PUBLIC ABSTRACT

Applicant (primary) name:	WMPI PTY., LLC
Applicant's address:	Main Street, Gilberton, PA 17934
Team Members (if any): (listing represents only participants at time of application, not necessarily final team membership)	Nexant, Inc., San Francisco, California 94104 Shell Global Solutions B.V., U.S., Houston, Texas 77060 Uhde GmbH., Dortmund, Germany SASOL Technology Ltd., Johannesburg, Republic of South Africa
Proposal Title:	Gilberton Coal-to-Clean Fuels and Power Co-Production Project
Commercial Application:	**X** New Facilities Existing Facilities Other, Specify:
Technology Type:	Gasification of Coal Waste Mixtures to Co-Produce Clean Transportation Fuels, Electricity and Other Value-Added By-Products
Estimated total cost of project: (May not represent final negotiated costs.)	
Total Estimated Cost:	$ 612,000,000
Estimated DOE Share:	$ 100,000,000
Estimated Private Share:	$ 512,000,000

PUBLIC ABSTRACT (cont'd)

Anticipated Project Site(s): Gilberton, Schuylkill County, PA 17934
Location (city, county, etc.) State Zipcode

The site is located near Gilberton, PA, north of Interstate 81 and east of Pennsylvania State Highway 61, off Morea Road, approximately 2 miles east of Highway 61 where it enters Frackville, PA.

Type of coal to be used: Primary - coal-derived wastes such as anthracite culm. Alternate - Pennsylvania and other coals, petroleum coke, or a combination of any of these.

Size or scale of project: Converting 4,711 tons/day of anthracite culm (40% ash) to produce 5,038 bbls/day of ultra clean fuels and 41 megawatts of power

Duration of proposed project: 6 years (72 months) from date of award

PRIMARY CONTACT:
For additional information, interested parties should contact:

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Alternative Contact:

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PUBLIC ABSTRACT (cont'd)

BRIEF DESCRIPTION OF PROJECT

WMPI PTY., LLC of Gilberton, Pennsylvania has assembled a world-class technology and engineering team to design, engineer, construct, and demonstrate a clean coal power facility using coal waste gasification as the basis for clean power, thermal energy and clean liquid fuels production. The Clean Coal Power Initiate (CCPI) project (DE-PS26-02NT41428) is sponsored by the U. S. Department of Energy, National Energy Technology Laboratory. In addition to WMPI, the team includes Nexant, Inc., an affiliate of Bechtel Corporation; Shell Global Solutions U.S., an international energy company with a major presence in coal gasification technology; Uhde, a global engineering company and authorized Shell gasification technology supplier and contractor, and SASOL Technology Ltd., a world leader in synthesis gas based Fischer-Tropsch Liquefaction technology.

The Gilberton Coal-to-Power and Clean Fuels demonstration plant will convert the abundant resources of low- or negative-value coal wastes scattered across the northeastern part of the United Stated into electric power and high-value, premium ultra clean transportation fuels, with minimum negative environmental impact. In addition to the minimal emissions inherent to the gasification-base technology, use of the coal wastes will help reclaiming our land and removing a serious environmental legacy from past mining practices in the United States. The Gilberton plant will gasify the coal wastes to produce a synthesis gas of carbon monoxide and hydrogen. Electric power and steam will be produced, and then a portion of the synthesis gas will be converted into synthetic hydrocarbon liquids via a catalytic chemical process known as Fischer-Tropsch (FT) synthesis.

The FT liquids of naphtha, kerosene and diesel fuels, being virtually free of sulfur, nitrogen, and aromatics, are much superior to their conventional petroleum counterparts in both end-use and environmental properties. The FT naphtha can either be upgraded to a high-Octane, clean RFG (reformulated gasoline) or use as sulfur-free onboard reforming feed (in additional to methanol) for hydrogen fuel-cell-powered vehicles applications. The FT kerosene is low in smoke point and has special application as niche-market jet fuels. FT diesels have a high Cetane Number and it has been demonstrated that they can significant reduce engine emissions in PM (particulate matter), NOx (nitrogen oxides), HC (hydrocarbon) and CO (carbon monoxide) while meeting and/or exceeding all current and expected government fuel (e.g., EPA 2006 Low Sulfur Fuels) specifications. When fully implemented, these ultra clean fuels can contribute significantly to the overall U.S. road GHG (greenhouse gas) emissions reduction.

The synthesis gas would have to be cleaned before FT synthesis, and in doing so, offering a means of removing trace metal contaminants such as mercury and producing a high purity CO_2 stream ready for sequestration if the economics permit. Other byproducts from the process include sulfur and a vitrified material resembling coarse sand that has variety of uses in the construction and building industries; both byproducts are marketable.
The proposed CCPI plant is to be built at a 75-acre WMPI site adjacent to their existing 85 MW Gilberton Power Plant that is based on circulating fluidized bed boiler technology known for its exceptional low emission characteristics when compared with conventional pulverized coal power plant. The Gilberton Power Plant has been in continuous successful commercial operation since 1986 fuel exclusively with coal waste and yet operating under the most stringent air-emissions limits. The CCPI will be fully integrated into the existing Gilberton facility to save costs and further reduce its current emissions.

The Gilberton Coal-to-Power and Clean Fuels Plant will also test and use alternative feedstocks for economic operation. These would include other coals and/or coal wastes, petroleum coke, biomass, and selected industrial/municipal wastes. Successful demonstration results will have a broad range of applications, especially in coal producing and consuming regions of the United States and North America. Commercialization of the technology will bring substantial socioeconomic benefits to the coal regions. These include direct and indirect job stimulation and the related benefits of enhanced productivity and tax revenues; environmental benefits of waste land reclamation as the coal waste is converted into high value products; and last but not least, the benefits of re-establishing North America's energy independence.

The State of Pennsylvania is enthusiastically supporting this project as evident by the passage of a 'Coal Waste Removal and Ultraclean Fuels Tax Credit' bill of 1999 in the State Assembly, offering $47 million in tax incentives for its construction cost. With demonstrated performance at Pennsylvania, WMPI expects to commercialize this clean coal gasification/liquefaction co-production concept across the United States and North America.

More facts and information on the proposed WMPI CCPI gasification/liquefaction power co-production concept can be found at www.ultracleanfuels.com.