

Desert Rock Power Plant

1 Summary Issues

Both scientific studies (IPCC and others) and the economic study by Stern point to the next decade as being a crucial period during which serious green house gas mitigation must be instituted, or serious risks from global warming will result.

Instead of initiating a path for decreasing green house gas emissions in the State, Desert Rock would INCREASE the total net emissions in the State by from 14% to 20% (depending on the estimates). This magnitude of increase could not be counteracted by other mitigation policies for the better part of that crucial decade described above. And in particular, the savings proposed by the Governor to take effect by 2012 are almost exactly the amount that Desert Rock will increase those emissions, once it is fully operational.

Mercury is a serious health hazard in NM, and mercury emissions by Desert Rock will not be controlled by present EPA stance. Uncontrolled, Desert Rock would increase mercury emissions in the state by about 40%.

Overall levels of controlled pollutants will put the 4 Corners region over the top on EPA air quality standards if Desert Rock is built.

The disposal of fly ash from pollution control processes could pose a serious health hazard, but is not a controlled standard.

The accuracy of all the submitted figures for pollutant control at Desert Rock have been seriously questioned by expert testimony from Dine Care, San Juan Citizens Alliance, et al.

The EPA judges Desert Rock on the basis of "Best Available Control Technology", but did not allow comparisons to Integrated Gasification Combined Cycle systems. IGCC is significantly better than the traditional Desert Rock plan ON ALL COUNTS. (For example, mercury can be practically eliminated entirely, CO2 emission is lower, and ultimate CO2 capture is financially feasible.) An IGCC plant would therefore significantly ameliorate the problems associated with building a new electric power plant in the 4 Corners.

An even better alternative to Desert Rock than IGCC is a concentrated solar power system, which has NO environmental downsides. It would also create jobs in the Navajo Nation, just as Desert Rock does.

2 Basic Data (From CCAG Final Report)

2.1 Total Green House Emissions Produced in NM

Million Metric Tons (CO ₂ e)	1990	2000	2010
Energy	62.6	74.2	79.7
Electricity Production	29.5	33.2	33.3
Transportation And Other	33.2	33.7	37.9
Other	5.9	8.7	9.7
Forests, etc.	-20.9	-20.9	-20.9
Net Emissions Produced	47.6	62.0	68.5

Note on table: This data is from CCAG final report, Table 2-1. Data for electric power are for total GHG produced in NM electric power plants. Net emissions are corrected for CO₂ uptake by forests. Units are in million metric tons of CO₂ (equivalent) so all green house gases are on a par.

2.2 Desert Rock Facts and Statistics

Owners: Sithe Global Power of Houston, TX.

Electricity Production: 1500 MW (two 750 MW units), Expected electric energy produced per yr for Desert Rock is 11,169 GWh. Total electric energy produced in NM in 2003 was 32.5 GWh.

Cost: \$2.2 Billion

Fuel: Coal (mine mouth facility)

Location: 580 acres about 30 mi S of Shiprock

CO₂ emissions: 9.23 MMtCO₂e (Mike Eisenfeld estimates this at 13.7 MMtCO₂e or about 50% higher than my source)

Desert Rock is proposed by Sithe in partnership with Dine Power Authority (a Navajo nation enterprise). It will be a “market plant” which means it will sell power to other buyers. Sithe claims prospective buyers will be APS the Salt River Project and PNM (PNM denies they will buy power from Desert Rock). The land is leased to Dine Power and subleased to Sithe. Sithe has brokered a 67% reduction of taxes from the Nation, and is in negotiation with the County for additional tax breaks. A bill is expected to be introduced in the Legislature for substantial relief from State taxes. (Last year, the total amount of such tax relief requested was \$60M over a period of about 5 years.)

2.3 EPA Pollutant Standards, and Sithe Projections

The following table is computed from the Ambient Air Quality Impact Report from the EPA, and is the basis for the EPA hearings on the EPA permit for construction.

Pollutant	Pollutant Production
NOX	.06
SO2	.06
CO	–
VOC	.003
Particulate (PM ₁₀)	.02
Particulate	.01
SO2	.004
Mercury	.057 tons/yr if controls required
Mercury	0.277 tons/yr if not controlled
Current mercury from 4Corners	.678 tons/yr

Notes on Table:

Units of production are pounds per million BTU, except for mercury which are in tons per year. This mercury entry is equivalent to 80% scrubber action on stack gases.

Each of the entries has been submitted by Sithe, and has initial approval by EPA on the basis of Best Available Control Technology (BACT) in comparison with recent experience in the industry. In every case, the figures submitted exceeded the BACT, as determined by EPA.

Every one of the entries has been intensely criticized and challenged in the unified comments to EPA by Dine Care, San Juan Citizens Association, et al. See that document for details.

Mercury is a special case. Mercury emission is listed by Sithe as “if required”, but EPA is so far silent on a Mercury standard for Desert Rock. So two figures listed: the first is that quoted by Sithe if control is required, and that an estimate if no mercury removal occurs, based on industry mercury control practice. For comparison, current emissions by existing plants in the 4Corners region are listed.

CO is controlled by “good burning practice”, and is not a standard.