MESABA ENERGY PROJECT

REPORT TO THE MINNESOTA PUBLIC UTILITIES COMMISSION

SECTION VII

COMPENDIUM OF RECENT PUBLICATIONS CONFIRMING IGCC'S PUBLIC INTEREST BENEFITS

EXCELSIOR ENERGY INC.

December 2005

A. OVERVIEW OF SUPPORT FOR INTEGRATED GASIFICATION COMBINED CYCLE TECHNOLOGY

Due to its superior environmental profile and its inherent technological flexibility to meet ever-increasing environmental regulations, there is widespread and growing support for the commercial implementation of IGCC technology in power generation. The following narrative provides an introductory overview of that support. The table of characteristic quotes that follows this narrative provides a non-exhaustive introduction to sources that articulate the myriad benefits associated with IGCC technology. The referenced sources listed in Subsection C were provided to the Commission and the Department of Commerce to allow ready access to these important statements from a broad variety of energy policy stakeholders supporting the conclusion that commercial scale deployment of IGCC for power generation is in the public interest.

1. ECONOMICS

There is extensive support for IGCC technology based on its economic benefits. Cambridge Energy Research Associates (CERA) notes that IGCC is an effective hedge against increasing natural gas prices[1] and heightened carbon regulation.[2] While CERA reports that the North American natural gas supply is becoming increasingly constrained at the same time that competition for that supply is increasing,[3] the National Commission on Energy Policy observes that the United States has proved coal reserves sufficient to last over 250 years at current production levels.[4] Consequently, as a report from the Princeton Environmental Institute states, "Low and stable coal prices stand in sharp contrast to rising and volatile natural gas prices and make coal power options increasingly attractive."[5] Reports from the United States Department of Energy, John F. Kennedy School of Government at Harvard University, American Electric Power, Cinergy and the Center for American Progress argue that IGCC is instrumental to any economically feasible strategy to sequester carbon from coal-fired generation in the future.[6] Therefore, IGCC will enable utilization of the nation's vast coal reserves even with strict standards on carbon emissions.

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[1] CAMBRIDGE ENERGY RESEARCH ASSOCIATES ADVISORY SERVICES, INTEGRATED GASIFICATION COMBINED-CYCLE: CLEAN COAL TECHNOLOGY OF CHOICE OF THE FUTURE? 3 (2004) ("Given the risks associated with both the absolute price level of natural gas and intense gas price volatility, coal could be a very secure hedge for the future.")

[2] *Id.* at 7 ("[I]t would be a brave investor that anticipates no carbon controls within the life of a new coal-fired generation plant. Thus, an investor in a new coal-fired plant must weigh the merits of continuing investment in improved supercritical coal boilers that do not resolve the carbon recovery process easily compared with investing in IGCC, where mechanisms exist today for recovery of a high purity stream of CO_2.").

[3] CAMBRIDGE ENERGY RESEARCH ASSOCIATES ADVISORY SERVICES, NORTH AMERICAN GAS CAPACITY RACE: CAN UNCONVENTIONAL GAS OFFSET THE INCREASED DECLINE IN THE GULF OF MEXICO? 1 (2005).

[4] NATIONAL COMMISSION ON ENERGY POLICY, ENDING THE ENERGY STALEMATE: A BIPARTISAN STRATEGY TO MEET AMERICA'S ENERGY CHALLENGES 52 (2004).

[5] ROBERT H. WILLIAMS, PRINCETON ENVIRONMENTAL INSTITUTE, PRINCETON UNIVERSITY, IGCC: NEXT STEP ON THE PATH TO GASIFICATION-BASED ENERGY FROM COAL 3 (2004).

[6] BOOZ ALLEN HAMILTON, DEPARTMENT OF ENERGY/NATIONAL ENERGY TECHNOLOGY LABORATORY AND THE GASIFICATION TECHNOLOGIES COUNCIL, COAL-BASED INTEGRATED COAL GASIFICATION COMBINED CYCLE: MARKET PENETRATION RECOMMENDATIONS AND STRATEGIES 25 (2004); WILLIAM G. ROSENBERG ET AL., JOHN F. KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY, DEPLOYING IGCC IN THIS DECADE WITH 3PARTY

2. ENVIRONMENTAL PROFILE

Implementing IGCC technology would provide immediate and significant environmental benefits. As reported by the Environmental Law Institute[7] and in testimony before the House Subcommittee on Clean Air, Wetlands, and Climate Change,[8] IGCC is at least 10 percent more efficient than conventional coal plants, thereby reducing emissions of all pollutants by a corresponding percentage. Further, unlike conventional coal plants, IGCC plants produce marketable byproducts, achieve mercury capture rates of 90 percent or above, and significantly reduce NO_x and sulfur emissions.[9] Consequently, the advantages of IGCC plants over conventional coal plants is striking. As the Clean Air Task Force has observed, in comparison with a comparable IGCC plant, a conventional supercritical pulverized coal plant emits 400 percent more sulfur dioxide, 300 percent more carbon monoxide, 106 percent more volatile organic compounds, 100 percent more mercury emissions, 64 percent more particulate matter, and 1,900 percent more sulfuric acid mist emissions.[10]

Because of these benefits, a number of environmental advocacy groups have criticized utilities for failing to implement IGCC in recently proposed coal projects.[11] The Natural Resources Defense Council, Clean Air Task Force, and various local chapters of the Sierra Club are among the groups making such arguments.

COVENANT FINANCING 22 (2004); BRUCE H. BRAINE & MICHAEL J. MUDD, AMERICAN ELECTRIC POWER, INTEGRATED GASIFICATION COMBINED CYCLE TECHNOLOGY 15 (filed with the Ohio Public Utilities Commission) (2005); Cinergy Corporation, Air Issues: Report to Stakeholders, December 2004; CENTER FOR AMERICAN PROGRESS, JONATHAN PERSHING AND ROBERT BRADLEY, A CLIMATE SOLUTION CONCEPT 5 (2005) ("[T]o make [carbon capture] feasible, you need to have Integrated Gasification Combined Cycle (IGCC) plants, rather than conventional coal power plants.").

[7] Gregory B. Foote, *Considering Alternatives: The Case for Limiting CO_2 Emissions from New Power Plants Through New Source Review*, 34 ENVTL. L. REV. 10642, 10659–60 (2004).

[8] The IGCC Process: From Coal To Clean Electric Power: Hearing on Compliance Options for Electric Power Generators Before the H. Subcomm. on Clean Air, Wetlands and Climate Change (2002) (testimony of Edward Lowe, Gas Turbine-Combined Cycle Product Line Manager, General Electric Power Systems) [hereinafter *Hearing on Compliance*].

[9] Foote, *supra* note 7, at 10660; *Hearing on Compliance*, *supra* note 8, at 3.

[10] John Thompson, Clean Air Task Force, Coal Gasification—Air Pollution and Permitting Implications of IGCC, http://www.epa.gov/ttn/ecas/Presentations/Less-Polluting/Thompson%202IGCC.ppt#9 (last visited Nov. 15, 2005).

[11] *See, e.g.*, Sierra Club, Wyoming Chapter, Alerts and Special Issues, Wyoming at Crossroads on New Coal-Fired Power Plants: Citizen Input Needed to Ensure Cleanest Technology Used (Dec. 4, 2004), http://wyoming.sierraclub.org/alerts/a120404.html; The Clean Power Act: Hearing on S.556 Before Sen. Comm. on Environment & Public Works (testimony of David Hawkins, director of Natural Resources Defense Council's Climate Center); Clean Air Task Force, Advanced Coal Background & Highlights, http://www.catf.us/projects/power_sector/advanced_coal/background.php (last visited Oct. 21, 2005); Letter from Utah Chapter Sierra Club, Wasatch Clean Air Coalition, Grand Canyon Trust, Rocky Mountain Office of Environmental Defense, Western Resource Advocates, and Clean Air Task Force to John D. Jenks, Utah Department of Environmental Quality (Apr. 9, 2004), http://www.catf.us/projects/power_sector/new_coal_plant_opposition/permits/Sevier_Power_Company_Comments.pdf.

3. STRATEGIC BENEFITS

There are significant advantages associated with using coal as a domestic and abundant energy source for power generation. In his 2005 State of the Union Address, President Bush urged "Congress to pass legislation that makes America more secure and less dependent on foreign energy."[12] As Energy Secretary Bodman has observed, "The continued use of coal will have a number of very concrete benefits…. It will help lead us to a stable, secure energy future at a time when we know our economy's appetite for electricity will grow."[13] Similarly, a recent editorial in *Engineering News Record* argued, "The beauty of coal gasification is not just its low emissions. It also is secure. The U.S. has depended for decades on energy imports to meet the demand for oil, natural gas and even uranium for nuclear power plants. And much of those imports come from politically volatile parts of the world."[14]

4. PUBLIC POLICY SUPPORT

Because of its economic and environmental attributes and its ability to take advantage of the United States' vast coal reserves, it is not surprising that several public policy groups have recommended rapid deployment of IGCC technology with the aid of government resources. Among the non-partisan groups that support implementation of IGCC are the National Commission on Energy Policy and the Center for American Progress. Further, the United States Congress and the Minnesota Legislature have responded to such recommendations with legislation that provides financial and regulatory support for IGCC projects.[15] These advocates have recognized the historical impediments to implementation of IGCC and have concluded that the dramatic public policy benefits of rapid IGCC deployment warrant government action to remove some of the historic barriers to entry for IGCC.

[12] President George W. Bush, 2005 State of the Union Address, *available at* http://www.whitehouse.gov/news/releases/2005/02/20050202-11.html.
[13] Press Release, Energy Secretary Bodman Heads to West Virginia to Promote Energy Bill, July 8, 2005, *available at* http://www.i-newswire.com/pr35291.html.
[14] *New Coal Technology Will Buy Time for Future Shock*, ENGINEERING NEWS RECORD, Dec. 5, 2005, *available at* http://enr.ecnext.com/coms2/summary_0271-23194_ITM (last visited Dec. 6, 2005).
[15] *See*, *e.g.*, Energy Policy Act of 2005, Pub. L. 109-58; Minn. Stat. §§ 216B.1693–1694.

B. CHARACTERISTIC QUOTES

INDUSTRY PUBLICATIONS

	Source	Characteristic Quote
1.	AMERICAN ELECTRIC POWER, BRUCE H. BRAINE & MICHAEL J. MUDD, INTEGRATED GASIFICATION COMBINED CYCLE TECHNOLOGY, (filed with the Public Utilities Commission of Ohio), 2005	"Clean coal technologies must be embraced by the electric utility industry across the country, and at this point in history, Integrated Gasification Combined Cycle (IGCC) technology is the premier clean coal technology." (Page 1)
2.	AMERICAN ELECTRIC POWER, AN ASSESSMENT OF AEP'S ACTIONS TO MITIGATE THE ECONOMIC IMPACTS OF EMISSIONS POLICIES, 2004	"Based on assessments prepared by company and other analysts, IGCC technology appears to have the greatest potential for meeting AEP's long term goals." (Page 14)
3.	CAMBRIDGE ENERGY RESEARCH ASSOCIATES, INTEGRATED GASIFICATION COMBINED-CYCLE: CLEAN COAL TECHNOLOGY OF CHOICE FOR THE FUTURE?, 2004	"CERA believes that the inherent flexibility of coal gasification in terms of a spectrum of products and by-products and its integration into a concept of industrial ecology now needs to be taken much more seriously…. IGCC has the potential to address most major environmental issues that plague coal through a more closed-loop system and, with oxygen combustion, the development of a pure stream of CO2, more amenable to recovery or storage." (Pages 3–4)
4.	CINERGY CORP., AIR ISSUES: REPORT TO STAKEHOLDERS, 2004	"GHG policy must recognize the need to continue using coal; it should encourage development and deployment in the near term of technologies such as integrated gasification combined cycle (IGCC) that uses coal more efficiently, produces fewer emissions and solid wastes and may permit the long-term storage of CO2." (Page 10)
5.	CINERGY CORP., 2004 ANNUAL REPORT	"[Cinergy] announced [its] intention to study the feasibility of building one of the first full-scale Integrated Gasification Combined Cycle (IGCC) plants." (Page 7)

6.	Testimony of Edward Lowe, General Electric Power Systems, Hearings Before the Subcomm. on Clean Air, Wetlands and Climate Change, U.S. Senate Comm. on Environment and Public Works (Jan. 29, 2002), *available at* http://www.epw.senate.gov/107th/Lowe_01-29-02.pdf	"High IGCC efficiencies yield CO_2 greenhouse gas emissions that are 12% lower than those of state-of-the-art coal steam-boiler plants. These emissions are approximately 30% lower than those of average coal plants." (Page 3)

GOVERNMENT PUBLICATIONS

	Source	**Characteristic Quote**
7.	BOOZ ALLEN HAMILTON, PREPARED FOR U.S. DEPT. OF ENERGY /NAT'L ENERGY TECHNOLOGY LABORATORY AND THE GASIFICATION TECHNOLOGIES COUNCIL, COAL-BASED INTEGRATED COAL GASIFICATION COMBINED CYCLE: MARKET PENETRATION RECOMMENDATIONS AND STRATEGIES, 2004	"IGCC can provide the Nation with a clean, reliable, domestic source of energy at an acceptable economic and environmental cost." (Page ES-10)
8.	JOHN N. O'BRIEN ET AL., PREPARED FOR U.S. DEPT. OF ENERGY /NAT'L ENERGY TECHNOLOGY LABORATORY, AN ANALYSIS OF THE INSTITUTIONAL CHALLENGES TO COMMERCIALIZATION AND DEPLOYMENT OF IGCC TECHNOLOGY IN THE U.S. ELECTRIC INDUSTRY: RECOMMENDED POLICY, REGULATORY, EXECUTIVE, AND LEGISLATIVE INITIATIVES—FINAL REPORT, 2004	"Accelerated IGCC deployment in the U.S. power sector will provide critical benefits in four key areas: environmental; technology advancement; economic; and energy and national security." (Page ES-1)

9.	JAY RATAFIA-BROWN ET AL., PREPARED FOR U.S. DEPT. OF ENERGY /NAT'L ENERGY TECHNOLOGY LABORATORY, MAJOR ENVIRONMENTAL ASPECTS OF GASIFICATION-BASED POWER GENERATION TECHNOLOGIES—FINAL REPORT, 2002, *available at* http://www.netl.doe.gov/coal /Gasification/pubs/pdf/final%20env.pdf	"[IGCC plants in current operation] have achieved the lowest levels of criteria pollutant air emissions (NOx, SOx, CO, PM10) of any coal-fueled power plants in the world." (Page ES-2)
10.	U.S. DEPT. OF ENERGY, OFFICE OF FOSSIL ENERGY, FEDERAL ENERGY TECHNOLOGY CENTER, IGCC: CLEAN, AFFORDABLE ENERGY FOR TOMORROW'S WORLD, July 1999, *available at* http://www.netl.doe.gov/publications/brochures/pdfs/igccbro.pdf	"Integrated Gasification Combined Cycle plants are the powerplants of the next millennium." – Robert S. Kripowicz, Principal Deputy Assistant Secretary Fossil Energy (Page 4)

ACADEMIC PUBLICATIONS

	Source	**Characteristic Quote**
11.	JEREMY DAVID & HOWARD HERZOG, THE COST OF CARBON CAPTURE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 2003, *available at* http://www.netl.doe.gov/publications/proceedings/01/carbon_seq_wksp/David-Herzog.pdf	"IGCC plants will become more economical than PC plants if carbon sequestration becomes necessary." (Page 2)
12.	Gregory B. Foote, *Considering Alternatives: The Case for Limiting CO2 Emissions from New Power Plants Through New Source Review*, ENVIRONMENTAL LAW REPORTER, July 2004	"[Q]uantitative assessments conclude that if CO_2 is regulated in the future, that factor alone renders IGCC the cheapest of available production processes for new coal-fired units." (Page 10667)

13.	WILLIAM G. ROSENBERG ET AL., JOHN F. KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY, DEPLOYING IGCC IN THIS DECADE WITH 3PARTY COVENANT FINANCING, 2004	"IGCC was selected as the focus of this paper because it is a commercially ready, advanced technology for generating electricity with coal that is widely supported and can substantially reduce air emissions, water consumption, and solid waste production from coal power plants…. IGCC also offers the potential of a technical pathway for cost effective separation and capture of carbon dioxide (CO2) emissions and for co-production of hydrogen." (Pages 2–3)
14.	ROBERT H. WILLIAMS, PRINCETON ENVIRONMENTAL INSTITUTE, PRINCETON UNIVERSITY, IGCC: NEXT STEP ON THE PATH TO GASIFICATION-BASED ENERGY FROM COAL, 2004	"The integrated gasifier combined cycle (IGCC) makes it feasible to provide coal electricity as cleanly as natural gas combined cycle (NGCC) plants and to deal with the climate challenge via CO2 capture and storage (CCS) with much lower energy and cost penalties than with coal steam-electric technologies. Moreover, IGCC is a stepping stone to provision of clean, secure, and climate-friendly supplies of synthetic fuels manufactured via gasification of coal and biomass with capture and storage underground of CO2—synthetic fuels that will often be provided in polygeneration plants that also make electricity, as well as chemicals and process steam." (Page 1)

POLICY PUBLICATIONS

	Source	**Characteristic Quote**
15.	JONATHAN PERSHING & ROBERT BRADLEY, CENTER FOR AMERICAN PROGRESS, A CLIMATE SOLUTION CONCEPT, 2005	"In addition to the potential advantages of IGCC technology in making [carbon sequestration] possible, it offers important near-term advantages due to its far lower emissions of conventional pollutants such as sulfur, particulates and mercury than is the case with conventional coal power. Indeed, once power plants are required to control these pollutants … the cost disadvantage of IGCC largely disappears." (Page 7)

16.	Clean Air Task Force, New Coal Plant Opposition Background & Highlights, http://www.catf.us/projects/power_sector/new_coal_plant_opposition/background.php	"A corollary to advancing new coal technologies is making sure that older, dirtier coal technology does not proliferate…. To that end, CATF devotes significant time opposing new conventional coal plant proposals in the United States, citing the superior environmental performance, and potential climate-friendliness, of gas-fired power and IGCC technology." (Page 1)
17.	NATIONAL COMMISSION ON ENERGY POLICY, ENDING THE ENERGY STALEMATE: A BIPARTISAN STRATEGY TO MEET AMERICA'S ENERGY CHALLENGES, 2004	"IGCC technology holds great promise for advancing national as well as global economic, environmental, and energy security goals." (Page 52)
18.	National Commission on Energy Policy, Senate Coal Conference, *What Are the Environmental and Regulatory Challenges Associated with the Future Use of Coal for Power Generation?*, Mar. 10, 2005	"IGCC technology…offers considerable promise for substantially reducing numerous types of pollutant emissions associated with conventional coal use and, in combination with carbon capture and sequestration, could allow coal to play a central role in reconciling future energy needs and energy security imperatives with climate concerns." (Page 7)
19.	Testimony Presented Before the U.S. Senate Committee on Environment & Public Works by David Hawkins, Director of NRDC's Climate Center, June 12, 2002, *available at* http://www.nrdc.org/globalwarming/tdh0602.asp	"If coal is to continue as a major player in the U.S. and elsewhere for more than a few decades it will only be if technologies like IGCC, that make it feasible to store carbon permanently in geologic formations, are commercially deployed at sufficient scale to buy down their costs to fully competitive levels."

NEWS PERIODICALS

	Source	**Characteristic Quote**
20.	Michael Arndt, *The New Clean Fuel: Coal*, BUSINESSWEEK, Sept. 26, 2005	"[IGCC] would allow power generators to stick with coal even if the U.S. joins other industrialized nations in cutting carbon emissions." (Page 73)

21.	Adam Aston & Burt Helm, *The Race Against Climate Change*, BUSINESSWEEK, Dec. 12, 2005	"[Bankers, insurers, and institutional investors] are now demanding that companies in which they hold stakes (or insure) add up risks related to climate change and alter their business plans accordingly." (Page 60)
22.	Michael T. Burr, *Coal Gasification Gets Real*, PUBLIC UTILITIES FORTNIGHTLY, January 2005	"[I]n the past few years, the calculus has been changing in IGCC's favor." (Page 43)
23.	*California Shuns Traditional Coal Power In Favor Of IGCC*, ENERGY WASHINGTON, Nov. 30, 2005	"[T]he [California] state energy plan rejected general supply worries in an effort to meet new greenhouse gas emissions reduction targets—by essentially forbidding the purchase of out-of-state coal power that is not as clean as a natural gas plant and instead calling for the construction of IGCC plants." (Page 1)
24.	Craig Canine, *How to Clean Coal*, ONEARTH, Fall 2005	"Generating carbon-free electricity from coal is somewhat more complicated and expensive than the natural-gas process…[b]ut it can be done, using a combination of technologies known as integrated gasification combined cycle (IGCC)." (Page 26)
25.	Thomas Homer-Dixon & S. Julio Friedmann, *Coal in a Nice Shade of Green*, N.Y. TIMES, March 25, 2005	"The marriage of gasified coal plants and geologic storage could allow us to build power plants that produce vast amounts of energy with virtually no carbon dioxide emissions in the air." (Page 2)
26.	Harry Jaeger, *Will IGCC Win Out Over Pulverized Coal and Nuclear Steam Plants?*, GAS TURBINE WORLD, March-April 2005	"The potential for near-zero emissions and a defined coal-based path to the hydrogen economy, not efficiency and cost advantages, has produced a groundswell of environmental and political support for coal gasification." (Page 14)
27.	Jeff Johnson, *Coal-Fired Power May Get Cleaner*, CHEMICAL AND ENGINEERING NEWS, September 2004	"Compared to pulverized coal plants, IGCC facilities emit far less mercury, sulfur dioxide, nitrogen dioxides, and other pollutants; they have nearly doubled the 35% efficiency of conventional coal-fired plants; and they make collection of carbon dioxide … far easier than it is in conventional coal plants." (Page 36)

28.	Robert H. Socolow, *Can We Bury Global Warming?*, SCIENTIFIC AMERICAN, July 2005	"Pumping carbon dioxide underground to avoid warming the atmosphere is feasible, but only if several key challenges can be met." (Page 49)

STATEMENTS FROM POLICYMAKERS

	Source	**Characteristic Quote**
29.	Letter from Gov. Pawlenty to Sec. Spencer Abraham, U.S. Dept. of Energy, June 14, 2004	"[In 2003] I supported the most far-reaching and comprehensive set of incentives ever enacted by any state to spur the development of IGCC and the Mesaba Energy Project. This was accomplished in a very bi-partisan way, with broad based support for the project."
30.	Press Release, Secretary Abraham Announces $36 Million for Minnesota Clean Coal Plant, Oct. 26, 2004, *available at* http://releases.usnewswire.com/printing.asp?id=38908	"Clean energy technologies like those pioneered here mean jobs for this region…. The Excelsior plant builds on the significant progress we have already made toward meeting America's growing energy needs in an environmentally sound manner."
31.	Press Release, Senator Coleman, Coleman Announces $36 Million DOE Grant for Excelsior Energy's Mesaba Energy Project, Oct. 26, 2004, *available at* http://coleman.senate.gov/index.cfm?FuseAction=PressReleases. Detail&PressRelease_id=494	"By increasing efficiency and reducing emissions, this project will continue energy production without forsaking the resources that sustain us. I'm proud at the vision for future energy this project sets before Minnesota and the rest of the country as it means greater diversification of energy and reduction on our dependence on foreign sources of oil."
32.	Press Release, Governor Pawlenty Applauds U.S. Department of Energy for Excelsior Energy Grant, Oct. 26, 2004, *available at* http://www.governor.state.mn.us/Tpaw_View_Article.asp?artid=1157	"The Mesaba Energy Project will supply much-needed energy and jobs in an innovative way that protects our environment and natural resources using an affordable, abundant domestic fuel source."

33.	Opening Statement of Senator Alexander from the Senate Energy Committee's Nomination Hearing for Dr. Samuel Bodman to be Energy Secretary, Jan. 19, 2005, *available at* http://alexander.senate.gov/index.cfm?FuseAction=CommitteeStatements.Detail&CommitteeStatement_id=1&Month=1&Year=2005	"[Dr. Bodman should] support national policies that promote coal, but require coal plants to quickly install emissions control technology or utilize technologies such as coal gasification."
34.	Press Release, Gov. Blagojevich Continues to Develop New Markets for Clean-Burning Illinois Coal and the Creation of New Jobs Across the State, June 21, 2005, *available at* http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=1&RecNum=4077	"Legislation such as [Senate Bill 90, which supports production of coal gasification facilities] allows us to take a national leadership role in clean-coal technology."
35.	Letter from Governor Arnold Schwarzenegger to the California Legislature Concerning Energy Policy Issues, Aug. 23, 2005, *available at* http://www.energy.ca.gov/energypolicy/index.html	"I support continued clean coal technology research and development towards a zero emission operation so that we can economically achieve reduced emissions of pollutants such as SO2, SOX, NOX and mercury and develop methods for capturing and storing significant amounts of CO2, either as an integral part of the energy conversion process or in pairing with external CO2 sequestration." (Page 5 of Attachment to Letter)

36.	Pennsylvania Governor Edward G. Rendell, An American Energy Harvest Plan: Jobs, Prosperity, Independence, Speech to the National Press Club, Dec. 1, 2005, *available at* http://www.governor.state.pa.us/governor/cwp/view.asp?a=3&q=444223	"Under [the American Energy Harvest] plan Pennsylvania will leapfrog past the traditional way of reducing emissions, of adding 'scrubbers' to old power plants. Instead, I am asking the federal government to give Pennsylvania the power to work with our utilities to close down these dinosaur coal plants and replace them with state-of-the-art coal gasification plants that will be subject to strict limits on greenhouse gas emissions and will far surpass federal emissions requirements two years before the final clean air standards go into effect." (Page 5)
37.	Letter from Gov. Pawlenty to Minnesota State Senators, May 23, 2003	"The coal-gasification technology proposed for the Excelsior Energy project will provide base-load power with clean emissions, helping pave the way for a better energy future. The project also provides economic development opportunities in a region of the state that has suffered significant job losses."
38.	Letter from Rep. Michael Beard and Sen. David Tomassoni to Chairman Leroy Koppendrayer, Oct. 5, 2004	"The purpose of the [innovative energy project] legislation was to encourage the development of an IGCC plant in Northeastern Minnesota, because of the significant benefits such a project would bring to Minnesota's consumers, economy and environment."
39.	Letter from Speaker of the House Steve Sviggum to Chairman Leroy Koppendrayer, Feb. 2, 2005	"The chief authors' [Rep. Beard and Sen. Tomassoni] characterization of the purpose and intent behind the provision of the [innovative energy project] statute … accurately reflects the intent of the Legislature."
40.	Letter from Charlie Weaver to Chairman Leroy Koppendrayer, Feb. 2, 2005	"In my view, [Rep. Beard and Sen. Tomassoni's] letter accurately reflects what Minnesota's policymakers intended."

C. TABLE OF PUBLICATIONS ATTACHED TO THIS PETITION

(Provided to the Commission and Department of Commerce)

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JOHN N. O'BRIEN ET AL., PREPARED FOR DEPARTMENT OF ENERGY/NATIONAL ENERGY TECHNOLOGY LABORATORY, AN ANALYSIS OF THE INSTITUTIONAL CHALLENGES TO COMMERCIALIZATION AND DEPLOYMENT OF IGCC TECHNOLOGY IN THE U.S. ELECTRIC INDUSTRY: RECOMMENDED POLICY, REGULATORY, EXECUTIVE, AND LEGISLATIVE INITIATIVES FINAL REPORT, 2004 7

JAY RATAFIA-BROWN ET AL., PREPARED FOR DEPARTMENT OF ENERGY/NATIONAL ENERGY TECHNOLOGY LABORATORY, MAJOR ENVIRONMENTAL ASPECTS OF GASIFICATION-BASED POWER GENERATION TECHNOLOGIES FINAL REPORT, 2002 8

U.S. DEPT. OF ENERGY, OFFICE OF FOSSIL ENERGY, FEDERAL ENERGY TECHNOLOGY CENTER, IGCC: CLEAN, AFFORDABLE

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