

China IGCC Development Proposal

July 2012



GE's IGCC experience

Demo

(1984-89)



Coolwater

California

120 MW IGCC

DOE tech demo

7E

Commercial

(1996-present)



Polk I IGCC

Florida

250 MW IGCC

DOE demo project

7FA gas turbine

5 year construction

Large Commercial

(2012-present)



Edwardsport IGCC

Indiana

618 MW IGCC

7F syngas turbine

5 Year Construction

Partnering for growth in China

China IGCC joint study

- Assess technical & economic viability of China IGCC using GE technology
- Joint study w/ CPECC sponsored by US TDA
- Technology selections maximize efficiency while minimizing capital expenditure
- Create plan for future efficiency and cost improvements
- Completed by late 2011



GE and Shenhua Announce Formation of Cleaner Coal Technology JV in China

Venture to Advance Deployment of Coal Gasification in China

WASHINGTON, DC – January, 2011 – GE and Shenhua announced that they have agreed to form an industrial coal gasification joint venture to advance the deployment of “cleaner coal” technology solutions in China. The new company combines GE’s expertise in industrial gasification technologies with Shenhua’s expertise in coal gasification and coal-fired power generation.



GE-Shenhua Gasification JV

- 50-50 gasification licensing in China
- GE technology + Shenhua project & market expertise
- Commercial platform for Industrial licensing + IGCC advocacy
- Established in May 2012

IGCC Study Results

Study Parameter Target 主要指标的目标值	Result 结果
41-43% LHV Efficiency 低位热效率：41-43%	42.2% LHV ✓ 低位热效率：42.2%
Output 800MW net 净出力：80万千瓦	870 MW net ✓ 净出力：87万千瓦
Cost 8000-10000 RMB/KW (Gross Output Basis) 成本：介于8千-1万人民币/千瓦 (以毛出力计)	8928 RMB/KW ✓ (~\$1380/KW)
Meet IGCC Emissions Standards 符合IGCC排放标准	Key Area Standard met ✓ IGCC主要单元满足排放标准
Water Consumption at a Maximum of 0.6 m ³ /GWs 水耗：不超过0.6方/百万千瓦	Maximum met ✓ 满足要求

China IGCC Commercialization Concept

IGCC Commercialization Program

Establish Objectives

Design+Build+Improve

Measure+Report Progress

