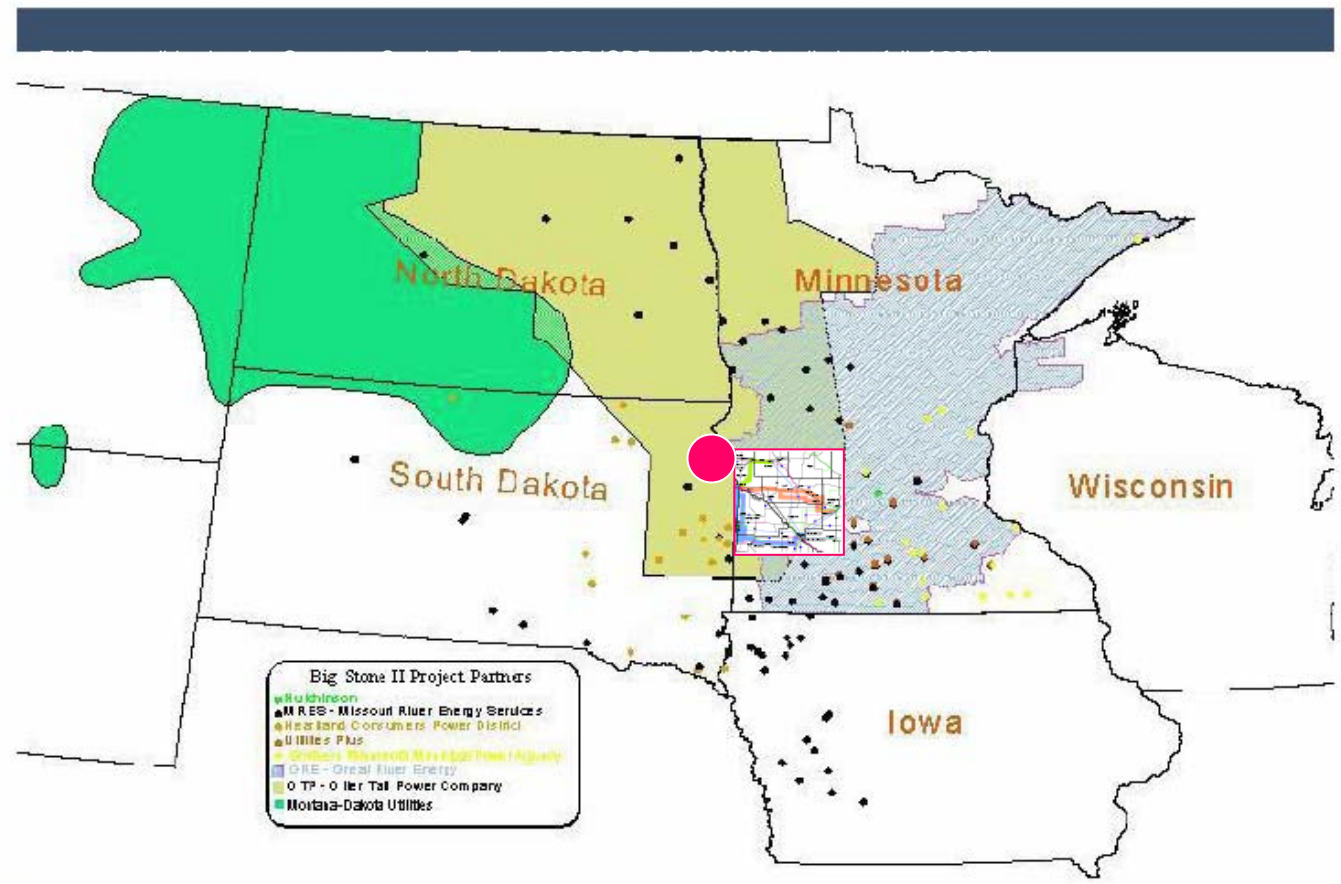
- **Current Status**

- **Questions**



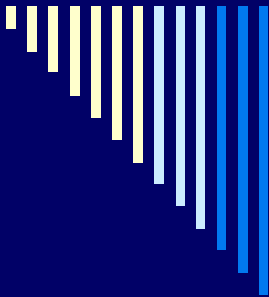
Fall of 2007

Great River Energy (blue shaded) and Southern Minnesota Municipal Power Agency (yellow circles) pull out of Big Stone II raising questions as to 'need' and who is going to pay?

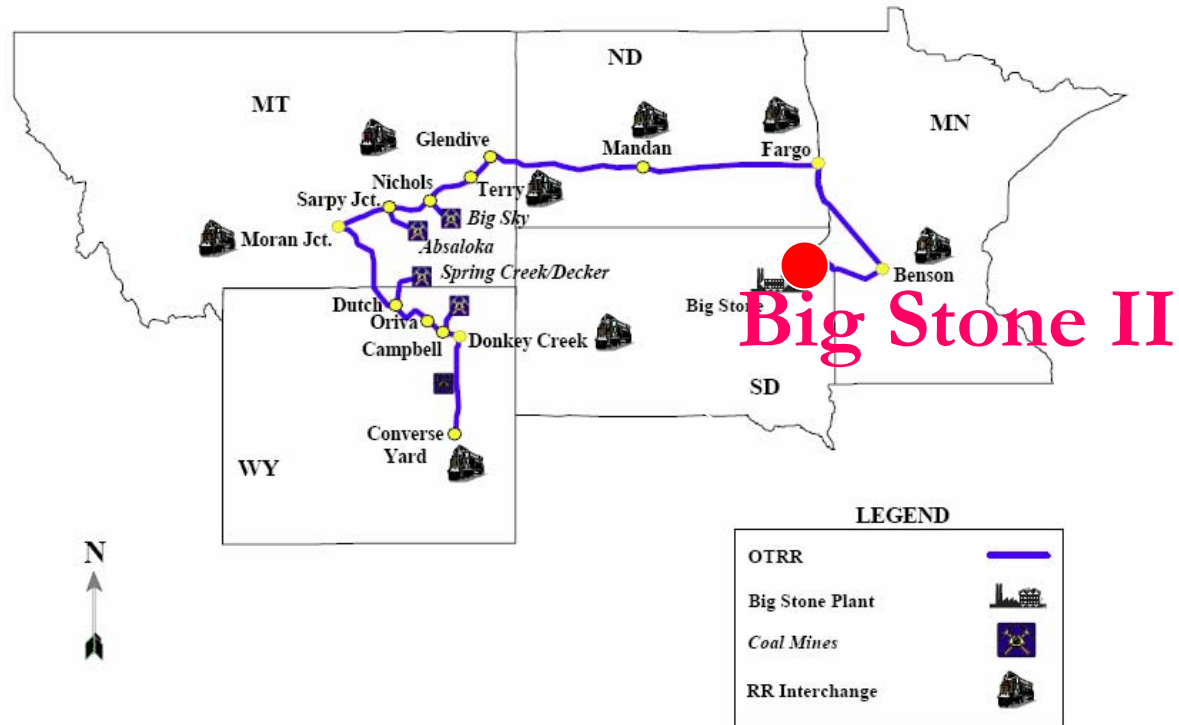


Co-owners' Service Territories 2005

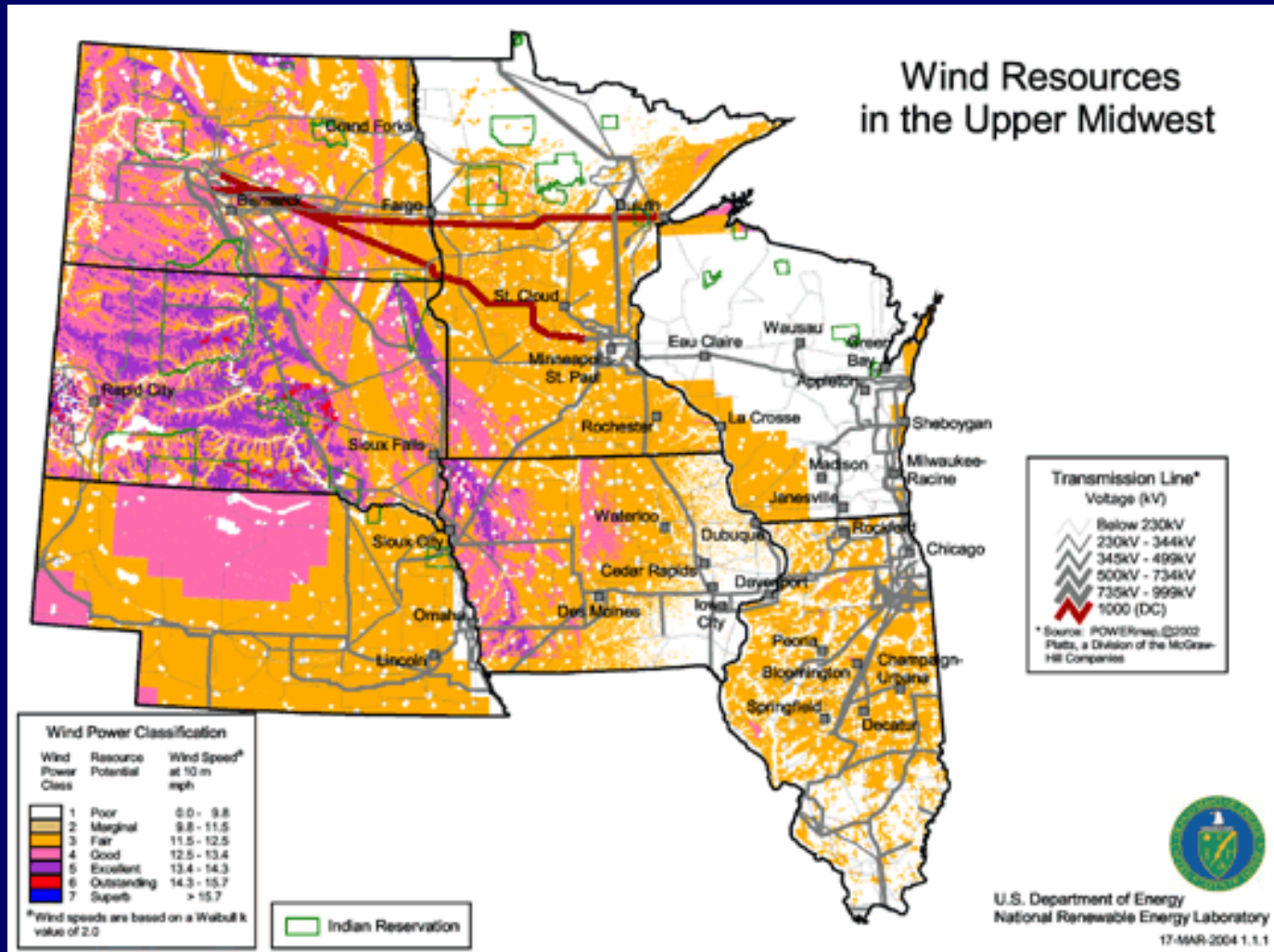
*BSII project area overlaid, not to scale, adapted from <http://www.state.sd.us/puc/commission/dockets/electric/2005/EL05-022/exhibit1a.pdf>

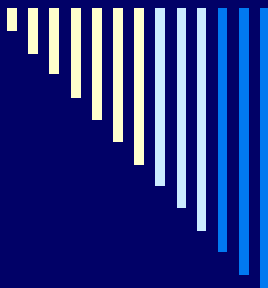


SCHEMATIC OF THE OTTER TAIL RAILROAD
(Excluding Glendive to Snowden)



WIND & RENEWABLES Can Meet the Need for Co-owners Service Territory





WIND & RENEWABLES can meet the need for Co-owners Service Territory with added long-term financial benefits

- Direct Testimony of Marshall R. Goldberg SD PUC EL05-022, 19 May 2006
 - Permanent jobs (direct and indirect):
 - Big Stone II: 64*
 - Comparable Wind: 483
 - Annual contribution to state economy (SD):
 - Big Stone: \$ 6.8 million*
 - Comparable Wind: \$34.9 million
 - Construction jobs (4 year period):
 - Big Stone II: 1210 avg. annually*
 - Comparable Wind: 1002 avg. annually
 - *Assumes 50% construction costs spent in-state
-

Big Stone II: Uncovered

- To Access the Public Electronic Reading Room for the Big Stone II Project Regulatory Site
 - Type: <https://extranet.lindquist.com/bigstone>
 - Username: BSIIPublic
 - Password: Big Stone
 - Security Exchange Commission - OTTR
 - SD PUC EL05-022
 - MN PUC, MN DOC BSII CON 05-619
 - MN Office of Administrative Hearing
 - ND PSC
 - SD DENR WMB 6846-3



[Emissions Control Summary from Otter Tail Power slide]

Emissions Control Summary

- Sulfur dioxide, nitrogen oxides, and mercury emissions from both units are targeted to be less than or equal to Unit I's emissions in 2004.

What's the catch?

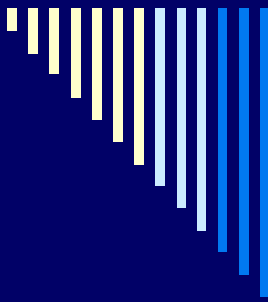
Otter Tail at Public Hearing Milbank (2005) and in the press bragging about having two plants with same amount of mercury (189 pounds per year) as from 2004. Problem? No plan on how to get there, too many loopholes, only a 'target.'



Mercury – potent neurotoxin causing kidney and brain damage

□ Big Stone I and Big Stone II

- Average coal burned per year
4.5 – 5.0 million tons
- Estimated pounds of mercury
present in the coal **639 – 710
pounds** (Otter Tail letter to SD DENR, Dec 2005)



Conservative Estimates for BSII
4.5 million tons CO2
\$19 million per year
to purchase carbon credits

*“To put it less charitably than Moody’s, the investor-owned sector now teeters on the cusp of non-investment grade (junk) status.”**

EL05-022 Testimony (T) on CO2 Cost

Witness / Source	\$ / ton CO2 assuming legislation	Reference
Tielke	\$0/ton	App' Exh 44, at p. 16, lines 21-22 (public version)
Hewson		App' Exh 30, at p. 3, lines 10-14
Greig / MN PUC	\$0.35- \$3.64/ton	T. at p. 339, lines 16-18
Greig	\$3.64	App' Exhibit 23, at p. 11, lines 6-13
Denney	\$5/ton	T. at p. 675, lines 19-22
Hewson, Jr	\$6/ton beginning 2013	Exam by PUC Johnson T. at p. 577-78, lines 12-25; 1-7.
Hewson, Jr	Considerably < \$14/ton	App' Exhibit 30, at p. 28, lines 4-5
Greig	'Breakeven' for investor-owned \$14/ton	Exam by PUC Johnson T. at p. 346-47, lines 13-25; 1-7; App' Exh 13-A, Section 6, p. 6-3
Schlissel & Sommer	Midpoint, leveled \$19.10/ton	T. at p. 726, lines 5-17
Greig	'Breakeven' for public power-ownership \$23/ton	Exam by PUC Johnson T. at p. 346-47, lines 13-25; 1-7; App' Exh 13-A, Section 6, p. 6-3

SD PUC EL05-022 Application for Reconsideration II, Stueve 8/14/2006

<http://www.state.sd.us/puc/commission/dockets/electric/2005/el05-022/ApplicationforReconsiderationII.pdf>

Operative CO2 Emissions Markets

CCX Carbon Financial Instrument (CFI) Contracts Prices quoted in \$ / ton ⁷		ECX Carbon Financial Instrument Futures (CFI) Market Prices quoted in € / metric tonne ⁸ =USD	
Date	Close at	Date	Price
Dec 2003	.98		Dec Sett
Dec 2004	\$1.68	4/22/05	16.85 = \$21.43
Dec 2005	\$1.75	12/30/05	21.70 = \$27.60
			Front Sett
Jan 2006	\$1.90		26.05 = \$33.12
Feb 2006	\$2.05		25.95 = \$32.99
Mar 2006			34.27
Apr 2006			13 = \$16.91
May 2006		05/31/06	17.05 = \$21.67
Jun 2006		06/30/06	16.65 = \$19.90
Jul 2006		07/31/06	19.95 = \$20.40
			21.70 = \$25.68



2006

Otter Tail Power est.

CO2

\$0.0 - \$3.64 per ton

European CO2 price

March 2008

\$32.00 per ton



WATER USE & COAL

Call for Nation to Nation Consultation and Reconvening of the South Dakota Minnesota Boundary Waters Commission Now!

Grant County Review, Milbank, "Sioux Tribes Oppose Use of Ground Water for Big Stone II" November 21, 2007

West Central Tribune, Willmar, Letter: "The Impact of Big Stone II," Published February 1, 2008, - Clean Water Action joins the Minnesota River Board in urging Governor Pawlenty and Rounds to reconvene the Boundary Waters Commission for Big Stone Lake ("Board: Minn. should have a say in water appropriation for Big Stone II," 29 January 2008, West Central Tribune).



Big Stone Lake – 3 foot drop?

- ❑ 3.2 billion gallons per year water permit to draw from Big Stone Lake
- ❑ 3.2 billion gallons per year groundwater permit from the Veblen Aquifer
- ❑ Dismissed the dry cooling option, which would have required no additional water use
- ❑ 1970's agreement says Otter Tail can take water if lake \geq mean sea level 965 Oct – Apr
- ❑ Current operating water level = 968
- ❑ Worse case scenario = 3 foot drop

Sources: Water Use by Power Plants in the Arid West 2002 <http://www.catf.us/publications/view/18>

Letter from Mark Rölfes to SD PUC Semi-Annual Report

<http://www.state.sd.us/puc/commission/dockets/electric/2005/el05-022/ltr011607.pdf>

SD DENR, Water Rights Program Administrative record for Application No. 6846-3 through May 14, 2007, posted May 18, 2007, p8-9 of 214, <http://www.state.sd.us/denr/DES/WaterRights/wmb/6846-3.htm> , accessed February 5, 2008



Veblen Aquifer – sold for how much?

- ❑ Otter Tail Power paid \$2,325 permit fee
- ❑ 10,000 acre-feet per year, equal to
- ❑ 3.2 billion gallons per year
- ❑ Like plopping a city the size of Sioux Falls and its water use into Grant County
- ❑ In South Dakota, the ‘water belongs to the people’ ...who dropped the ball?

Collective ACTION!



**Big Stone II concerns Native Americans
Environmental issues raised at forum
discussing South Dakota power plant**
By [Tom Hintgen](#) ([Contact](#)) | The Daily Journal
Published Thursday, March 6, 2008



"At a Glance" Big Stone II Regulatory Hurdles as of Feb. 2008

Regulatory Hurdle	Status	Comments	Further Info/Links
Big Stone II PSD (Air Quality) Permit There has been a challenge mounted to the EPA's fast track approval of South Dakota's authority to issue the Air Quality Permit to BSII (making it a local state decision rather than a Federal one). Comments on Air Quality Permit itself are currently being solicited. The timeline for when or if the permit will be issued is still up in the air.	On Feb. 19 th 2008, The Sierra Club petitioned the U.S. Court of Appeals for a review of the EPA's decision to grant South Dakota authority to issue the BSII Air quality permit. The Sierra Club is also submitting comments on the actual PSD permit itself. These are due by Feb. 29 th 2008.	If South Dakota's authority to issue the air quality permit is upheld, South Dakota will most likely approve the permit as it has done with every other permit that the BSII partners have asked for. However, the Sierra Club's recent petition may cause delays and there are other potential delays and increased costs to BSII partners stemming from the recent U.S. Court of Appeals Ruling striking down the EPA's cap and trade program for mercury, which directly impacts BSII.	Bruce Nilles Sierra Club Casia Keams 612-659-9124 ext. 310
WAPA (Western Area Power Administration) Supplemental Draft Environmental Impact Statement (SDEIS)	Comments on the Supplemental Draft EIS due by Feb. 28, 2008. Final EIS will be issued in late summer 2008, but no further comment will be allowed. It will be released then and acted upon by WAPA.	WAPA is considered to be friendly to the coal fired power industry. Hundreds of comments have been submitted by citizens decrying the water draw down threat to the MN River. The Minnesota DNR has submitted a letter that can be viewed by clicking here . Your comments to WAPA can be submitted by clicking here .	Mary Jo Stueve Clean Water Action
Minnesota Public Utilities Commission (PUC) Certificate of Need for Transmission lines into Minnesota from BSII	Administrative Law Judge (ALJ) Report due in March 2008. Vote by PUC may come in early April 2008	The MN PUC could approve, approve with conditions, or reject the Certificate of Need (CON) Application. If the CON is approved, an appeal is likely. A summary of recent damaging testimony provided to the ALJ during the BSII hearings can be viewed by clicking here .	Beth Goodpaster, Chuck Laszewski, Minnesota Center for Environmental Advocacy
Convening of the South Dakota - Minnesota Boundary Waters Commission	Requires an order by the Governors to reconvene the now defunct commission that was established originally to work out water draw issues between the two states for the original Big Stone I plant	Governor Pawlenty of MN and Governor Rounds of South Dakota are more interested in seeing Big Stone II get constructed than they are in facilitating interstate water rights negotiations. Minnesota DNR staff and other water specialists have expressed serious concerns about the proposed water draw down. Expect public scrutiny to heat up on this issue in the coming months.	CURE Patrick Moore Clean Water Action Mary Jo Stueve
'Advanced Determination of Prudence' by the Montana Dakota Utilities (MDU) and Otter Tail Power (OTP) before the North Dakota Public Service Commission (PSC).	Following the withdrawal of 2 investors, MDU and OTP filed an amended application in ND. The new hearing is scheduled for 4/28 - 4/30/08.	The ND PSC has expressed concern about the following facts on BSII: (1) use of WY - not ND - coal; (2) single rail line; (3) escalating construction costs; (4) displacement of potential ND energy being transmitted to MN. There is little in-state pressure to approve the application.	Carrie La Seur Plains Justice

Patrick Moore, Executive Director, Clean Up the River Environment, Feb 2008 www.curemnriver.org

Honor the Earth, Take Action Flyer on Big Stone II http://www.honorearth.org/media/pdfs/whatsnew/BS2_Flyer3.08.pdf



A PEBBLE

JAMES W. FOLEY (1847-1939)

DROP A PEBBLE IN THE WATER:
JUST A SPLASH, AND ITS GONE;
BUT THERE'S HALF-A-HUNDRED RIPPLES
CIRCLING ON AND ON,
SPREADING, SPREADING FROM THE CENTER
FLOWING ON OUT TO THE SEA.
AND THERE IS NO WAY OF TELLING
WHERE THE END IS GOING TO BE.

DROP A PEBBLE IN THE WATER:
IN A MINUTE YOU FORGET,
BUT HERE'S LITTLE WAVES A FLOWING,
AND THERE'S RIPPLES CIRCLING YET,
AND THOSE LITTLE WAVES A FLOWING
TO A GREAT BIG WAVE HAVE GROWN;
YOU'VE DISTURBED A MIGHT Y RIVER
JUST BY DROPPING IN A STONE.



QUESTIONS?

CLEAN WATER ACTION

Our water. Our health. Our future.

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