

Iatan 2 Coal Plant (KCP&L)

Capacity (in MW):	850	Time to build: 5 years (8 years from initial permitting commencement)																									
Installed Cost:	1,319,200,000	Expected to be operational in 2010; source of cost estimate figures below: public testimony.																									
Homes Powered:	700,000																										
Assumed kWh per home per month:	753	Assumes 85% availability of coal plant																									
Change in residential electric rates:	17.5%	Average of 15-20% range estimated by KCP&L (goes into effect 2009) + a fuel adjustment charge																									
Fuel Adjustment charge impact to electric rates:	2.0%	Goes into effect in 2015																									
Cost per MW	\$1,552,000																										
Cost per MW (in Millions)	\$1.6																										
Average Nationwide Residential electric bill in 2001	\$104	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Average annual increase in electric rates (without wind)	2.0%	\$	104	\$	106	\$	108	\$	110	\$	113	\$	115	\$	117	\$	119	\$	122	\$	124	\$	127	\$	129	\$	132
Average Nationwide Residential electric bill in 2010	\$124																										

Electric Bill impact to KC area customers:	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	\$ 113	\$ 115	\$ 117	\$ 119	\$ 143	\$ 146	\$ 149	\$ 152	\$ 155	\$ 158	\$ 164	\$ 171	\$ 178	\$ 185	\$ 192	\$ 200	\$ 208	\$ 216	\$ 225	\$ 234	\$ 243
	17.5%					2.0%					2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Wind Farm

Capacity Factor assumed:	43%													
Homes Powered:	700,000													
kWh per month per home needed:	753													
kWh per year needed:	6,329,100,000													
MWh per year needed:	6,329,100													
Size of Wind Farm needed (in MW):	1,680	Time to build: 1 year (2 years from initial permitting commencement); assumes it is online by 2006												
Cost per MW of Wind Farm (in Millions):	\$1.0	\$0.6	Million per MW less than Iatan 2											
Installed Cost:	\$1,680,232,558													
Additional cost of Wind versus Iatan 2:	(\$361,032,558)													
Average annual increase in electric rates (with wind):	1.0%	Wind included in the generation portfolio of a utility or region acts as a strong anchor to rising fossil fuel based energy costs												
Change in residential electric rates:	0%													
Fuel Adjustment charge impact to electric rates:	0%													
Electric Bill impact to KC area customers:														
Difference (Wind vs. Iatan 2) per month to KC area customers:		Avg per Yr		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Monthly change for avg KC area customer from 2005 thru 2025:	(\$968)	(\$48.41)		\$ 113	\$ 114	\$ 115	\$ 116	\$ 117	\$ 118	\$ 119	\$ 121	\$ 122	\$ 123	\$ 124
Annual change for avg KC area customer from 2005 thru 2025:	(\$11,619)	(\$580.94)		\$0	(\$1)	(\$2)	(\$3)	(\$26)	(\$28)	(\$29)	(\$31)	(\$33)	(\$35)	(\$40)
Total cost of increased energy bills to KC area customers due to Iatan2	\$8,133,173,903													
Healthcare costs per KCPL customer that would be avoided	\$1,485,555,556	\$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37 \$ 37												
Total cost of Iatan 2 to ALL KC area customer by 2025:	\$9,257,696,900	Includes the increased rates paid by all customers every month thru 2025, less the higher initial cost of the wind farm.												

Notes:

Transmission costs may be slightly higher for wind than the estimated transmission upgrades required by KCPL for coal, but most of these costs are absorbed in the \$1Million per MW figure for wind (already included).

"There are 1,237 heart attacks; 94 lung cancer deaths; 16,000 asthma attacks; all each year in our state, all attributed to these dirty power plants," said Charles E. Gillam of the Sustainable Sanctuary Coalition of the Greater Kansas City Area

"You have letters from the American Lung Association. You know the terrible results of permanent brain damage by methylmercury toxicity," Gillam said. "This poison affects over one half a million babies a year in our country. Coal-burning power plants are the major contributor."

	MW	Cost
Total	850	1,319,200,000
KCPL Owned	500	776,000,000
	58.8%	58.8%

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Missouri Public Service Commission

Exhibit No. 6  
Case No(s). EO-2005-0329  
Date 6-23-05 Rptr KF

Total Nationwide estimated Health costs of burning coal & fossil fuels

	2005 thru 2025	Per Year	Source
Environmental Pollution (mercury, lead, cadmium, etc.)	\$ 1,100,000,000,000	\$ 55,000,000,000	The Center for Children's Health & the Environment & The Dept of Community & Preventive Medicine, Mount Sinai School of Medicine, New York, July 2002: <a href="http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&amp;db=PubMed&amp;dopt=Abstract&amp;list_uids=12117650">http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&amp;db=PubMed&amp;dopt=Abstract&amp;list_uids=12117650</a>
Asthma	\$ 220,000,000,000	\$ 11,000,000,000	Dept of Health & Human Services Action Against Asthma, Strategic Plan, May 2000
Skin Cancer from Ozone hole depletion	\$ 360,000,000,000	\$ 18,000,000,000	American Cancer Society. Natural Capitalism, by Paul Hawken, Amory Lovins, & L. Hunter Lovins, 1999. Planet Earth, German Aerospace Center, with Intro by Robert Hughes, 2002; Union of Concerned Scientists report "The Science of Stratospheric Ozone Depletion." World Health Organization, Fact Sheet Number 261, July 2001. USA Today "Antarctica Ozone Hole Gets Larger" September 26, 2003.
Chronic obstructive pulmonary disease (COPD)	\$ 325,000,000,000	\$ 16,250,000,000	American College of Chest Physicians, 2000 "The Economic Burden of COPD" by Sean D. Sullivan, PhD; Scott D. Ramsey, MD, PhD and Todd A. Lee, PharmD.
	<u>\$ 2,005,000,000,000</u>	<u>\$ 100,250,000,000</u>	
Cost of premature deaths	Impossible to quantify		
Estimated Cost of future litigation to be borne by utilities	\$ 500,000,000	\$ 25,000,000	
U.S. Population	300,000,000		
Kansas City Metro area population	2,000,000	0.67%	
Percent of national costs borne by the KC metro area	\$ 13,370,000,000	\$ 668,500,000	
Number of coal plants in the KC Metro area	9		
Health costs per coal plant	\$ 1,485,555,556	\$ 74,277,778	
Health costs per person	\$ 743	\$ 37	

In the summer of 2004, MSNBC and other media outlets reported a groundbreaking study that was released linking power plant pollution to over 24,000 deaths per year. Americans are dying prematurely due to energy industry pollution at a rate of at least 65 per day from asthma attacks, heart attacks, lung disease, and upper respiratory failure. It is impossible to assign a cost to so many of our neighbors and countrymen dying before their time.

At least eight (8) states are now suing power companies to force them to clean up air emissions. The attorneys general for eight northeastern states and New York City filed a lawsuit in New York state court in 2004 to reduce power plant pollution. They are trying to pressure five large power producers — American Electric Power Company, Southern Company, Xcel Energy Inc., Cinergy Corporation and the federal Tennessee Valley Authority — to clean up their emissions and help curb global warming. The plaintiffs claim those power producers own 174 fossil fuel-burning power plants that produce 646 million tons of carbon dioxide annually, which is about 10 percent of the nation's total. The attorneys general claim greenhouse gases like carbon dioxide could have catastrophic effects, including increased asthma and heat-related illness, depletion of drinking water supplies, a decline in fisheries and erosion of infrastructure. Marc Violette, a spokesman for New York Attorney General Eliot Spitzer, declined to comment Tuesday on details but said the lawsuit would, "for the first time, put global warming on the litigation map. This is a precedent-setting, first-of-its-kind lawsuit," he said. Clearly this lawsuit is the first of what could mimic the tobacco industry litigation