FILED
March 23, 2011
INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

JOINT PETITION BY THE INDIANA FINANCE AUTHORITY)	
("AUTHORITY") AND INDIANA GASIFICATION, LLC)	
("INDIANA GASIFICATION") FOR THE INDIANA UTILITY)	
REGULATORY COMMISSION TO (1) APPROVE A)	
SUBSTITUTE NATURAL GAS PURCHASE AND SALE)	
AGREEMENT ENTERED INTO BY THE AUTHORITY AND)	
INDIANA GASIFICATION FOR THE SALE BY INDIANA)	
GASIFICATION AND PURCHASE BY THE AUTHORITY OF)	
SUBSTITUTE NATURAL GAS ("SNG") OVER A 30-YEAR)	
TERM PURSUANT TO I.C. 4-4-11.6; (2) IF NECESSARY,)	
ORDER INDIANA REGULATED ENERGY UTILITIES TO)	
ENTER INTO A MANAGEMENT CONTRACT WITH THE)	
AUTHORITY; (3) DECLINE TO EXERCISE JURISDICTION)	CAUSE NO. 43976
PURSUANT TO I.C. 8-1-2.5-5 OVER INDIANA GASIFICATION)	
WITH RESPECT TO ITS FINANCING, CONSTRUCTING,)	
OWNING AND OPERATING SNG PRODUCTION AND)	
TRANSPORTATION FACILITIES, AND AN ANCILLARY)	
INTEGRATED COAL GASIFICATION POWERPLANT ("ICGP)	
FACILTIES") AND ELECTRIC GENERATION FACILITIES)	
WHICH USE CLEAN COAL TECHNOLOGY IN CONNECTION)	
THEREWITH, AND WHICH PRODUCES SNG TO BE SOLD TO)	
THE AUTHORITY AND OTHER PERSONS, AND PRODUCES)	
ELECTRICITY WHICH WILL BE SOLD TO ENERGY)	
UTILITIES; AND (4) GRANT ALL OTHER APPROPRIATE)	
AND ASSOCIATED APPROVALS AND RELIEF.	1	

PREFILED TESTIMONY OF

RALPH E. MILLER – PUBLIC'S EXHIBIT #1

ON BEHALF OF THE

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

MARCH 23, 2011

DIRECT TESTIMONY OF RALPH E. MILLER CAUSE NO. 43976

1 Q. PLEASE STATE YOUR NAME, OCCUPATION, AND ADDRESS.

- 2 A. My name is Ralph E. Miller. I am an independent consulting economist. My office is at
- 3 5502 Western Avenue, Chevy Chase, Maryland 20815.

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4 Q. PLEASE SUMMARIZE YOUR PROFESSIONAL QUALIFICATIONS.

and public policy towards business. I have more than thirty-five years of experience in public utility and related energy work, both as a consultant and in government. I am the author of several published reports and papers on public utility economics and energy matters, and I have testified in more than 30 different jurisdictions in a total of more than 360 public utility and other proceedings. I also have several additional years of

I am an economist specializing in the fields of utility regulation, industrial organization,

experience in government and as a university teacher in antitrust, energy demand

Over the years, I have addressed almost all aspects of gas and electric utility regulation, including rate of return, accounting and revenue requirements, rate design and cost of service, electric fuel and purchased gas cost recovery, industry structure and the role of competition, affiliate relationships, incentive ratemaking and other types of innovative rate designs, gas and electric supply planning and power plant licensing, productivity and

forecasting and supply analysis, and other areas of economics and energy.

efficiency, and the determination of marginal, incremental, and avoidable costs.

1 Q. WHAT IS YOUR EMPLOYMENT EXPERIENCE?

2 A. I have been an independent consultant for more than twenty-five years. I also have ten 3 years of experience as president or vice president of two different consulting firms 4 specializing in public utility and energy matters. Before that, I spent three years in the 5 federal government, where I was employed in positions at the Federal Power 6 Commission (now the Federal Energy Regulatory Commission, or FERC), the Antitrust 7 Division of the U.S. Department of Justice, and the Federal Energy Administration (now 8 part of the U.S. Department of Energy, or DOE). I was on the faculty of the University 9 of California for three years, where I taught economics courses at both the graduate and 10 undergraduate levels.

11 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

12 A. I did my undergraduate work at Harvard College, where I received the A. B. degree

13 summa cum laude in mathematics in 1961, and I was elected to Phi Beta Kappa. I then

14 went on to graduate work in economics at Harvard, where I received a Master's degree in

15 1963. I continued my graduate studies there until 1966, and I completed all of the course

16 requirements for the Ph.D. degree, but not a doctoral dissertation.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

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18 A. I am testifying on behalf of the Indiana Office of Utility Consumer Counselor (OUCC).

O. ARE YOU FAMILIAR WITH THE MARKETS FOR NATURAL GAS?

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A. Yes. I have been following the natural gas markets closely for more than 25 years, since the mid-1980s. During this period, I have worked mostly in gas supply and related proceedings involving gas utilities in Michigan, Ohio, Pennsylvania, New Jersey, and Maryland, along with a few cases in other states. In the course of this work, I have reviewed the acquisition of more than \$35 billion of natural gas by public utilities. In Michigan, for example, I have reviewed and testified on the gas supply plans and gas cost recovery (GCR) reconciliations of Consumers Energy Company (Consumers) and Michigan Consolidated Gas Company (MichCon) in each year since 1988, except for the three years when their GCR clauses were suspended. I have also reviewed and testified on many of the gas supply plans and GCR reconciliations of Michigan Gas Utilities Corporation (MGU) and SEMCO Energy Gas Company (SEMCO) during this period. My Ohio work includes many management/performance audits of the gas purchasing practices and policies of gas distribution companies there, and the reports of these audits were submitted to the Public Utilities Commission of Ohio (PUCO). I am also familiar with the history of the natural gas markets all the way back to the Federal Power Commission's area rate cases in the 1960s. I gained this knowledge in my work at the FPC and the Federal Energy Administration, and in my consulting work going back to 1970, when I did some work on natural gas issues before I began focusing on gas in the late 1980s.

Q. DO YOU HAVE EXPERIENCE IN THE ANALYSIS OF LONG-TERM GAS SUPPLY OR GAS PURCHASE CONTRACTS?

- 3 A. Yes. Although most of the gas supply arrangements used by gas distribution companies
- do not involve long-term commitments, some of them do, and I have been called upon to
- 5 examine those long-term arrangements. Some of the long-term contracts I have analyzed
- 6 were purchases from large gas suppliers, and others were long-term commitments to
- 7 purchase the gas directly from gas producers.
- 8 I also served as a consultant to the New Jersey Department of the Public Advocate in its
- 9 evaluations of the long-term gas service agreements for several large cogeneration
- projects in New Jersey, and I have reviewed and testified on the gas supply arrangements
- for the Midland Cogeneration Project in Michigan.

12 Q. ARE YOU FAMILIAR WITH GAS SUPPLY ARRANGEMENTS INVOLVING 13 TAKE-OR-PAY OR TAKE-AND-PAY COMMITMENTS?

- 14 A. Yes. At the FERC, I reviewed requests by three interstate pipelines for their recovery of
- 15 take-or-pay buyout and contract reformation costs under Order No. 500. These
- proceedings involved many hundreds of millions of dollars of take-or-pay claims by
- producers against the pipelines. I also reviewed numerous disputed producer contracts in
- 18 Michigan proceedings involving Consumers Energy Company and Michigan
- 19 Consolidated Gas Company, which purchased large quantities of local production in the
- 20 1980s and 1990s.

1 Q. ARE YOU FAMILIAR WITH THE FORECASTING OF ENERGY SUPPLY AND DEMAND?

- 3 A. Yes. In the fall of 1973, when I joined an office that was then in the U.S. Department of
- 4 the Interior, I was the founding editor of the *Monthly Energy Review*, now published by
- 5 the Energy Information Administration (EIA) of the Department of Energy. In that same
- 6 position in 1974-1975, which was then part of the Federal Energy Administration, I
- 7 participated in the formation and implementation of a detailed regional energy demand
- 8 model for all energy products and consuming sectors in the U.S. economy, based on a
- 9 national macroeconomic model of energy demand.

10 Q. DO YOU HAVE ANY EXPERIENCE IN FINANCIAL ANALYSIS?

- 11 A. Yes. I have testified on rate of return and related financial matters in numerous
- proceedings involving electric, gas, water, and telephone utilities in many jurisdictions,
- including the FERC, the Federal Communications Commission (FCC), and a dozen state
- 14 regulatory commissions.

15 Q. ARE YOU FAMILIAR WITH INDIANA GASIFICATION, LLC ("IG") AND ITS PROPOSED SNG FACILITIES?

- 17 A. Yes. In 2007, I participated as a consultant to the OUCC in negotiations relating to an
- earlier proposal by IG to sell substitute natural gas (SNG) to several Indiana gas utilities.
- 19 From my non-engineer's perspective, the SNG facility addressed in that proposal was
- 20 generally similar to the SNG project being addressed in the current proceeding.

Q. CAN YOU PROVIDE ADDITIONAL INFORMATION ABOUT THAT 2007 PROCEEDING AND YOUR ROLE IN IT?

A. In October 2006, IG and several Indiana gas utilities signed a letter of intent for the utilities to purchase SNG from IG, which IG would produce at an SNG facility it proposed to construct in Indiana. In January 2007, IG and the utilities filed a joint petition at the Indiana Utility Regulatory Commission (IURC), docketed as Cause No. 43154, seeking its approval for these arrangements. The IURC proceedings apparently were then suspended while IG and the utilities attempted to negotiate a complete SNG contract to replace the October 2006 letter of intent. The OUCC also participated in those 2007 contract negotiations, and the OUCC retained me as a consultant to assist with its participation. In that capacity, I attended negotiating sessions and reviewed several drafts of the proposed SNG contract. However, as far as I know, that proposed SNG contract was not completed or executed.

INTRODUCTION and OVERVIEW

- 15 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THE PRESENT PROCEEDING?
- 17 A. The OUCC has asked me to provide an assessment of the SNG Contract between the
 18 Indiana Finance Authority ("IFA") and IG.
- 19 Q. WHAT HAS BEEN YOUR ROLE IN THE PROCESS BY WHICH THE SNG CONTRACT WAS DEVELOPED?
- A. As IFA witness Jennifer M. Alvey states, the Indiana Code provides for the IFA to consult with the Consumer Counselor of the OUCC before negotiating and entering into an SNG purchase contract. The IFA did so, and in October 2010 the OUCC retained me to assist in responding to the IFA. It is my understanding that the OUCC had been

consulting with the IFA for more than a year before I was retained. At the time I was retained, the IFA and IG had negotiated a Term Sheet for an SNG purchase contract, but the IFA had not provided a draft of such Contract to the OUCC. The OUCC asked me to review the Term Sheet and, more generally, to provide an initial evaluation of the proposed SNG project in the context of Indiana Code 4-4-11.6 ("SNG Legislation"). In the course of my review, I identified several possible issues with the provisions in the Term Sheet, and I also identified several areas in which I suggested that the OUCC might obtain additional information from the IFA about its (*i.e.*, the IFA's) due diligence and other efforts in negotiating the Term Sheet and the SNG Contract.

In November, I discussed the results of my review with the OUCC. I then participated (by telephone) in conferences between the IFA and the OUCC, at which time my concerns were discussed and satisfactorily addressed.

At the beginning of December, the OUCC sent me a copy of a draft of the SNG Contract, which it had received from the IFA. I reviewed that draft, and I found that it addressed to my satisfaction the possible issues that I had identified in the Term Sheet. That review concluded my participation in the development of the SNG Contract.

17 Q. HAVE YOU REVIEWED THE EXECUTED VERSION OF THE SNG 18 CONTRACT?

A. Yes. I have read the amended Joint Petition and the testimony and exhibits filed by the Joint Petitioners on January 24, 2011, focusing on the testimony of IFA witnesses Alvey and Reiner W. Kuhr and IG witnesses Donald W. Maley and Arthur E. Berman. The executed version of the SNG Contract is Exhibit JMA-1.

1 Q. WHAT ARE THE MOST IMPORTANT FEATURES THAT A PROJECT SUCH 2 AS THE SNG CONTRACT SHOULD PROVIDE TO INDIANA CUSTOMERS?

- 3 The most important features are diversification of the energy supply for Indiana A. 4 customers; limitation of the risk that Indiana customers may pay more for SNG than the
- 5 market price of conventional natural gas supplies; and protection against the danger that
- 6 Indiana customers will have a continuing obligation to purchase SNG if tendered by the
- 7 IG project ("Project"), but with no assurance that any such SNG supplies will be
- 8 forthcoming.

9 DOES THE SNG CONTRACT ADDRESS THESE IMPORTANT FEATURES? Q.

- 10 A. Yes it does. The SNG contract is a diversification of the supply of natural gas for
- 11 Indiana customers. Its derivation from coal is also a diversification relative to the way
- 12 most coal is used for electric generation, because it does not involve conventional
- 13 combustion, which is the principal issue with the use of coal as fuel.
- 14 The guaranteed savings of \$100 million provided for by the SNG Contract, described by
- IFA witness Alvey at pages 19-21 and 23-25 of her testimony, protects against some of 15
- 16 the danger that the price of the SNG to Indiana customers will exceed the market price of
- 17 conventional natural gas supplies.

18 Q. HOW DOES THE SNG CONTRACT PROTECT INDIANA CUSTOMERS 19

- AGAINST HAVING A CONTINUING OBLIGATION TO PURCHASE SNG
- 20 EVEN IF NO SNG IS PRODUCED?
- 21 The primary protection is the Long Stop Date of December 31, 2018. If IG fails to A.
- 22 complete its proposed SNG facility and achieve commercial production of SNG by the
- 23 Long Stop Date, the IFA has a unilateral right to terminate the SNG Contract on 30 days'

1		notice. The Long Stop Date is subject to extension only for delays beyond June 30, 2011							
2		in completing the present proceeding, including any appeals, and specifically not for							
3		delays associated with Force Majeure. IG thus has seven years and six months to							
4		complete its SNG facility and bring it on-line with commercial production, and the IFA							
5		can terminate the Contract if IG does not meet this deadline.							
6		SNG CONTRACT							
7 8	Q.	WHAT IMPORTANT CONCERNS DID YOU IDENTIFY IN REVIEWING THE SNG CONTRACT?							
9	A.	The most important concern that I have identified is:							
10 11 12 13 14		 the absence of significant competition among prospective sellers for the opportunity to provide SNG to the IFA. Absent significant competition, neither the IFA nor the representatives of Indiana customers can use a market test to determine whether the terms of the proposed SNG Contract represent the market "price" for this type of SNG purchase arrangement. 							
15 16		I have also identified the following other important concerns, which I address in the remainder of my testimony.							
17 18		 Does the SNG Contract provide incentives for IG to manage the project to maximize the benefits for Indiana customers? 							
19 20 21		 Do the arrangements proposed by the Joint Petitioners ensure that the benefits of the IG Project will go to the Indiana customers that bear the risk of loss if the IG Project fails to achieve the expected benefits? 							
22 23 24		 Does the SNG Contract protect against the risk of large increases in the price of SNG, which might occur because of increases in the SNG costs or for other reasons, such as regulatory and public policy changes? 							
25 26 27		 Does the SNG Contract protect Indiana customers against the risk that the proposed SNG facility will fail to operate as planned, producing less SNG than is expected, and at an irregular rate? 							
28 29 30		• When the SNG is sold, there is a risk that the selling price will be slightly less than the then-current monthly or spot market price of conventional natural gas supplies.							

1 Q. WHAT DO YOU MEAN BY THE ABSENCE OF SIGNIFICANT COMPETITION 2 AMONG PROSPECTIVE SELLERS OF SNG TO THE IFA?

3 At page 18 of her testimony, IFA witness Alvey explains that the IFA issued a Request Α. 4 for Proposals (RFP) in March 2009, two days after the Governor signed Public Law 5 2-2009, on which the SNG project is based. IG submitted its proposal two weeks later, 6 and the IFA did not receive any other responses. The IFA then spent approximately 7 21 months discussing the Project with IG and negotiating the SNG Contract. The only 8 opportunity for competition to enter into this procurement process was the two-week 9 period for responding to the RFP at the end of March and the beginning of April 2009, 10 and no competition appeared at that time. Many of the important provisions of the SNG 11 Contract were developed after IG had been selected by the IFA as the only respondent to 12 its RFP. Those provisions are the result of a bilateral negotiation, not a competitive 13 process, so there is no market-based benchmark for the reasonableness of the SNG 14 Contract.

15 Q. CAN YOU PROVIDE AN EXAMPLE OF A PROVISION IN THE SNG 16 CONTRACT FOR WHICH THE ABSENCE OF A MARKET-BASED 17 BENCHMARK IS NOTICEABLE?

18 A. Yes. Under the SNG Contract, the price that the IFA pays for SNG includes a fixed
19 capital component of \$3.50 per MMBtu. There is no market-based evidence that \$3.50
20 per MMBtu is a reasonable or appropriate price to pay for the capital cost of the plant
21 that IG is proposing to construct to produce SNG for the IFA.

One other observation bears on this concern. IG witness Donald W. Maley identifies the scenario in which natural gas prices are much lower than IG expects them to be, and as a result, the SNG Contract costs Indiana customers more than they would pay for natural gas without the SNG Contract. However, even in this "Low Case" scenario, Mr. Maley testifies that IG "would be stuck with a low, single-digit return on its invested capital." This statement is important because it indicates that the pricing formula is expected to yield a positive return to IG even if natural gas prices are so low that SNG is more expensive to produce than natural gas. If IG can earn some profit even with very low natural gas prices, then the SNG Contract places most of the risk of low natural gas prices on Indiana customers.

Α.

11 Q. DOES MR. MALEY'S TESTIMONY MEAN THAT IG IS GUARANTEED A 12 PROFIT UNDER THE SNG CONTRACT?

No. My understanding of Mr. Maley's Low Case scenario is that it assumes the SNG facility will be constructed for whatever cost IG used in its cost projections, and that it will operate as planned to produce at least 38 million MMBtu of SNG per year, and probably much more, as well as various Additional Products. Under the SNG Contract, IG — not Indiana customers — bears the risk that the construction cost of the SNG facility will exceed IG's estimate, but IG reaps the gain if the construction cost is less than estimated. IG also bears the entire risk that the SNG facility will not produce the 38 million MMBtu per year that the IFA is committed to purchase if it is produced, and there is no gain to IG if the SNG facility produces less than 38 million MMBtu. IG shares with Indiana customers the risk that revenue from Additional Products, and from the production of more than 38 million MMBtu of SNG per year, will fail to reach

- expectations. The SNG Contract thus appears to shield IG from much of the risk of low
- 2 natural gas market prices, but it does not protect IG against the risks of the construction
- and operation of the proposed SNG facility.

4 Q. IS THE ABSENCE OF SIGNIFICANT COMPETITION IN THE RFP AND CONTRACTING PROCESS A REASON FOR REJECTING THE PROPOSED SNG CONTRACT?

7 No. As Ms. Alvey explains, the IFA has extensive experience in managing major Α. 8 projects and in negotiating the contractual arrangements for them. The IFA retained 9 Shaw Consultants International, Inc. ("Shaw") to assist it with the technology and 10 engineering aspects of reviewing and evaluating the proposed IG Project and SNG 11 Contract. The use of expertise like Shaw's is the only available substitute for market 12 competition, which competition is not available at this stage in the development of coal 13 gasification, and it is a reasonable substitute. Part 4 of Shaw's January 24, 2011 report 14 (IFA Exhibit RWK-1) specifically addresses the capital cost concern that I have 15 identified, concluding that "the \$3.50/MMBtu capital cost payment for Contract SNG is 16 not excessive" (Exhibit RWK-1, page 4-3).

Q. DOES THE SNG CONTRACT PROVIDE INCENTIVES FOR IG TO MANAGE THE PROJECT TO MAXIMIZE THE BENEFITS FOR INDIANA CUSTOMERS?

A. Yes. IG has a direct financial incentive to maximize the production of SNG and Additional Products, and to do so at minimum incremental cost, because IG retains a substantial percentage share (generally 50%) of the net revenues from all of these activities, with the balance going to the IFA for distribution to Indiana customers. IG also has some financial incentive to control the costs that are reflected directly in the

1	SNG price, because IG is at risk for the \$100 million of guaranteed savings if the SNG
2	prices exceed or are close to the price of natural gas, and because there is a cap on the
3	amounts that can be included for Changes in Governmental Requirements.

Q. DO THE ARRANGEMENTS PROPOSED BY THE JOINT PETITIONERS
 ENSURE THAT THE BENEFITS OF THE IG PROJECT WILL GO TO THE
 INDIANA CUSTOMERS THAT BEAR THE RISK OF LOSS IF THE IG
 PROJECT FAILS TO ACHIEVE THE EXPECTED BENEFITS?

Α.

Yes. Two points are important in response to this question. The first is the division of risks and benefits between IG and Indiana customers. I have explained that IG and Indiana customers each bear some of the risk of the Project. IG bears the risks of construction cost and successful operation of the SNG facility, whereas customers bear most of the risk that SNG is more expensive than natural gas because natural gas prices are very low. On the benefit side, IG and the Indiana customers will share the expected benefits, and each will obtain a larger benefit as the total amount of benefits available for sharing becomes larger. This sharing of benefits occurs because the SNG Contract provides for sharing the Net Incremental Revenues of the Project, and these Net Incremental Revenues are the principal source of the expected benefits of the Project.

The second point about having the benefits accrue to the Indiana customers that bear the risks of loss relates to the concern that some customers could opt out of the sharing if the Indiana customers are bearing a loss, but could opt into the sharing of benefits if the benefits are positive.

- Q. CAN YOU EXPLAIN THE CONCERN THAT SOME CUSTOMERS COULD OPT INTO SHARING THE BENEFITS OF THE IG PROJECT IF THOSE BENEFITS ARE POSITIVE, BUT OPT OUT OF SHARING IN ANY LOSSES?
- A. Yes. The legislation authorizing the IFA to purchase SNG provides that the IFA convey any net benefits from its SNG activities to the retail end use customers of regulated gas utilities in Indiana ("Retail Customers"), and that it recoup any losses in its SNG activities from these Retail Customers. If it is possible for some entities to choose to be Retail Customers only when the IFA is distributing net benefits, and not be Retail Customers when the IFA is recouping losses, those entities would be able to obtain any benefits provided by the SNG Project without bearing the risk of any losses.

11 Q. HOW DO THE ARRANGEMENTS PROPOSED BY THE JOINT PETITIONERS ADDRESS THIS CONCERN?

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A. The Form of Billing and Collection Services Agreement (Exhibit JMA-4) defines the class of "retail end use gas customers" as excluding industrial transport customers with an annual volume of 50,000 dekatherms or more ("Exempt Customers"), and it provides that Exempt Customers will not be included in the class of retail end use gas customers at any later point in the term of the SNG Contract. Large industrial gas users are thus exempt from the sharing of risks and benefits at the beginning of the contract term, when it is most likely that benefits will be negative, but they cannot later opt into the sharing arrangement if benefits become positive.

Q. DO YOU HAVE OTHER COMMENTS ABOUT THE DEFINITION OF "RETAIL END USE CUSTOMERS"?

A. Yes. It appears that an entity can withdraw from the class of retail end use customers by discontinuing its use of natural gas, and it can join this class by becoming a gas

1	customer. Entities that now use gas can thus avoid any negative consequences under the
2	SNG Contract by ceasing their use of gas, and they can obtain a share of any positive
3	benefits by becoming gas customers. But I view these possibilities as a positive feature
4	of the arrangements proposed by the Joint Petitioners, not a problem. The factor most
5	likely to cause a negative result from the SNG Contract is low gas prices, and there is
6	little danger that entities will stop using natural gas when it is relatively inexpensive,
7	merely because they must help pay for any negative result of the SNG Project as part of
8	their gas bills. Similarly, large positive benefits from the SNG Contract are most likely
9	to be a consequence of high natural gas prices, and there is again little danger that
10	entities will migrate from other fuels to gas at a time when gas is expensive, merely to
11	share in the benefits from the SNG Project.

12 DOES THE SNG CONTRACT PROTECT AGAINST THE RISK OF LARGE 13 INCREASES IN THE PRICE OF SNG, WHICH MIGHT OCCUR BECAUSE OF 14 INCREASES IN THE SNG COSTS OR FOR OTHER REASONS, SUCH AS **REGULATORY AND PUBLIC POLICY CHANGES?** 15

- 16 A. The IFA negotiated a pricing formula for SNG in which all but two of the 17 components are capped or subject to other controls. These caps and controls protect 18 against unlimited increases in the price that the IFA pays for the SNG it purchases. IFA 19 witness Alvey explains the pricing provisions at pages 16-18 and 27-33 of her direct 20 testimony.
- 21 The two price components that are neither capped nor subject to other controls are the 22 Pipeline Transportation Charge and the pass-through of New Taxes. The Pipeline 23 Transportation Charge is a very small fraction of the total SNG cost or price, and the

- transportation services required for the SNG Project are subject to regulation by the FERC. The absence of a cap on the Pipeline Transportation Charge is therefore not a
- 3 significant concern.
- 4 The only New Taxes that are passed through to the SNG price without a cap are new or 5 increased taxes that apply specifically to the production of SNG, including taxes such as 6 carbon taxes or Btu taxes that apply to fuels and energy products. This "New Taxes" 7 category is limited in scope. First, it encompasses only government actions that 8 "taxes" in a narrow sense of the word. constitute Change in Governmental 9 Requirements is a separate category of government actions, and its effect on the SNG 10 price is capped. Within the category of Taxes, changes in general business taxes are 11 excluded from being passed through to the SNG price. Taxes on Additional Products are 12 also excluded and treated instead as offsets against Incremental Revenues in the 13 determination of Net Incremental Revenues. Taxes on Additional Products can therefore 14 reduce the amount of the credit (i.e., the reduction in the SNG price) for Net Incremental 15 Revenues, but they cannot increase the SNG price to an amount higher than it would be 16 absent any Additional Products. Negative Net CO₂ Revenues can increase the SNG 17 price (and CO₂ is also an Additional Product), but this increase is capped at \$0.51 per 18 MMBtu.
- Q. CAN YOU COMMENT ALSO ABOUT THE CAPS OR CONTROLS ON THE MAJOR COMPONENTS OF THE SNG PRICE, SPECIFICALLY THE 0&M COMPONENT AND THE FUEL COMPONENT?
- A. Yes. As Ms. Alvey explains, the O&M Component is fixed at \$1.88 per MMBtu plus adjustments for inflation in specified price indexes, with provision for redetermination to

reflect IG's actual O&M expense per MMBtu at five-year intervals starting in the seventh year of SNG production. However, IG cannot request a redetermination unless the Project has achieved cumulative savings by selling SNG to the IFA at prices lower than the market price of natural gas. The provision prevents IG from including high O&M costs in the SNG price unless the SNG price has been low enough to provide gas cost savings to Indiana customers.

The Fuel Component of each month's price per MMBtu of SNG is 96.5% of the actual delivered cost per MMBtu for the coal (or petcoke) used in that month, multiplied by the reciprocal of the actual conversion efficiency achieved by the facility in that month. The reciprocal of the conversion efficiency is the ratio of the total quantity of fuel used in the month (measured in MMBtu) to the total quantity of SNG produced in that month. However, this multiplier is limited to a maximum of 2.5 initially, decreasing to 2.0 after 20 months. The Fuel Component per MMBtu of SNG is thus limited to 1.93 times the actual delivered cost of fuel per MMBtu (1.93 equals 2.0 times 0.965, reflecting the 96.5% allocation of fuel cost to SNG and the floor on the conversion efficiency).

There is no cap on the actual delivered cost of fuel per MMBtu of fuel used in the SNG Project, or on the inclusion of the actual delivered cost of fuel per MMBtu in the SNG price. However, the most appropriate way to view this arrangement is that it substitutes the delivered cost of coal (or petcoke) for the market price of natural gas as the primary driver for part of the natural gas requirements of Indiana customers. This substitution is appropriate diversification against the risks of uncertain and volatile natural gas prices.

- The risk of high delivered coal costs is also mitigated by the right of the IFA to participate in the development and adoption of the Project's Annual Fuel Procurement Plans, and by the IFA's right to direct IG to use petcoke for up to 49% of the Project's fuel.
- Q. IS THERE A DANGER THAT LOW NATURAL GAS PRICES OVER THE
 NEXT 20 OR 30 YEARS WILL CAUSE THE SNG TO BE MUCH MORE
 EXPENSIVE FOR INDIANA CUSTOMERS THAN CONVENTIONAL
 NATURAL GAS SUPPLIES, EVEN IF THE SNG CONTRACT PREVENTS
 LARGE INCREASES IN THE SNG PRICE?
- 10 A. Low natural gas prices may be a real possibility. However, I do not view the possibility
 11 of low natural gas prices as a "danger" or a reason for refraining from approval of the
 12 proposed SNG Contract, even if the SNG Contract would be more expensive for Indiana
 13 customers than natural gas in that situation of low natural gas prices.

The proposed SNG Contract is most appropriately viewed as insurance against the risk of high gas prices. The purchase of such insurance serves an economic purpose because the risk of high gas prices clearly exists, even if there is a distinct possibility that gas prices may not be high during the term of the proposed SNG Contract. The purchase of insurance is not rendered undesirable by the possibility that the events being insured against may not occur. The premium for term life insurance is not wasted if the policyholder survives for the entire term of the policy, and the premium for major medical coverage is not wasted in a year that the policyholder avoids serious health problems. The proposed SNG Contract provides for a fraction of the natural gas requirements of Indiana customers. It would be shortsighted to reject this insurance against the risk of high natural gas prices for fear that it would involve some net

- 1 additional costs if Indiana gas customers are so fortunate that gas prices remain low
- 2 throughout the term of the proposed SNG Contract.

IS THE RISK OF HIGH NATURAL GAS PRICES RECOGNIZED IN THE SNG 3 Q. LEGISLATION?

- 5 Yes. IC 4-4-11.6-12 sets forth public policy findings of the Indiana General Assembly A.
- 6 that recognize the need to mitigate the effects of the volatility of natural gas prices
- 7 through the construction of new coal gasification facilities to ensure retail end use
- 8 customers of gas utilities receive a reliable, reasonably priced, long term supply of
- 9 natural gas.
- 10 Q. DOES THE SNG CONTRACT PROTECT INDIANA CUSTOMERS AGAINST 11
 - THE RISK THAT THE PROPOSED SNG FACILITY WILL FAIL TO OPERATE
- 12 AS PLANNED, PRODUCING LESS SNG THAN IS EXPECTED, AND AT AN
- 13 **IRREGULAR RATE?**
- 14 Yes. The IFA is protected against expected normal fluctuations in SNG output because A.
- 15 IG cannot receive credit for any Incremental Production of SNG in any month unless the
- 16 IFA has received its full allotment for the month. The IFA is protected against any major
- 17 shortfall in SNG production because it pays only for the SNG that it receives. If the IG
- 18 Project fails to produce SNG as planned, the IFA and Indiana customers will not be able
- 19 to benefit from a successful SNG project, but they will not be saddled with any costs for
- 20 SNG they do not receive. Also, IG has no other sources of revenue to replace shortfalls
- 21 in SNG production, and it therefore has a very strong financial incentive to keep its SNG
- 22 facility operating as planned.

- Q. THE LAST OF THE CONCERNS THAT YOU IDENTIFIED IS A RISK THAT
 THE SELLING PRICE OF THE PROJECT'S SNG WILL BE SLIGHTLY LESS
 THAN THE THEN-CURRENT MONTHLY OR SPOT MARKET PRICE OF
 CONVENTIONAL NATURAL GAS SUPPLIES. PLEASE EXPLAIN THIS RISK.
- This sales price risk exists because there is a risk that the supply of SNG produced by the IG Project may be less reliable on a daily basis than conventional natural gas supplies. If so, then the Marketer may have to sell the SNG production at a discount from the published index prices for natural gas. The discount would be relatively small because the SNG production would most likely be more reliable than contractually interruptible gas supplies, and it could be firmed-up at a relatively low cost by an entity with access to gas storage.
- 12 Q. UNDER THE PROPOSED SNG CONTRACT, WHO BEARS THE RISK THAT
 13 THE SELLING PRICE FOR THE PROJECT'S SNG MAY BE LESS THAN THE
 14 PUBLISHED INDEX PRICES FOR NATURAL GAS?
- 15 A. Any reduction in the selling price for the Project's SNG reduces the positive Market 16 Differential or increases the negative Market Differential, because the Market 17 Differential is the difference between the actual selling price of the Project's SNG 18 (defined in the SNG Contract as the Monthly Weighted Average Market Price) and the 19 SNG price chargeable to the IFA before adjustment for positive or negative Market 20 Differentials. The IFA and IG therefore share the risk of obtaining only a discounted 21 selling price for the Project's SNG production, and the IFA's share is passed through to 22 Indiana customers.

1	Q.	DOES	THE	SNG	CONTRACT	ELIMINATE	THE	RISK	OF	HAVING	TO
2		ACCE	PT A D	ISCO	UNTED PRICE	E FOR THE SA	LE O	F THE	PRO	JECT'S SN	IG?

- 3 No, it does not, except that it causes IG and the IFA to share this risk. The SNG A. Contract imposes no reliability requirements on IG for daily or monthly production of 4 5 firm quantities of SNG, and it imposes no notice requirements on IG for changing the 6 daily or monthly rate of SNG production. The absence of requirements of this nature is 7 the reason that prospective purchasers of the Project's SNG production may view that 8 production as less reliable than conventional natural gas supplies, especially for the first 9 several years of SNG production, until the Project has established a record from which 10 its reliability can be determined.
- Q. DOES THE RISK OF HAVING TO ACCEPT A DISCOUNTED SELLING PRICE OF THE PROJECT'S SNG AFFECT YOUR EVALUATION OF THE SNG CONTRACT?
- 14 A. Yes, but it does not affect my overall assessment of the merits of the SNG Contract. The
 15 magnitude of the SNG sales price risk is a small fraction of the price of natural gas, as I
 16 have explained, and it is also small relative to the other risks and uncertainties affecting
 17 the SNG Project. This relatively small risk is one of the factors that I considered in my
 18 evaluation, but it is not large enough to swing my assessment from one side to the other.

19 Q. DO YOU HAVE ANY FURTHER COMMENTS ABOUT THIS SELLING PRICE 20 RISK?

A. Yes. It would be appropriate for the IFA and IG and the prospective Marketer to consider this risk when they are developing the Marketing and Services Agreement, and to attempt to mitigate it as much as possible at that time.

1 CONCLUSIONS

2 Q. WHAT IS YOUR ASSESSMENT OF THE SNG CONTRACT, AS A WHOLE?

A. The SNG Contract is a reasonable implementation of the objectives and requirements set forth in the SNG Legislation. The SNG Contract satisfies the explicit requirements of such legislation, and its terms and conditions are designed to achieve the legislative objectives set forth there. The IFA took the appropriate steps to initiate a procurement of SNG, to negotiate a contract for purchasing that SNG under reasonable terms and conditions, and to obtain a favorable contract. My assessment is that the IFA was successful in achieving these objectives.

10 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

11 A. Yes, it does.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

By: Ralph E. Miller

Indiana Office of Utility Consumer Counselor

Cause No. 43976 - SNG

21- March - 2011

Date

Respectfully submitted,

Randall C. Helmen, Atty. No. 8275-49 Chief Deputy Consumer Counselor

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing Indiana Office of Utility Consumer

Counselor's Testimony of Ralph E. Miller has been served upon the following counsel of record in the captioned proceeding by electronic service on March 23, 2011.

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