

## Sierra Club - Lost Coal Plant Jobs

Sierra Club Plants List By State/Plant	Plant Type	MW	Jobs/GWh	Permanent Jobs Prevented	Permanent Jobs By State	Construction Jobs Prevented	Construction Jobs By state	Total Jobs Prevented
<b>Alaska</b>					<b>904</b>		<b>8,007</b>	<b>8,911</b>
Matanuska	CFB	100	0.18	126		1,347		1,473
Nuvista	unknown	100	0.18	126		1,298		1,424
Arctic Slope	unknown	50	0.18	63		649		712
Agrium	CTG	350	0.24	589		4,713		5,302
<b>Arizona</b>					<b>1,009</b>		<b>8,079</b>	<b>9,088</b>
Bowie	IGCC	600	0.24	1,009		8,079		9,089
<b>Colorado</b>					<b>5,243</b>		<b>50,377</b>	<b>55,620</b>
AES Power	unknown	640	0.18	807		8,307		9,114
Buick	Subcritical	500	0.18	631		6,490		7,121
DOE	CFB	150	0.18	189		2,020		2,209
High Plains	unknown	600	0.18	757		7,788		8,545
Tri-state	Subcritical	1000	0.18	1,261		12,980		14,241
Xcel	IGCC	350	0.24	589		4,713		5,302
Xcel	IGCC	600	0.24	1,009		8,079		9,089
<b>Delaware</b>					<b>1,060</b>		<b>8,483</b>	<b>9,543</b>
Indian River	IGCC	630	0.24	1,060		8,483		9,543
<b>Florida</b>					<b>6,959</b>		<b>68,096</b>	<b>75,055</b>
Orange County	IGCC	285	0.24	479		3,838		4,317
Seminole	Supercritical	750	0.18	946		9,735		10,681
Southern	Supercritical	787	0.18	993		10,215		11,208
Taylor	Supercritical	800	0.18	1,009		10,384		11,393
Polk	IGCC	630	0.24	1,060		8,483		9,543
Glades	Ultra-supercritical	1960	0.18	2,472		25,440		27,913
<b>Iowa</b>					<b>2,269</b>		<b>23,351</b>	<b>25,620</b>
Chikasaw	unknown	400	0.18	505		5,192		5,697
Elk Run	Subcritical	750	0.18	946		9,735		10,681
Sutherland	Supercritical	649	0.18	819		8,424		9,243
<b>Idaho</b>					<b>1,493</b>		<b>14,521</b>	<b>16,013</b>
Idaho Power	IGCC	250	0.24	420		3,366		3,787
Mountain Island	CFB	250	0.18	315		3,366		3,682
Sempra	unknown	600	0.18	757		7,788		8,545
<b>Illinois</b>					<b>12,653</b>		<b>113,959</b>	<b>126,612</b>
Clean Coal	IGCC	2400	0.24	4,037		32,318		36,354
Cornbelt	LEBS	91	0.18	115		1,225		1,340
Dynegy	unknown	1300	0.18	1,640		16,874		18,514
Enviropower	CFB	600	0.18	757		8,079		8,836
FutureGen	IGCC	275	0.24	463		3,703		4,166
Illinois Energy Group	unknown	1500	0.18	1,892		19,470		21,362
Indeck	CFB	600	0.18	757		8,079		8,836
Madison	IGCC	600	0.24	1,009		8,079		9,089
MGP	Subcritical	50	0.18	63		649		712
Rentech	IGCC	76	0.24	128		1,023		1,151
SIUC	IGCC	225	0.24	378		3,030		3,408
Steelhead	IGCC	545	0.24	917		7,339		8,255
Turriss	unknown	35	0.18	44		454		498
United Supply	CFB	270	0.24	454		3,636		4,090
<b>Indiana</b>					<b>1,774</b>		<b>15,890</b>	<b>17,664</b>
Enviropower	CFB	500	0.18	631		6,733		7,364
Tondu	IGCC	630	0.24	1,060		8,483		9,543
Purdue	CFB	50	0.24	84		673		757
<b>Kansas</b>					<b>1,053</b>		<b>10,838</b>	<b>11,891</b>
Kansas BPU	Subcritical	235	0.18	296		3,050		3,347

Westar	Subcritical	600	0.18	757		7,788		8,545
<b>Kentucky</b>					<b>3,350</b>		<b>35,473</b>	<b>38,824</b>
Mountain Power	unknown	600	0.18	757		7,788		8,545
Smith 1	CFB	278	0.18	351		3,743		4,094
Smith 2	CFB	278	0.18	351		3,743		4,094
Thoroughbred	CFB	1500	0.18	1,892		20,199		22,091
<b>Louisiana</b>					<b>1,558</b>		<b>16,288</b>	<b>17,846</b>
Big Cajun II	Supercritical	705	0.18	889		9,151		10,040
Little Gypsy	CFB	530	0.18	669		7,137		7,805
<b>Massachusetts</b>					<b>505</b>		<b>5,192</b>	<b>5,192</b>
Sparrow	unknown	400	0.18	505		5,192		5,697
<b>Maine</b>					<b>1,177</b>		<b>9,426</b>	<b>9,426</b>
Twin River	IGCC	700	0.24	1,177		9,426		10,603
<b>Michigan</b>					<b>5,066</b>		<b>48,521</b>	<b>53,587</b>
Lansing	unknown	350	0.18	442		4,543		4,984
Northern Lights	unknown	425	0.18	536		5,516		6,053
Consumers Karn	Supercritical	930	0.18	1,173		12,071		13,244
Escanaba	unknown	300	0.18	378		3,894		4,272
Midland	Supercritical	758	0.18	956		9,839		10,795
NMU Ripley	CFB	10	0.24	17		135		151
Great Lakes	IGCC	750	0.24	1,261		10,099		11,361
TES Filer	IGCC	180	0.24	303		2,424		2,727
<b>Minnesota</b>					<b>694</b>		<b>7,139</b>	<b>7,139</b>
Xcel	unknown	550	0.18	694		7,139		7,833
<b>Missouri</b>					<b>900</b>		<b>9,105</b>	<b>10,005</b>
AEC Norborne	Subcritical	660	0.18	833		8,567		9,399
University	CFB	40	0.24	67		539		606
<b>Montana</b>					<b>10,975</b>		<b>103,127</b>	<b>114,102</b>
Bechtel	IGCC	3000	0.24	5,046		40,397		45,443
Highwood	CFB	250	0.18	315		3,366		3,682
Nelson Creek	CFB	500	0.18	631		6,733		7,364
Roundup	Subcritical	750	0.18	946		9,735		10,681
Broadview	unknown	200	0.18	252		2,596		2,848
Crow Nation	CTG	2800	0.18	3,532		37,704		41,236
Yellowstone	unknown	200	0.18	252		2,596		2,848
<b>North Dakota</b>					<b>1,482</b>		<b>15,579</b>	<b>17,061</b>
Gascoyne	CFB	175	0.18	221		2,357		2,577
Gascoyne	CFB	500	0.18	631		6,733		7,364
Milton	unknown	500	0.18	631		6,490		7,121
<b>New Jersey</b>					<b>820</b>		<b>8,437</b>	<b>8,437</b>
West Deptford	Subcritical	650	0.18	820		8,437		9,257
<b>New Mexico</b>					<b>2,271</b>		<b>23,364</b>	<b>25,634</b>
Desert Rock	Supercritical	1500	0.18	1,892		19,470		21,362
Mustang	Subcritical	300	0.18	378		3,894		4,272
<b>Nevada</b>					<b>6,660</b>		<b>68,534</b>	<b>75,194</b>
Ely	Supercritical	1500	0.18	1,892		19,470		21,362
Granite Fox	Subcritical	1450	0.18	1,829		18,821		20,650
Tuquop	Supercritical	750	0.18	946		9,735		10,681
White Pine	Supercritical	1580	0.18	1,993		20,508		22,501
<b>New York</b>					<b>1,552</b>		<b>13,439</b>	<b>14,991</b>
Huntley	IGCC	680	0.24	1,144		9,157		10,300
Lackawanna	CTG	18	0.24	30		242		273
Russell	CFB	300	0.18	378		4,040		4,418
<b>Ohio</b>					<b>7,315</b>		<b>63,056</b>	<b>70,371</b>
American	Subcritical	960	0.18	1,211		12,461		13,672
Ashtabula	IGCC	830	0.24	1,396		11,177		12,573
Dominion	Subcritical	600	0.18	757		7,788		8,545
Great Bend	IGCC	600	0.24	1,009		8,079		9,089
Lima	CTG	600	0.24	1,009		8,079		9,089
Ironton	CTL or IGCC	299	0.24	503		4,026		4,529
Lawrence	IGCC	850	0.24	1,430		11,446		12,876

<b>Oklahoma</b>					<b>3,772</b>		<b>38,810</b>	<b>42,581</b>
AES	Supercritical	630	0.18	795		8,177		8,972
Hugo 2	Supercritical	750	0.18	946		9,735		10,681
Sallisaw	Subcritical	660	0.18	833		8,567		9,399
Red Rock	Supercritical	950	0.18	1,198		12,331		13,529
<b>Oregon</b>					<b>875</b>		<b>7,002</b>	<b>7,877</b>
Lower Columbia	IGCC	520	0.24	875		7,002		7,877
<b>Pennsylvania</b>					<b>1,129</b>		<b>11,863</b>	<b>12,992</b>
Beech Hollow	CFB	250	0.18	315		3,366		3,682
River Hill	CFB	290	0.18	366		3,905		4,271
Schuylkill	CTL	41	0.24	69		552		621
Sithe	Cogen	300	0.18	378		4,040		4,418
<b>South Carolina</b>					<b>2,296</b>		<b>23,623</b>	<b>25,919</b>
Marion	Subcritical	500	0.18	631		6,490		7,121
Pee Dee	Supercritical	1320	0.18	1,665		17,133		18,798
<b>South Dakota</b>					<b>1,514</b>		<b>15,576</b>	<b>17,090</b>
Milbank	Supercritical	500	0.18	631		6,490		7,121
Walworth	Subcritical	700	0.18	883		9,086		9,969
<b>Texas</b>					<b>11,203</b>		<b>110,861</b>	<b>122,065</b>
NRG	IGCC	550	0.24	925		7,406		8,331
Twin Oaks	unknown	600	0.18	757		7,788		8,545
Nueces	IGCC	600	0.24	1,009		8,079		9,089
Big Brown	Supercritical	858	0.18	1,082		11,137		12,219
Lake Creek	Supercritical	858	0.18	1,082		11,137		12,219
Martin Lake	Supercritical	858	0.18	1,082		11,137		12,219
Monticello	Supercritical	858	0.18	1,082		11,137		12,219
Morgan Creek	Supercritical	858	0.18	1,082		11,137		12,219
Tradinghouse	Supercritical	1600	0.18	2,018		20,768		22,786
Valley 4	Supercritical	858	0.18	1,082		11,137		12,219
<b>Utah</b>					<b>3,455</b>		<b>36,227</b>	<b>39,682</b>
Bonanza	CFB	110	0.18	139		1,481		1,620
Consolidated	Cogen	109	0.18	137		1,468		1,605
Green River	unknown	500	0.18	631		6,490		7,121
Hunter 4	unknown	850	0.18	1,072		11,033		12,105
Intermountain Power	CFB	900	0.18	1,135		12,119		13,254
NEVCO	CFB	270	0.18	341		3,636		3,976
<b>Virginia</b>					<b>1,009</b>		<b>10,384</b>	<b>11,393</b>
LS Power	unknown	800	0.18	1,009		10,384		11,393
<b>Washington</b>					<b>6,010</b>		<b>55,314</b>	<b>61,324</b>
Composite	unknown	2500	0.18	3,154		32,450		35,603
Wallula	IGCC	915	0.24	1,539		12,321		13,860
Energy Northwest	IGCC	783	0.24	1,317		10,544		11,861
<b>Wisconsin</b>					<b>662</b>		<b>7,057</b>	<b>7,720</b>
Cassville	CFB	200	0.18	252		2,693		2,945
Cassville/Nelson Dewey	CFB	300	0.18	378		4,040		4,418
Charter Street	Subcritical	25	0.18	32		324		356
<b>West Virginia</b>					<b>1,720</b>		<b>15,321</b>	<b>17,041</b>
Greenbrier	CFB	75	0.18	95		1,010		1,105
New Haven	IGCC	629	0.24	1,058		8,470		9,528
Upshur	unknown	450	0.18	568		5,841		6,409
<b>Wyoming</b>					<b>4,485</b>		<b>38,067</b>	<b>42,552</b>
Rentech	CTL	104	0.24	175		1,400		1,575
Two Elk 2	Supercritical	750	0.18	946		9,735		10,681
Jim Bridger	IGCC	500	0.24	841		6,733		7,574
Buffalo	IGCC	1100	0.24	1,850		14,812		16,662
Pacificorp	IGCC	400	0.24	673		5,386		6,059
<b>Total</b>					<b>116,872</b>	<b>1,118,386</b>		<b>1,235,258</b>

**Notes:**

**Permanent Operation and Maintenance Jobs**

Data include direct, induced and indirect jobs.

"Circulating Fluidized Bed," "Cogen," and "unknown" plant types assumed to have similar employment impacts as sub, super, and ultra-super critical PC plants.

All other plant types assumed to have similar employment impacts as IGCC plants.

**Coal Generation Employment**

These numbers are based on an analysis Employment Impacts Associated with Electric Generation Options (October 2009) by Energy Ventures Analysis, Inc (EVA).

Onsite direct operation jobs assume NETL Cost and Performance Baseline for Fossil-Energy Plants. (May 2007) labor cost and salaries at \$102,300/ty (\$66,000/yr salary).

EVA assumption of 50% of maintenance cost is labor. Same labor rates as above.

Limestone cost from NETL May 2007 Study. EVA study results that found 35% of Limestone cost is labor. Salary rate of \$52,000/yr (\$70,000/yr total burden cost).

Chemical cost from NETL May 2007 Study. EVA study results that found 25% of Limestone cost is labor. Salary rate of \$52,000/yr (\$70,000/yr total burden cost).

Fuel cost from NETL May 2007 Study usage divided by 2007 MSHA ILB underground mine productivity rate (3.63 tons/man-hour). Surface mine productivity would be 4.92 tons/man-hour or at 74% of employment level.

Transport assumes 25 ton truckloads traveling 40-50 miles to plant (2.5 hours/round trip).

Induced jobs assumed to be 50% of the direct and indirect jobs.

**Employment per GWh**

Capital cost for fossil generation alternatives from NETL 2007 study.

Capacity factor assumptions from EVA as typical rates for new powerplants.

**Construction Jobs**

**Coal based alternatives**

DOE Cost from NETL Report Cost and performance Baseline for Fossil Energy Plants (May 2007) divided by industry labor rates.

Labor rates from RSMMeans Heavy Construction Cost Data-2006.

	Burden Salary	Salary (RS Means)
Construction	\$90,000 per man-yr	\$68,000
Engineering	\$140,000 per man-yr	\$85,000

10% Material cost % associated with Labor

30% Conventional Equipment cost % associated with labor

40% Turbine Equipment cost % associated with labor

35% HRSG/Boiler Equipment cost % associated with labor

50% of additional jobs supported for each direct/indirect job created