

INTERNATIONAL NATURAL GAS PRICING - A CHALLENGE TO ECONOMIC MODELING

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THE ECONOMIC MODELING OF NORTH AMERICAN NATURAL GAS BENEFITS FROM A LIBERALIZED MARKET IN WHICH GAS PRICES ARE SET BY MARKET COMPETITION

- Unfortunately, That is Not True of International Gas Markets
- International Gas Markets Today Are Experiencing Severe Disequilibrium
- Just How Far Out of Balance They Are is Illustrated by Average Regional Prices in 2011
 - U.S. Prices at Henry Hub - \$4.00
 - U.K. Prices at the NBP - \$9.20
 - German Imports from Russia at Waidhaus - \$11.33
 - And Japanese LNG (as Liquid) - \$14.67

- And the IEA in its World Energy Outlook 2011 Expects Some Degree of Disequilibrium to Continue (For 2020)
 - U.S. - \$6.70
 - Europe - \$13.00
 - Japan - \$16.20
- Thus the Question, "How do you Deal With It?"
- The Gas Industry Originally Developed as a Series of Isolated Regional Markets, Often with Their Own Government-Dictated Pricing Systems
- As Crossborder Trade Began to Develop, Particularly for the European and Russian Pipeline Grids and for LNG, Internally Consistent Pricing Systems For the Trades Emerged, Setting Precedents That Largely Remain in Place Today

- In a 2009 Survey, the International Gas Union Attempted to Catalog the Various Gas Pricing Systems Currently in Operation Throughout the World
- It Listed Eight Different Systems, Three of Which are Utilized for Crossborder Trade; Those Three Are:
 - 1) Gas-to-Gas Competition - Gas Priced in Open Free Market Trade (North America and the U.K.)
 - 2) Oil Price Indexation - Prices are Set by Formula Under Long-Term Contracts (The Continent and Asia)
 - 3) Bilateral Monopoly - The Dominant Pricing Mechanism in Deals Involving the Former Soviet Union, Central and Eastern Europe and China
- The Other Five Categories Apply to Internal Markets and Most Commonly are Used to Subsidize Domestic Customers (The IEA Treats These as Energy Subsidy Systems)

- Ironically, Russia Participates in Three Categories
- It Prices Gas to European Customers with Western Oil-Linked Long Term Contracts; In its Dealing with FSU Countries and China it Utilizes Bilateral Monopoly Pricing; and it Fixes Internal Prices Administratively, in Order to Subsidize its Own Consumers
- Broadly Speaking, There are Two Major Challenges to the Utilization of Economic Models in International Natural Gas Price Projections
 - 1) The Coexistence of Market-Responsive Commodity Gas with Long-Term Contract Supply Whose Pricing Clauses Do Not Reflect Changes in Gas Prices
 - 2) The Participation in the Market of Countries that Do Not Play by Western Economic Rules, Either in Pricing to Their Own Consumers or in Cross Border Trade

SO WHY ARE CONTRACTS NEEDED?

- Major Pipeline and LNG Projects are Capital Intensive, Often Front-End Loaded and Commonly Debt-Financed
- The Traditional Long-Term Contract is a Means of Allocating Risk Among Buyer, Seller and the Financial Backers
- To Protect the Financial Backers, a Credit-Worthy Buyer and Seller Assume the Debt Service Obligation; Their Risks Have Been Traditionally Shared According to the Old Adage, "The Buyer Takes the Volume Risk and the Seller Takes the Price Risk"
- Hence the Traditional Contract Has a Take-or-Pay Obligation for the Buyer and a Price Escalation Clause for the Seller; These Have Usually Been Linked to Oil Prices

SO WHY NOT JUST SWITCH TO A GAS MARKET INDICATOR, SUCH AS HENRY HUB, THE U.K.'S NBP OR THE DUTCH TTF?

- Since the Buyer with a Gas Market Indicator Can Easily Lay Off His Unwanted Volumes in the Spot Market, His Risk is Reduced; Risk Has Migrated Upstream to the Seller
- When Confronted with Gas-to-Gas Commodity Markets in North America and the U.K., LNG Suppliers Adapted by What Might be Described as "Self Contracting", They Assumed the Debt Service Obligation Themselves and Added the Gas to Their Supply Portfolios
- For Example, the First Three Trains of Nigeria LNG Were Sold on Traditional Contracts by the NLNG Joint Venture; But Much of Trains 4 and 5 Were Sold to ENI, Shell and Total, Partners in NLNG for Later Resale

- While the Self-Contracting Partners Assumed Greater Risk, They Obtained Destination Flexibility as an Offset
- The Value of this Greater Destination Flexibility was Illustrated in 2009/2010 When Qatar's Plans for Substantial Shipments to the U.S. Were Dashed; The Ability to Divert Those Supplies to Other Markets, Such as Asia, Proved to be a Major Advantage
- One of the Problems in Liberalizing European Pipeline Contracts is That Their Fixed Routing Usually Precludes the Destination Flexibility Tradeoff
- Older Pipelines, Which are Largely Paid Off, Can More Easily Accept Spot Market Flexibility; Systems That Are Contemplating Major Expansion and Need Financing - Such as the "Fourth Corridor" Lines to the Caspian and Middle East - May Not be Willing To

WHILE OIL LINKAGE IS SOMETIMES CONFUSED WITH OIL PARITY, THE TWO ARE VERY DIFFERENT AND DEPEND ON THE DESIGN OF THE PRICE CLAUSE

- The North American Price (Henry Hub) is a Gas-to-Gas Commodity Price Completely Independent of Oil
- European Price Clauses are Typically Linked to Oil Products Prices; Asian Clauses are Linked to Crude Oil
- And While the U.K. Also Has a Fully Liberalized Market, It is Now a Net Importer; In an LNG Surplus, Atlantic Basin Arbitrage Tends to Drive its Prices (NBP) Down Towards North American Commodity Prices, But When LNG is Tight, They Rise Towards Continental Oil-Linked Levels

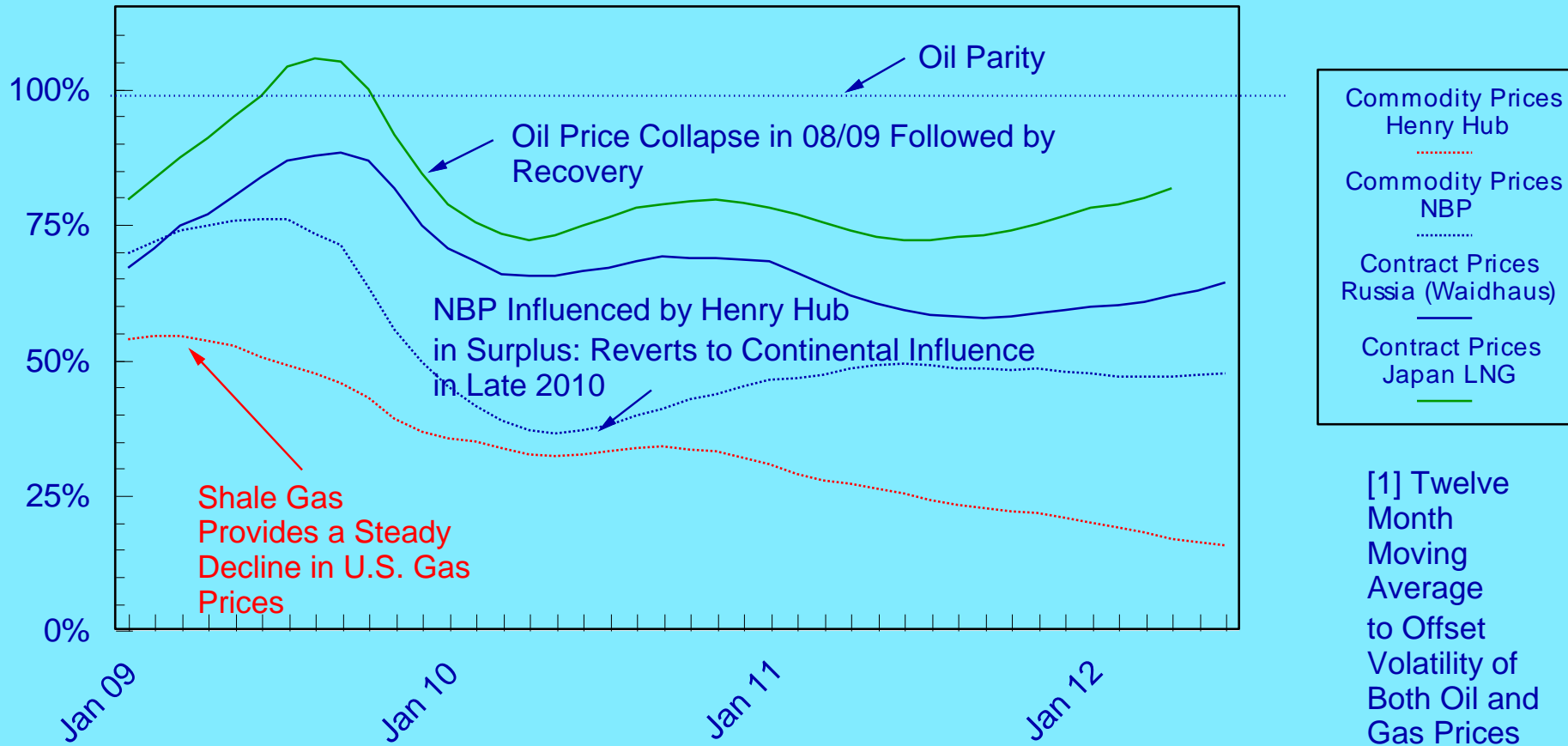
Figure 1

OIL LINKAGE IS NOT OIL PARITY

PRICES OF CONTRACT AND COMMODITY GAS AS A PERCENT OF BRENT CRUDE OIL PRICES

TWELVE MONTH MOVING AVERAGE [1]

Gas Price as a Percent of Brent



- Three Market Events in 2009/2010 Unleashed Competition Among The Three Somewhat Incompatible Crossborder Pricing Systems Forcing Them to Adapt to One Another

The Worldwide Recession

A Long-Awaited Surge in LNG Supply

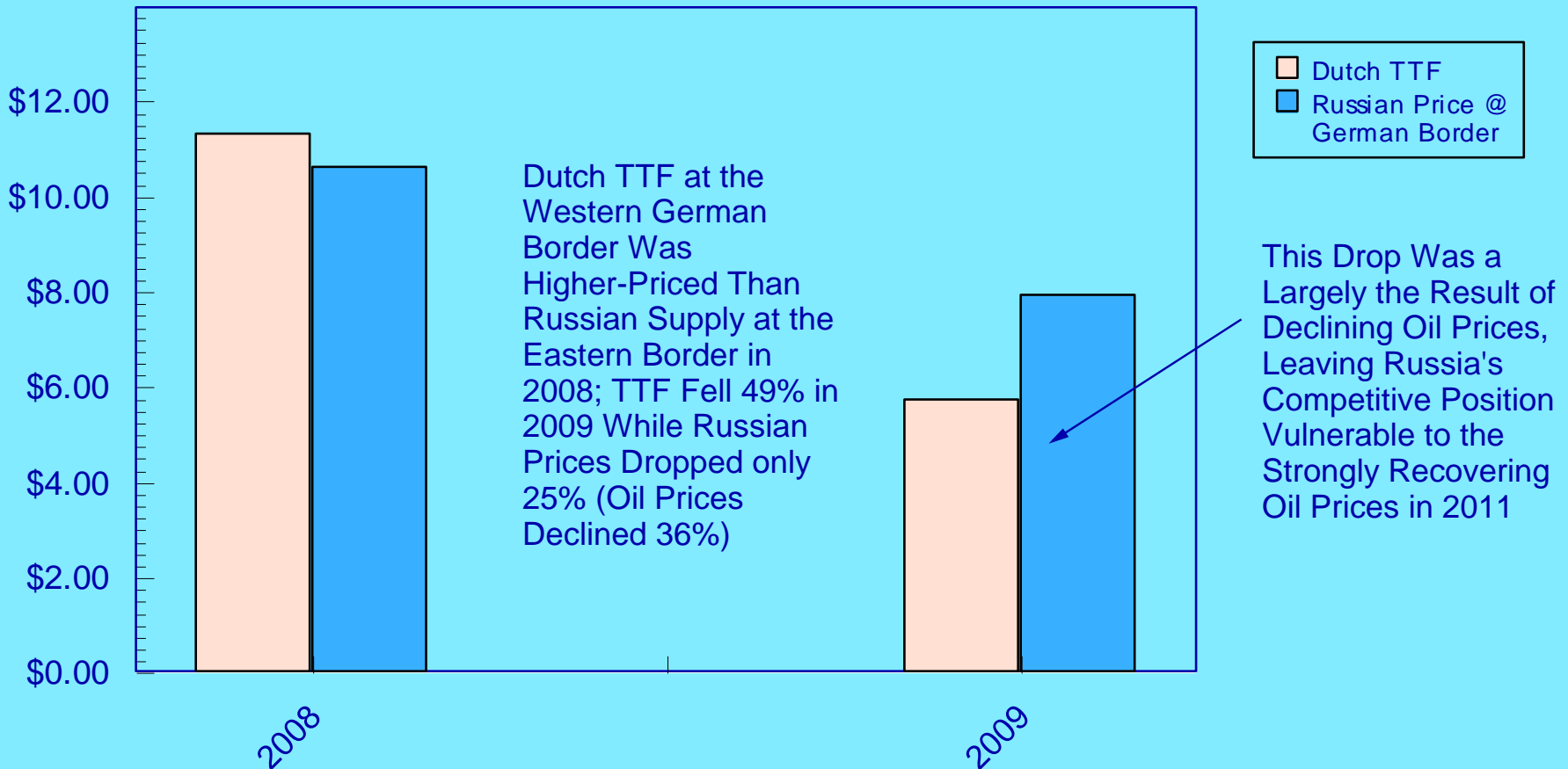
And the Development of Shale Gas, Taking North America Out the Market for LNG Imports and Sharply Reducing Regional Gas Prices

- The Growing Surpluses Transmitted North America's Very Weak Pricing to Northern Europe via LNG Terminals and U.K. Pipeline Links to the Continent
- And in a Weak Market, Some Retail Customers, Who Buy on Short Term Contracts, Dumped Take-or-Pay Surpluses on the Spot Market, Exacerbating the Price Decline
- As the Pipeline Suppliers Lost Market Share, They Were Forced to Renegotiate Some Contracts "Temporarily"

Figure 2

THE COLLAPSE OF WEST EUROPEAN GAS PRICING UNDER THE INFLUENCE OF LNG ARBITRAGE - GERMAN BORDER PRICES (WEST - DUTCH TTF HUB; EAST - RUSSIAN GAS @ W Aidhaus) 2008 VERSUS 2009

\$/MMBtu



THE EFFORTS OF THE EU TO LIBERALIZE GAS MARKETS, THOUGH STILL UNEVEN, ENABLES SOME RETAIL CUSTOMERS TO SHOP FOR GAS

- The Position of the Traditional Contract Suppliers Becomes Untenable When Their Oil-Linked Supply Must Compete With Cheaper Spot Gas Delivered Through a Third-Party-Access System
- Commodity Gas is Most Readily Available in Northwest Europe - the "Combat Zone" - With Easy Access to North Sea Pipeline and LNG Terminal Supply; Germany Has Proved to be a Main Battle Ground
- Competition Has Been Less Severe in Other Regions of Europe, Both Because of More Limited Access to Cheap Commodity Gas and Because Liberalization in Some Countries is Less Advanced

- Thus, Pipeline Suppliers Have Been Able to Tailor Their Pricing Adjustments to Individual Markets
- (Note That Any Observations on Contract Pricing are Based on Good - But Not Infallible - Commercial Intelligence)
- There Have Been Four Major Approaches to Contract Adjustment
- One, Favored by Buyers, Has Been Complete Hub Indexing Which Would Make Them Fully Competitive With Spot Gas; This Has Been the Position of Both E.ON and RWE in Germany, as Well as PGNiG in Poland, Which Have Been Negotiating With Gazprom with Price Arbitration as a Possible Backup (E.ON has Just Settled)
- Among the Sellers, Gazprom's Preferred Approach Has Been to Include a Hub Index (15%) in its Oil Formula

- But That Has Usually Been Ineffective; Therefore It Has Also Given a Discount Between 6% and 10% Off the Pricing Term to Some Customers
- This Has Been Taken in Addition to the Hub Index Term in the Case of the German Purchasers, But on the Original Oil-Linked Term in the Case of ENI in Italy and GDF Suez in France
- In Contrast, Statoil Has Reduced the Take Obligation for Some Contracts, Initially by 25%, Letting the Buyers Take the Remainder at Spot Prices
- And Through it All, Statoil's Market Adjustments Seem to Have Been Better Able to Preserve its Market Share Than Have Gazprom's

THE CHALLENGE TO CONTINENTAL OIL-LINKED CONTRACTS TOOK PLACE IN TWO WAVES

- The First, in 2009/2010, Resulted From the Collapse of the Commodity Hub Prices - NBP and Dutch TTF
- The Effect on Oil-Linked Prices Was Partly Moderated by the Contract Effect of Declining Oil Prices
- But Then as Rising NBP and TTF Prices Took Some of the Pressure Off in 2011, Rising Oil Prices Drove Up the Oil-Linked Prices Again
- One Way of Understanding the Challenge is to Walk an Example Contract Through the Various Market Periods

AN EXAMPLE OF A EUROPEAN PRICING TERM (USING DOLLARS INSTEAD OF EUROS AND MMBTU INSTEAD OF KWH)

Oil Market Share

Pass Through Factor

Conversion Factor Tonnes to MMBtus

Change in Product Price From Base Price

$$P_n = P_o + MS_{LFO} * PTF_{LFO} * CF_{LFO} * (P_{nLFO} - P_{oLFO}) + MS_{HFO} * PTF_{HFO} * CF_{HFO} * (P_{nHFO} - P_{oHFO})$$

Where P_n = The Current Price, LFO = Light Fuel Oil, HFO = Heavy Fuel Oil, and P_o = Base Price in \$/MMBtu and Product Prices in \$/Tonne

AN ILLUSTRATIVE EXAMPLE WITH REAL NUMBERS

(FORMULA ROUGHLY BASED ON 2002 MARKET CONDITIONS)

$$P_n = \$3.00 + 60\% * 0.5 * 0.253 * (P_{n_{LFO}} - \$300) + 40\% * 0.5 * 0.282 * (P_{n_{HFO}} - \$130)$$

Some Results:

In July 2008 with Strong Prices for Both Oil and Gas

$P_n = \$13.56$ Brent - \$123 HH - \$11.45 TTF - \$13.27

In September 2009 with Weak Oil and Gas Prices

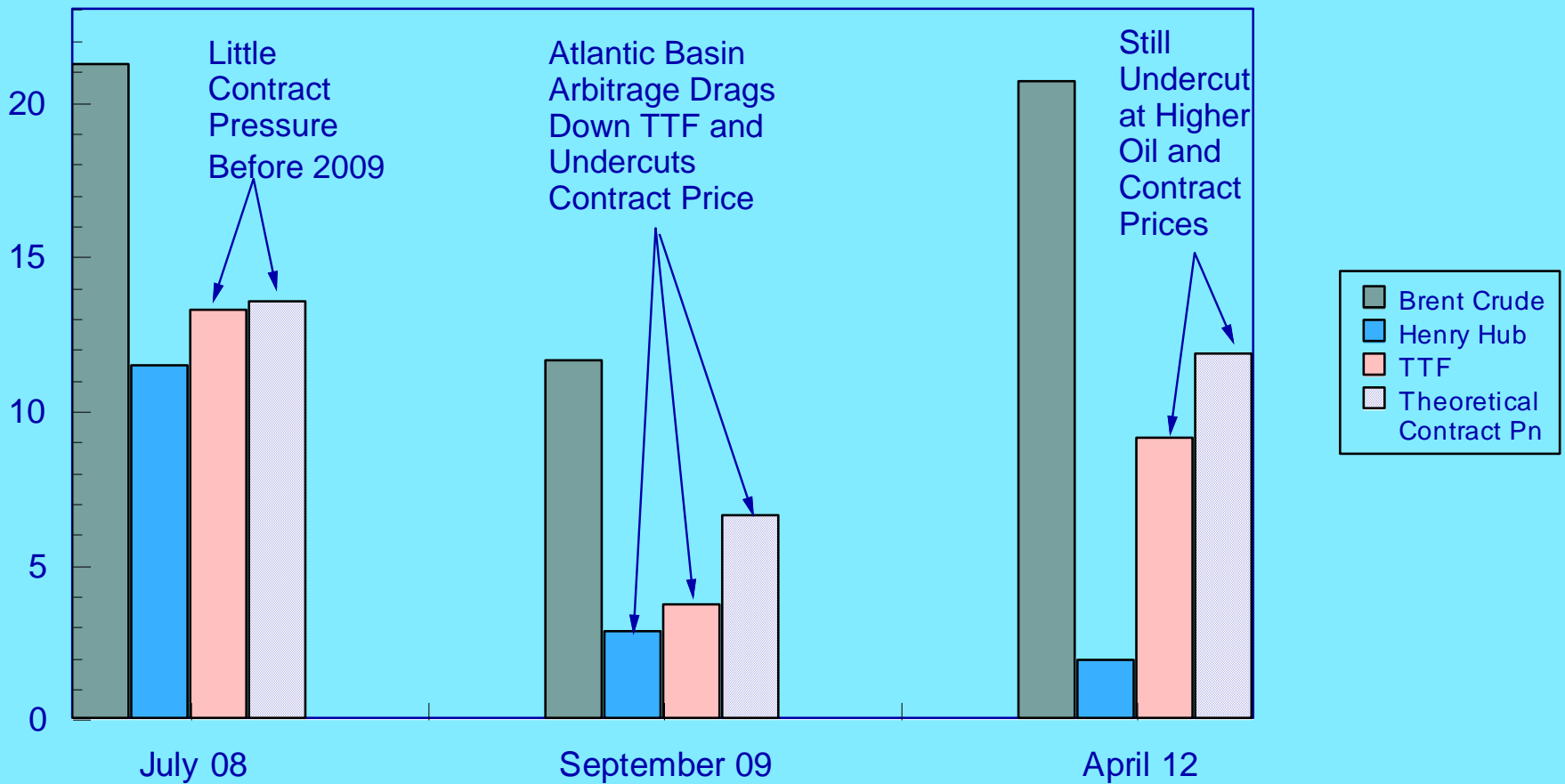
$P_n = \$6.60$ Brent - \$67 HH - \$2.88 TTF - \$3.75

In April 2012 with Weak HH Prices, Other Prices Strong

$P_n = \$11.87$ Brent - \$120 HH - \$1.92 TTF - \$9.12

Figure 3 THE RELATIONSHIP AMONG PRICES DURING THREE MARKET PERIODS

\$/MMBtu

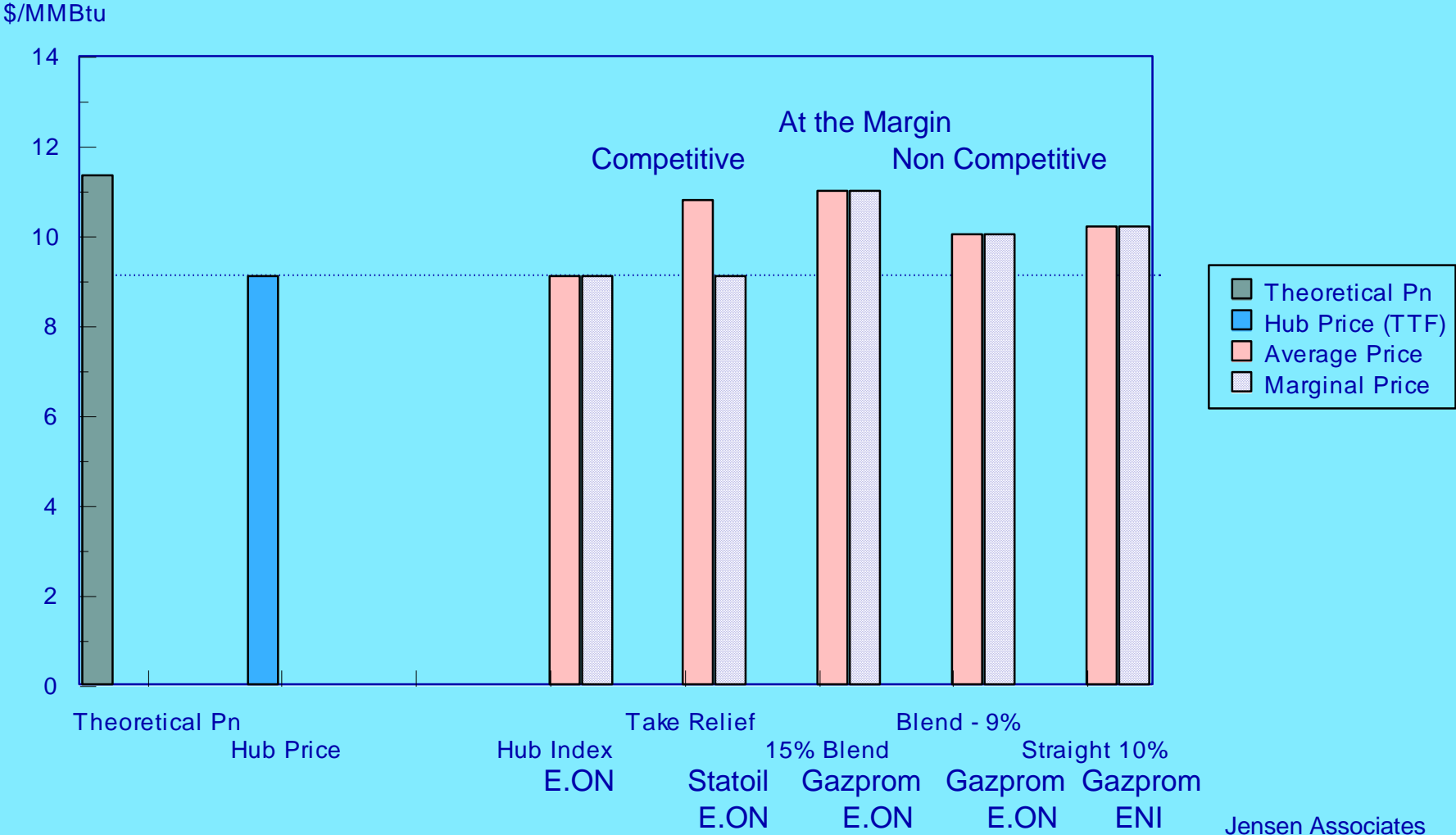


THE ILLUSTRATIVE EXAMPLE CAN ALSO BE USED TO SHOW HOW THE ADJUSTMENTS OPERATE

- In April 2012, the Theoretical Example Contract Price - Pn - Was \$11.37 Compared With TTF AT \$9.12
- While Full Hub Indexing Enables the Buyer to Compete with Spot Gas, Statoil's Approach of Partial Relief Also Enables the Buyer to Compete at the Margin While Preserving Some Original Revenue for the Seller
- But Gazprom's 15% Indexing (A "Blend"), and Further Discounting as it Appears to Have Offered E.ON, and Straight Discounting as it Supposedly Offered ENI and GDF Suez All Provide the Same Average and Marginal Price (Which in this Illustration, is Non-Competitive)

Figure 4

**THE PRICING CONSEQUENCES OF THE VARIOUS APPROACHES TO THE RECONCILING OF OIL-LINKED CONTRACTS WITH SPOT MARKETS
(THE SITUATION IN APRIL 2012)**



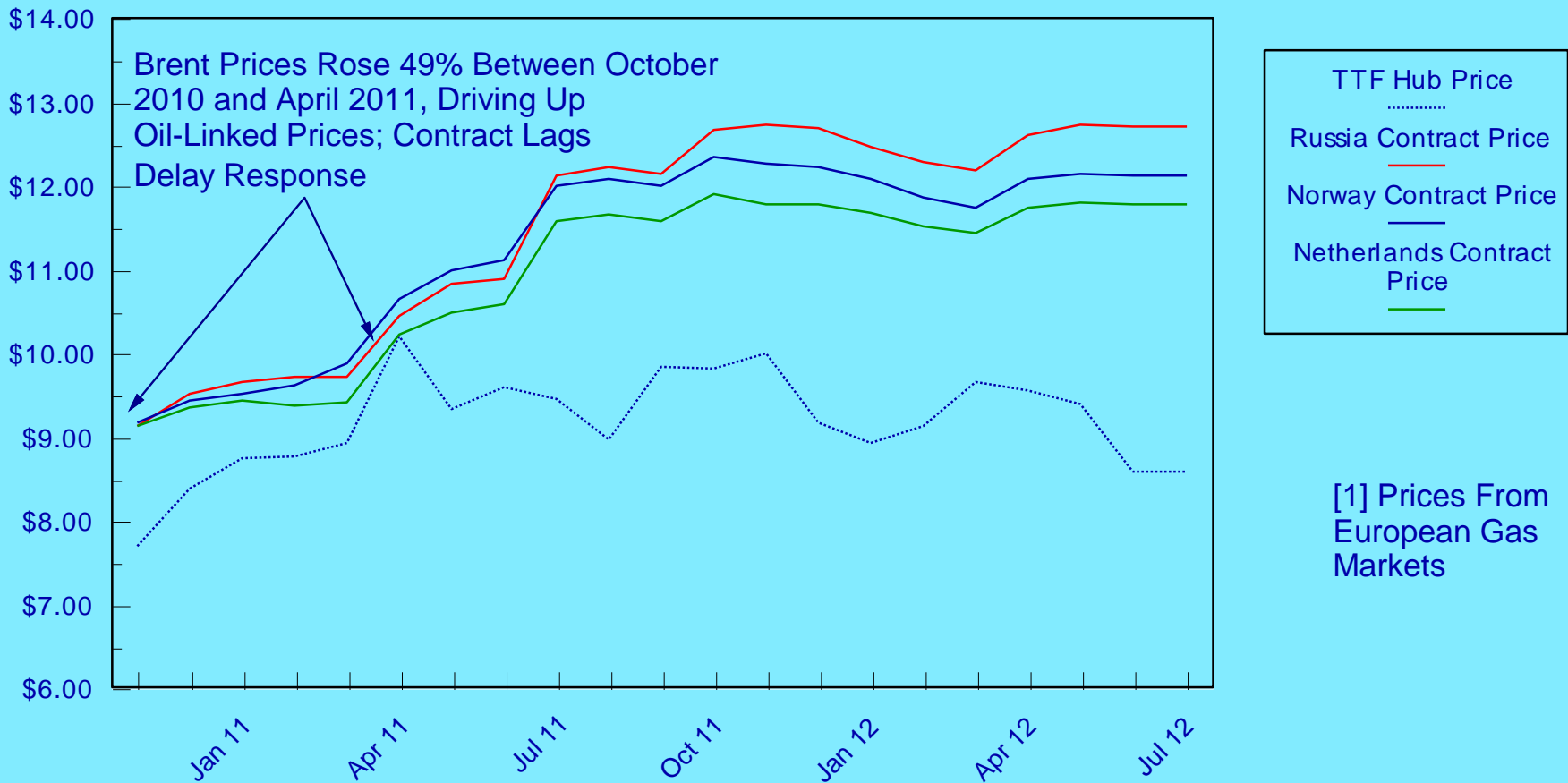
A TIME SERIES OF SPOT PRICES AND GERMAN CONTRACT PRICES FROM THE NETHERLANDS, NORWAY AND RUSSIA SHOWS RUSSIA'S COMPETITIVE PROBLEM

- Recent Norwegian Prices Have Been Below Russian Prices
- The Dutch Prices to Germany are Even Lower; One Source Claims that Some Contracts Include a 25% Hub (TTF) Index in the Oil Term
- If That Applies to Contracts That are Included in the German Export Price, It Would Explain the Behavior of the Dutch Price Series

Figure 5

BEHAVIOR OF CONTINENTAL GAS PRICES SINCE LATE 2011 TRADED DUTCH HUB PRICES [1] VERSUS GERMAN CONTRACT PRICES FROM RUSSIA, NORWAY AND THE NETHERLANDS

European Gas Prices

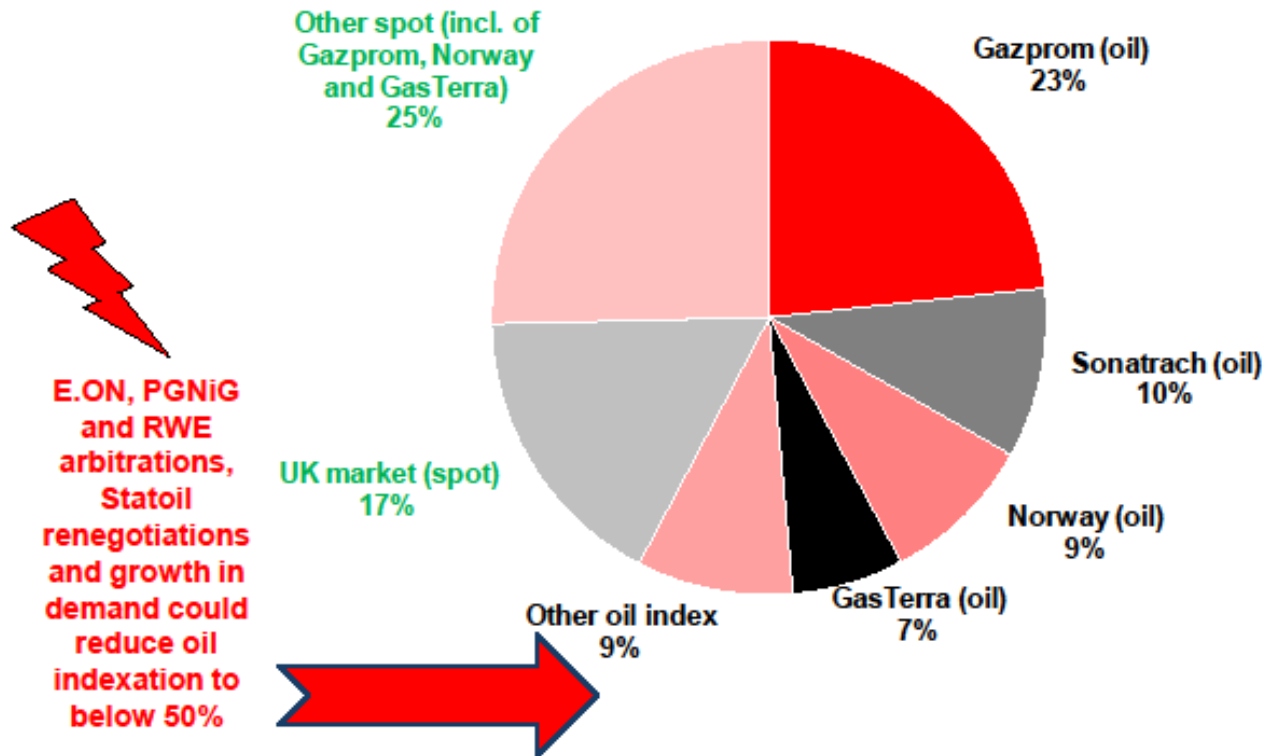


- Thierry Bros, an Analyst with Societe Generale in Paris Has Estimated that in 2011, 58% of European Supply was Still Oil-Indexed (The Following Slide is From his Presentation to an International Energy Forum Conference in Qatar in May)
- He Estimates that Oil-Indexing Will Slip to 55% in 2012 and Voices a Common European View That if the Average Falls Below 50%, the Situation will Become Unstable
- The Instability View is Reinforced by the Fact That Many of the Non-Competitive Contracts are Held by Electric Generators who Have Been Switching to Coal at These Gas Price Levels; Gas is Pricing Itself Out of the Market
- But Commodity Competition is Highly Regionalized and it is Not Clear That Hub Indexing Will Easily Spread to the Iberian Peninsula and to the South and East of the EU

EUROPEAN SUPPLY: ON THE VERGE OF BEING MOSTLY SPOT-INDEXED?

Estimated split of European gas supply in 2011

58% still oil-indexed



Source: SG Cross Asset Research

- More than 68% of the Pipeline Supply of the 12 Countries in Those Regions Comes From Russia and Algeria, Suppliers That Are Trying to Hold the Line on Oil-Linkage (Gazprom Gave Italy Less Generous Terms Than Germany)
- And the March Settlement Between E.ON and Gazprom Apparently Did Not Include Full Indexing but Rather a Combination of Partial Indexing and Further Discounts; Since it Also Supposedly Has Price Reopeners, It May Not Represent a Long Term Resolution of the Problem
- Thus I Would Judge That a Hybrid System (Partial Hub Indexing with Occasional Added Discounts) Which Attempts to Track Changes in the Market Administratively, But is Not Truly Market Responsive, is More Likely for Much of Europe

NORTHEAST ASIA AND CHINA HAVE LARGELY ADOPTED THE JAPANESE APPROACH TO OIL-LINKAGE

- It Utilizes a Simple Formula Which is Linked to the Japanese Customs Cleared Price for Crude Oil - JCC or the "Japanese Crude Cocktail"
- It is in the Form of:
$$P=C+S*JCC$$
- Where P is the Price in \$/MMBtu, C is a Constant Expressed in \$/MMBtu and S is the "Slope", a Dimensionless Number Applied to JCC in \$/BBI
- Because of the Constant, Gas Prices Do Not Rise Proportionally With Oil Prices as Do European Prices

- A Typical Formula - $P = \$0.80 + 0.1485 * JCC$
- In This Case, When $JCC = \$100/BBI$, $P = \$15.65$
- Because Oil Prices Have Gone Through Wide Swings Over Time, "S Curves" (Sometimes Caps and/or Floors) Were Introduced at One Point in Asian Contracts
- S Curves Reduce the Slope at Upper and Lower "Pivot Points"; They Thus Have the Effect of Protecting the Buyer at High Oil Prices and the Seller at Low Oil Prices
- But as Oil Prices Began to Move to Much Higher Levels in 2004/2005, S Curves Increasingly Put the Seller at a Disadvantage
- With the Tight Asian LNG Markets Towards the End of the Decade, Producers Were Successful in Removing Most of Them With the Exception of High-Cost Australia

Figure 7
AN "S CURVE" ILLUSTRATED
BASIC SLOPE - 0.1485, PIVOT POINTS @ \$65 AND \$90,
MODERATED SLOPE - 0.0696

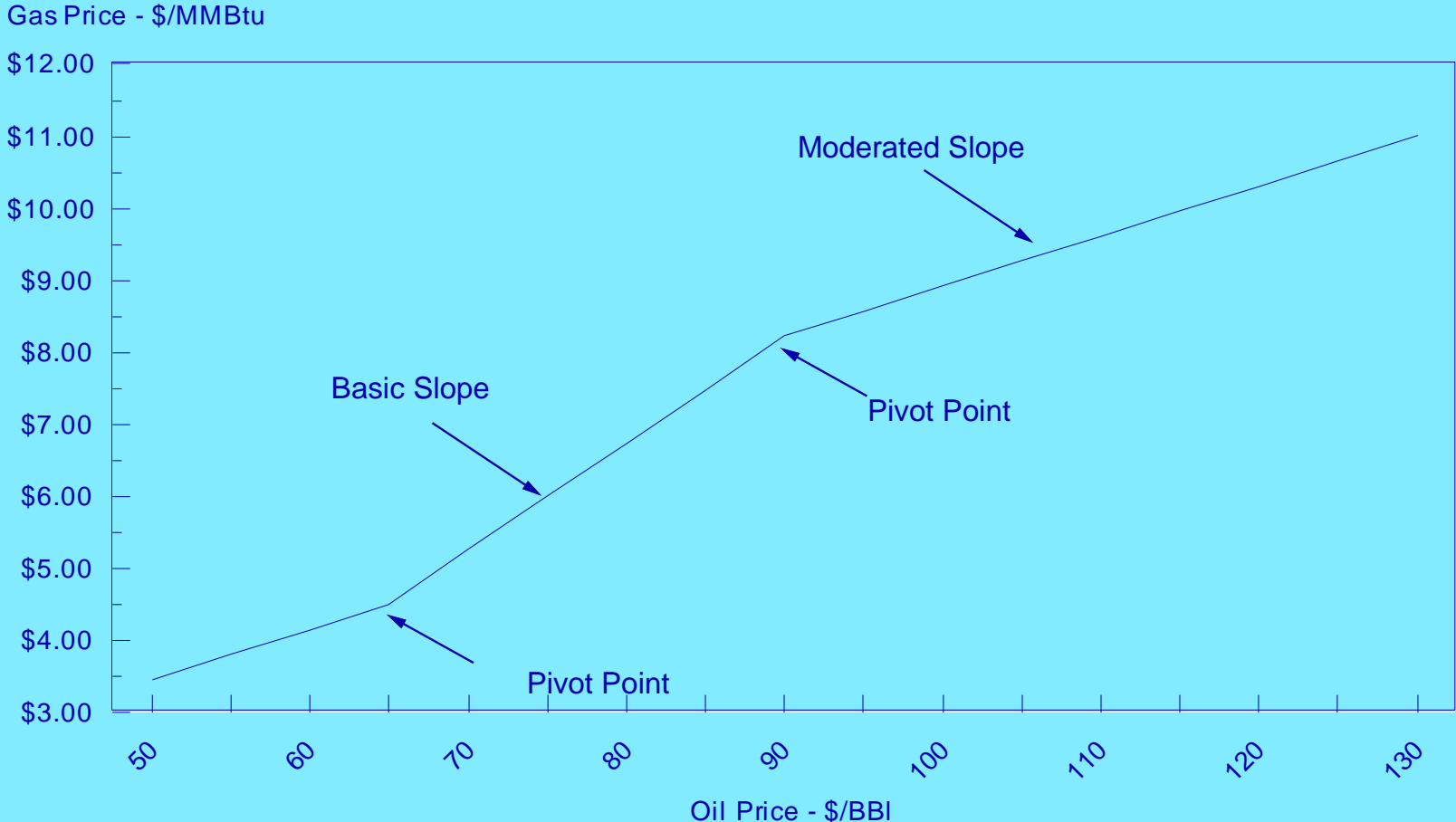
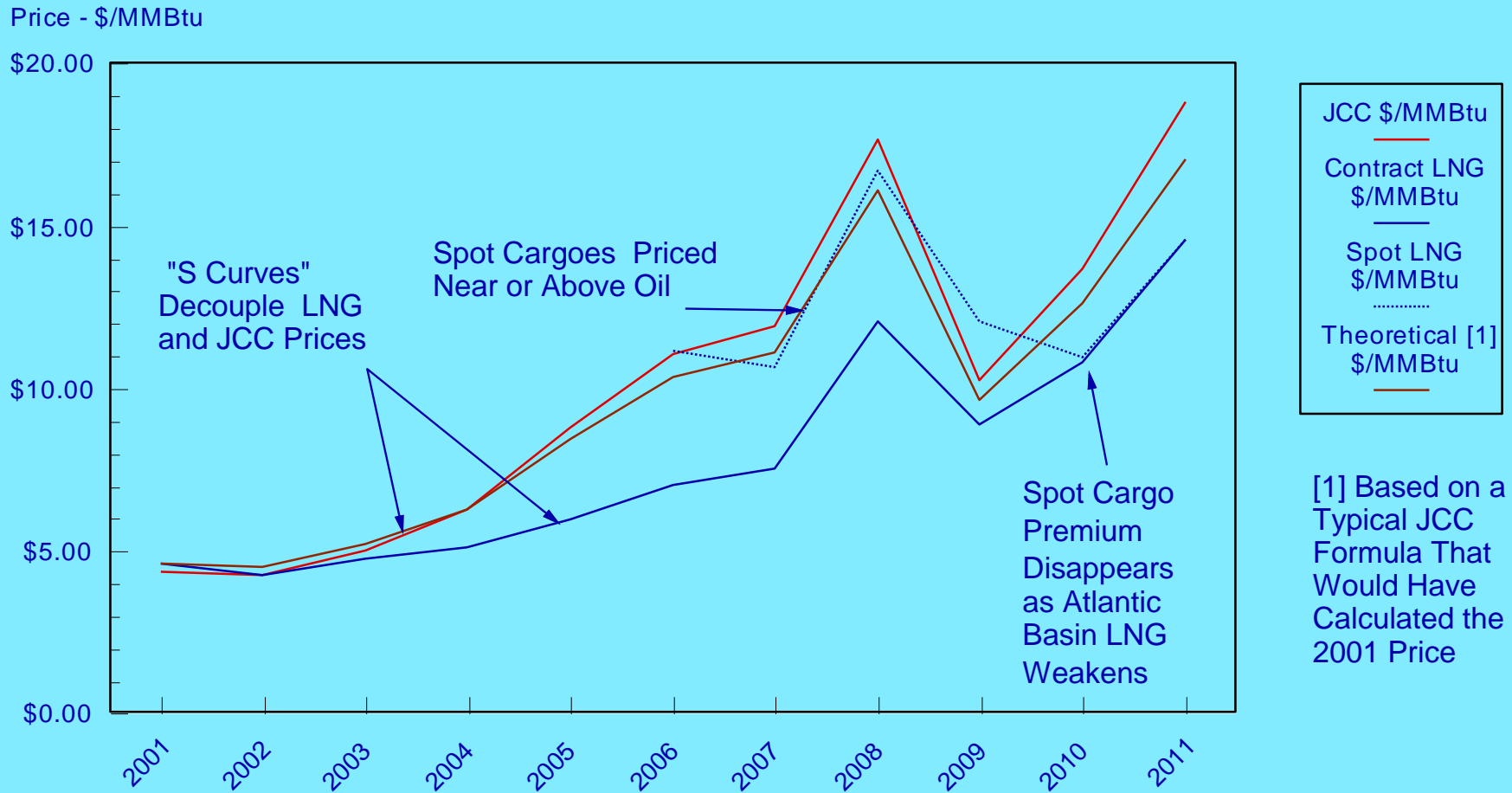


Figure 8

THE DECOUPLING OF JAPANESE LNG AND CRUDE OIL PRICES THROUGH "S CURVES" AS JCC (OIL) PRICES RISE - A COMPARISON OF OIL, CONTRACT LNG, SPOT LNG, AND THEORETICAL [1] PRICES



NORTHEAST ASIA AND CHINA WERE LESS SEVERELY HIT BY THE 2009 RECESSION

- LNG Demand for Japan, Korea and Taiwan Dropped 6.3% From 2008 to 2009; But China's Growth of 42.1% Left the Combined Total Off Only 2.3%
- And the Fukushima Disaster in March 2011, When Coupled with Chinese Growth, Meant that East Asian LNG Demand in 2011 Was Actually 30% Greater Than It Had Been in 2008
- Qatar's Efforts to Remarket the LNG Originally Intended for the U.S. Was Expected at One Point to Disrupt Asian Pricing; But the Tight Market and Qatar's Interest in Preserving Price Stability Meant That Prices Were Not Significantly Affected

- East Asia's Imports are Either in the Form of LNG or From Merchant Monopoly Pipelines; Thus There is No Commodity Competition as There is in Northwest Europe
- And Because The Economies Have Not Liberalized, There are No Significant Retail Customers to Provide Competition for Suppliers with Contracts
- Although Spot Cargoes of LNG are Freely Traded, the Size of a Transaction - Roughly 300 NYMEX Henry Hub Contracts - and the Need to Have an Import Terminal Limit Their Competitive Effectiveness
- As a Result, the Typical Oil-Linked Pricing Clause Has Remained Largely Intact in East Asia Despite the LNG Surplus Elsewhere and it is Not Easy to See What Will Change That

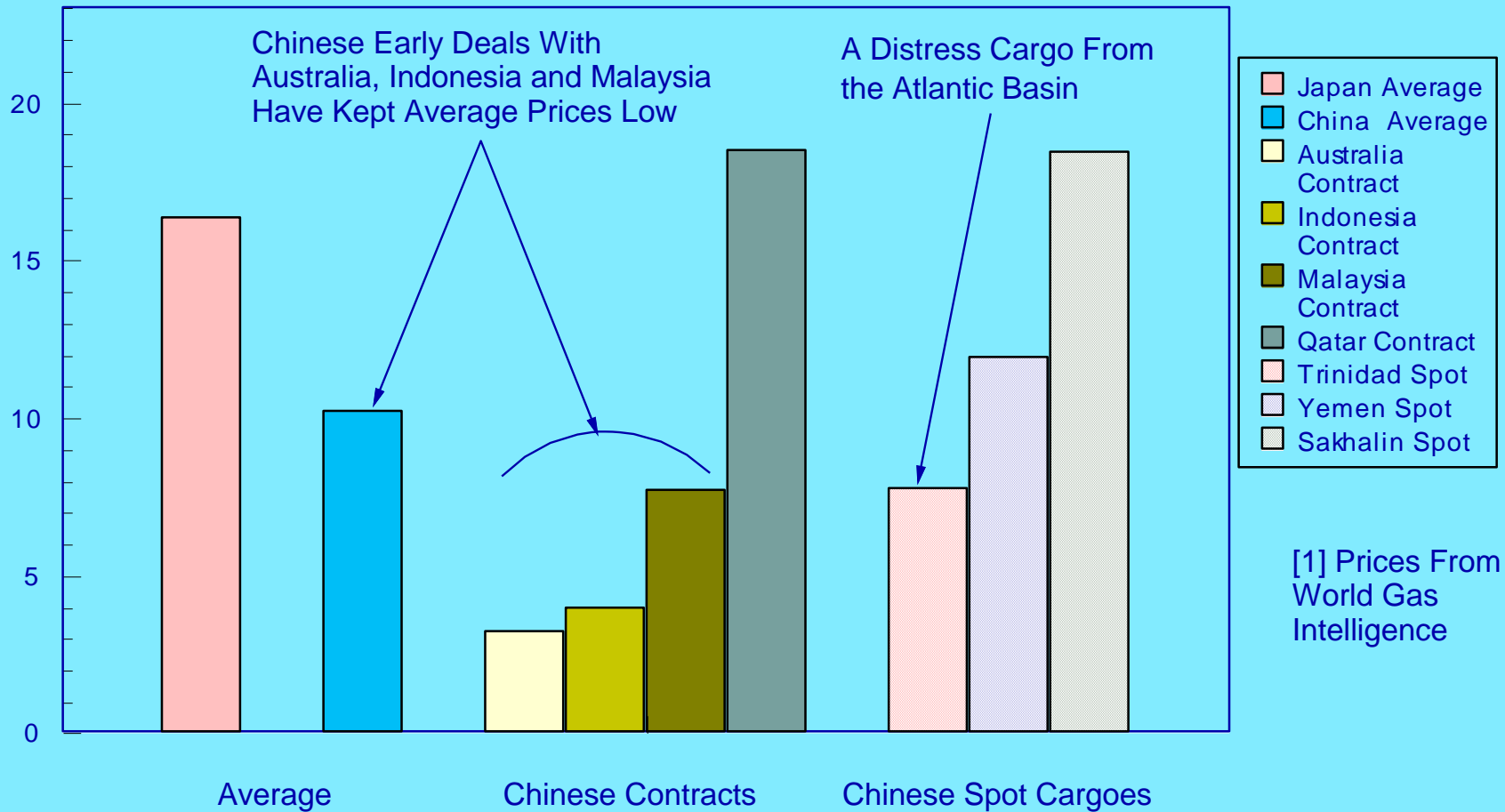
THAT DOES NOT MEAN THAT THERE IS NO COMPETITIVE PRESSURE ON ASIAN PRICES

- Suppliers Compete by Changing the Slope or the Constant in the Traditional Formula, or They May Utilize S Curves, Offer Reopeners or Limit the Range Over Which the Clause Operates (POR)
- There are Also Non-Price Terms - Upstream Equity Participation, Buyer Destination Flexibility, Buyer Built Tankers - to Sweeten the Deal
- Probably the Most Dramatic Exercise in Discounting was the Two Original Contracts for the Chinese Guandong and Fujian Terminals
- Australia's North West Shelf, Indonesia's Tangguh and Qatar's RasGas Were all in Competition to Supply the Two Terminals

- While RasGas Dropped Out, the Other Two Sought "First Mover" Status in the Chinese Market and Provided Substantial Discounts
- Australia Got the Guandong Contract at a Capped fob Price of \$2.89 and Indonesia the Fujian Contract at \$2.66 (Oxford Institute of Energy Studies NG-9)
- At an Equivalent Japanese ex Ship Price, That Represented Discounts of 16% for Guandong and 23% for Fujian Below the Then-Current Prices; But Oil - and JCC Formula - Prices Rose Rapidly Thereafter and Those Contracts, Together With a Later Malaysian Contract, Now Look Like Bargains
- An Obvious Question - "Can it Happen Again?"

Figure 9
AN ILLUSTRATION OF ASIAN CONTRACT AND SPOT PRICING [1]
EXAMPLE BASED ON MARCH 2012

\$/MMBtu



[1] Prices From World Gas Intelligence

IN THE TIGHT ASIAN MARKET OF 2008, QATAR ATTEMPTED TO ESTABLISH AN OIL-PARITY PRICING PRECEDENT

- Although Its Original Goal - a Slope of 0.1700 Plus a Constant - Was Largely Unsuccessful, Qatargas Did Manage a Slope of 0.1600 in Contracts with PetroChina and CNOOC (Supposedly Non-Price Terms Were Also Involved)
- But Since Then, Competition From Australian and Papua New Guinea Projects Have Eroded the Slopes; Trade Press Reports Suggest That AsiaPacificLNG Recently Accepted a 0.1380 Slope in a Kogas Contract
- The Fact That the Key Competing Suppliers Have Been High-Cost Australian Projects and Qatar - With its Desire to Hold the Line - Means that a Repeat of the Early Chinese Experience is Unlikely

Figure 10

EXAMPLES OF THREE DIFFERENT APPROACHES TO PRICING TERMS IN RECENT ASIAN OIL-LINKED CONTRACTS [1]

LNG Price - \$/MMBtu

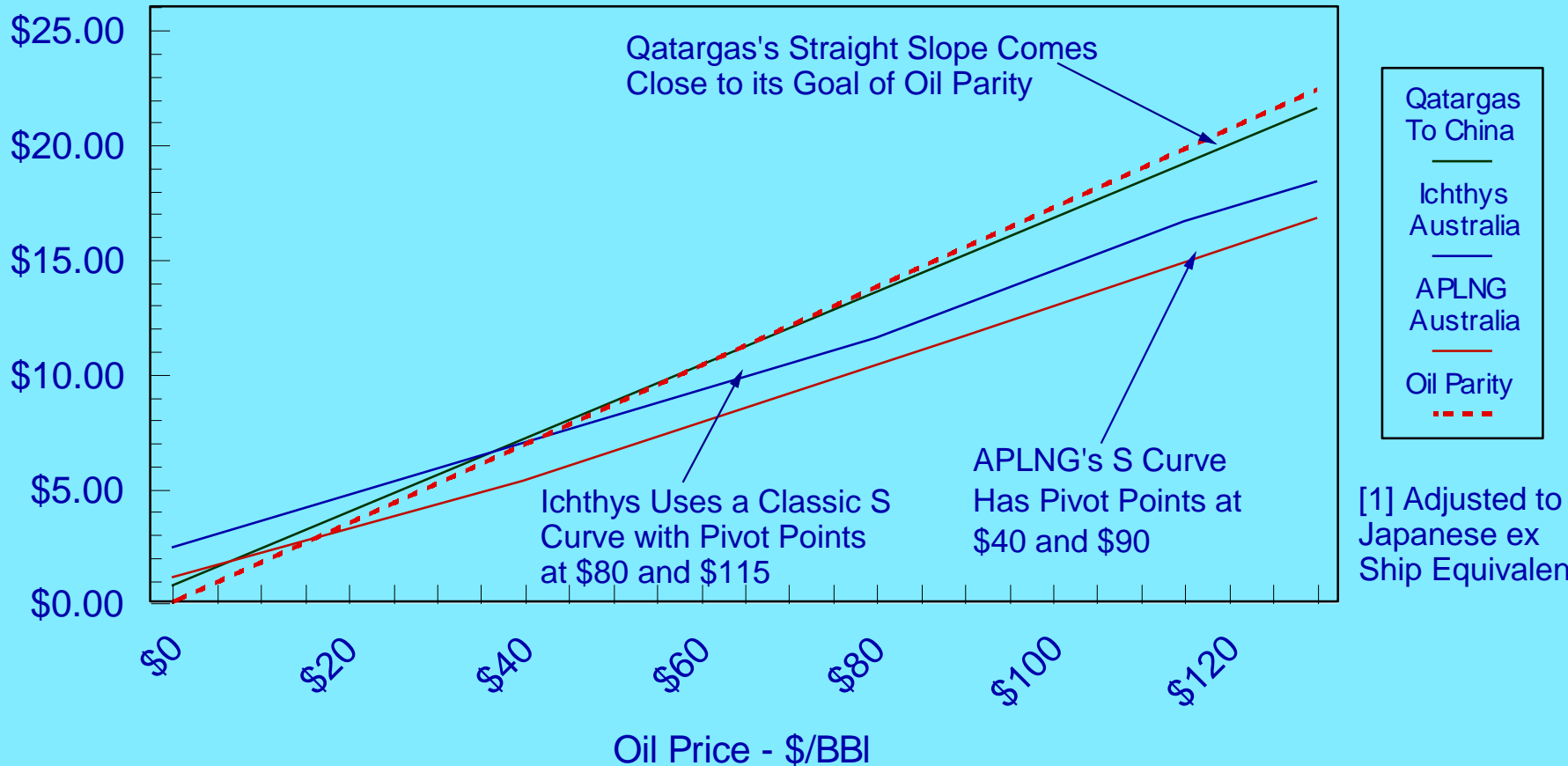
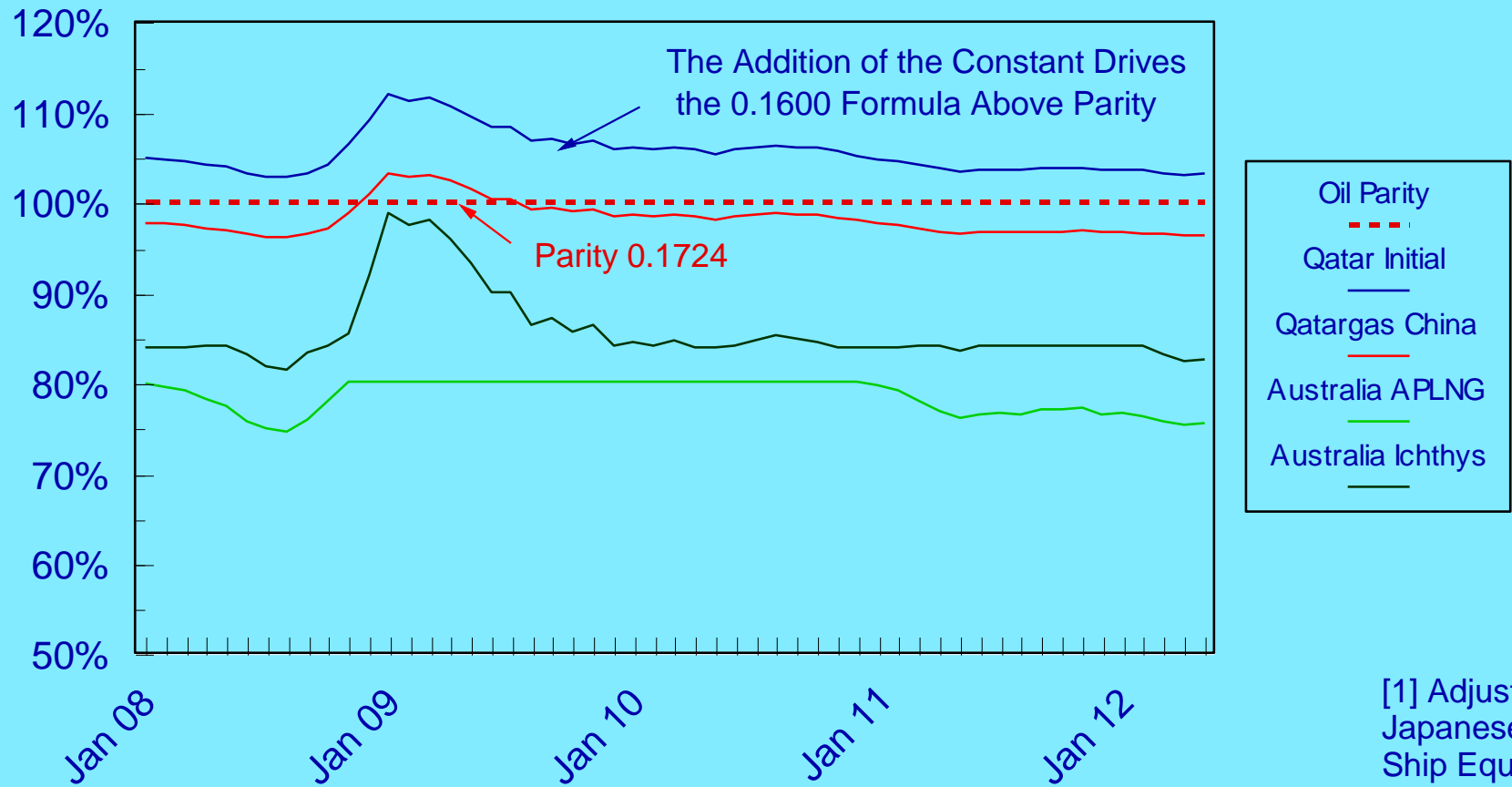


Figure 11 A COMPARISON OF SEVERAL ASIAN CONTRACTS [1] WITH OIL PARITY

Percent of JCC



[1] Adjusted to Japanese ex Ship Equivalen

- In its World Energy Outlook 2011, the IEA's Projected Japanese Prices Going Forward are Roughly 70% of World Oil Prices, While its European Estimates are Only 57%
- Since Recent Asian Contracts (at Japanese ex Ship Equivalent and \$100 Oil) are Above This Level, the IEA's Asian Projection Seems, if Anything, Conservative
- The Following Two Figures Illustrate that the Supply Economics for the Largest Competitive Sources, Particularly Australia, are High Enough to Provide Some Protection for the Asian Premium; The Premium is Also Supported by the Costs of Pipeline Supply to China from Russia and the Caspian (Although They Often Behave as if Costs Don't Count)
- North American LNG Exports to Asia Look Competitive in This Context

Figure 12

ILLUSTRATIVE COSTS OF DELIVERING LNG TO JAPAN IN 2020 ASSUMING 2011 COSTS AND PROJECTED 2020 PRICES (IEA WEO 2011 FOR JAPAN, EIA AEO 2011 FOR U.S.)

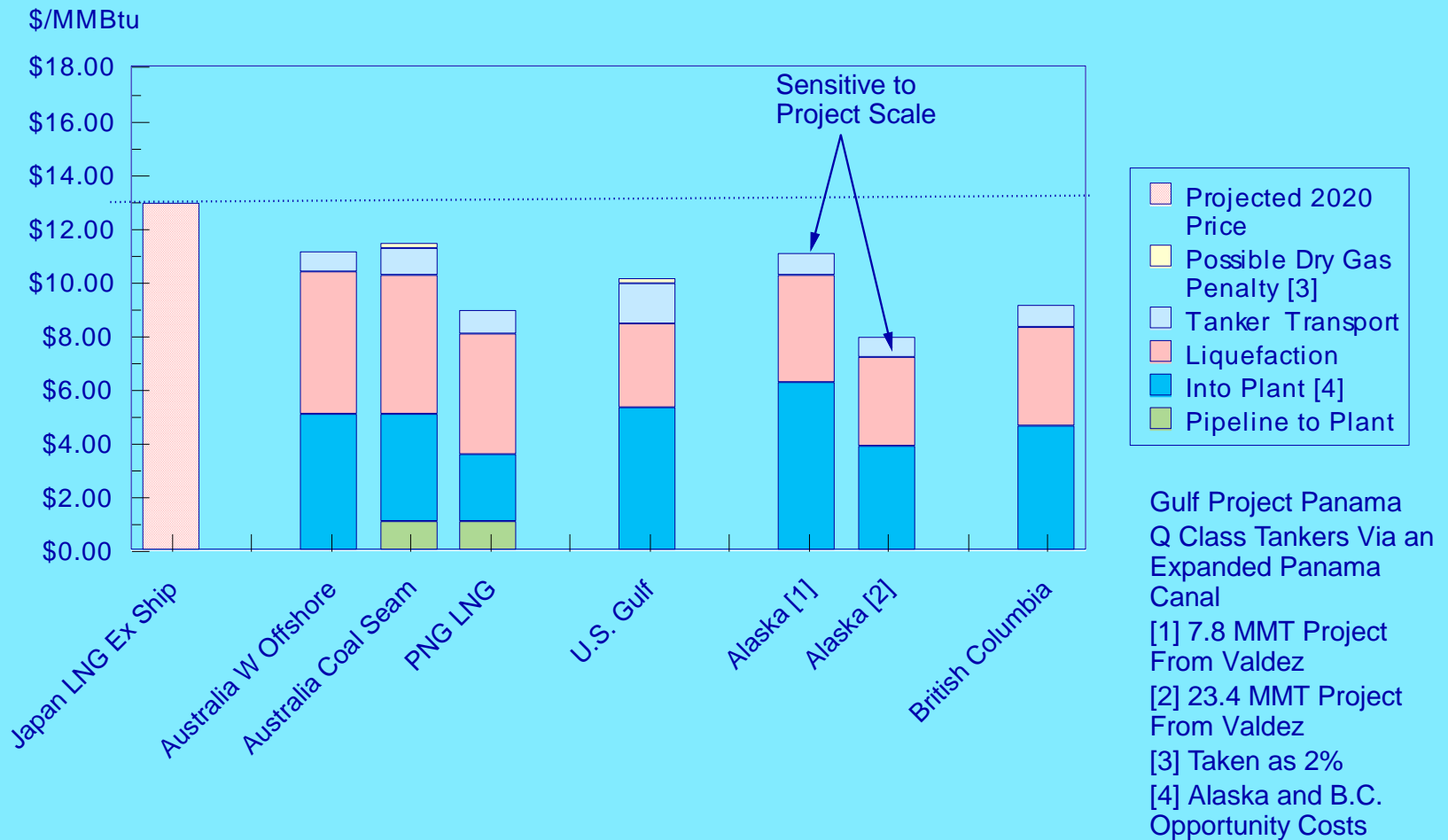
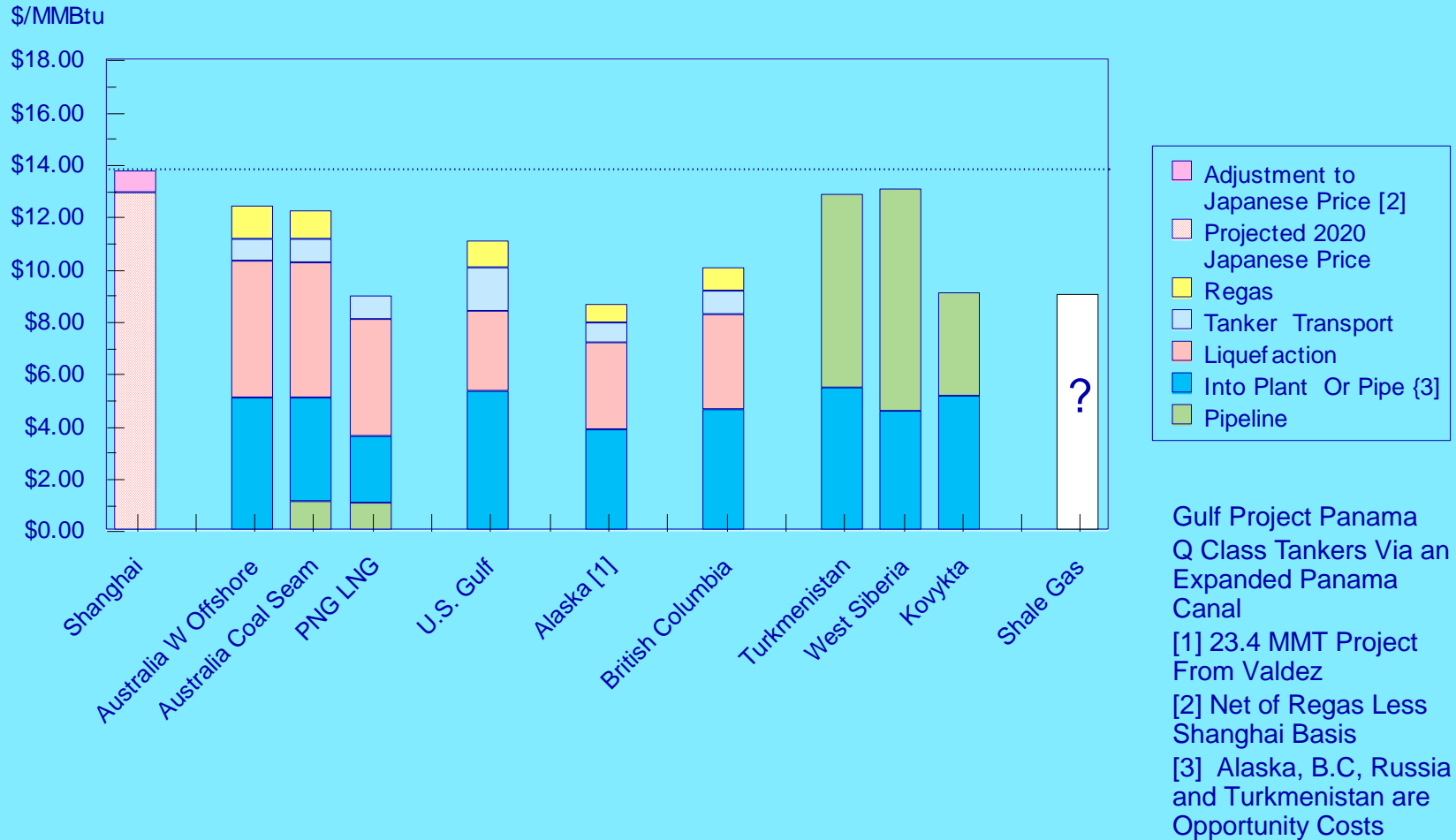


Figure 13

ILLUSTRATIVE COSTS OF DELIVERING NATURAL GAS TO SHANGHAI IN 2020 ASSUMING 2011 COSTS AND PROJECTED 2020 PRICES (IEA WEO 2011 FOR JAPAN AND EUROPE, EIA AEO 2011 FOR U.S.)



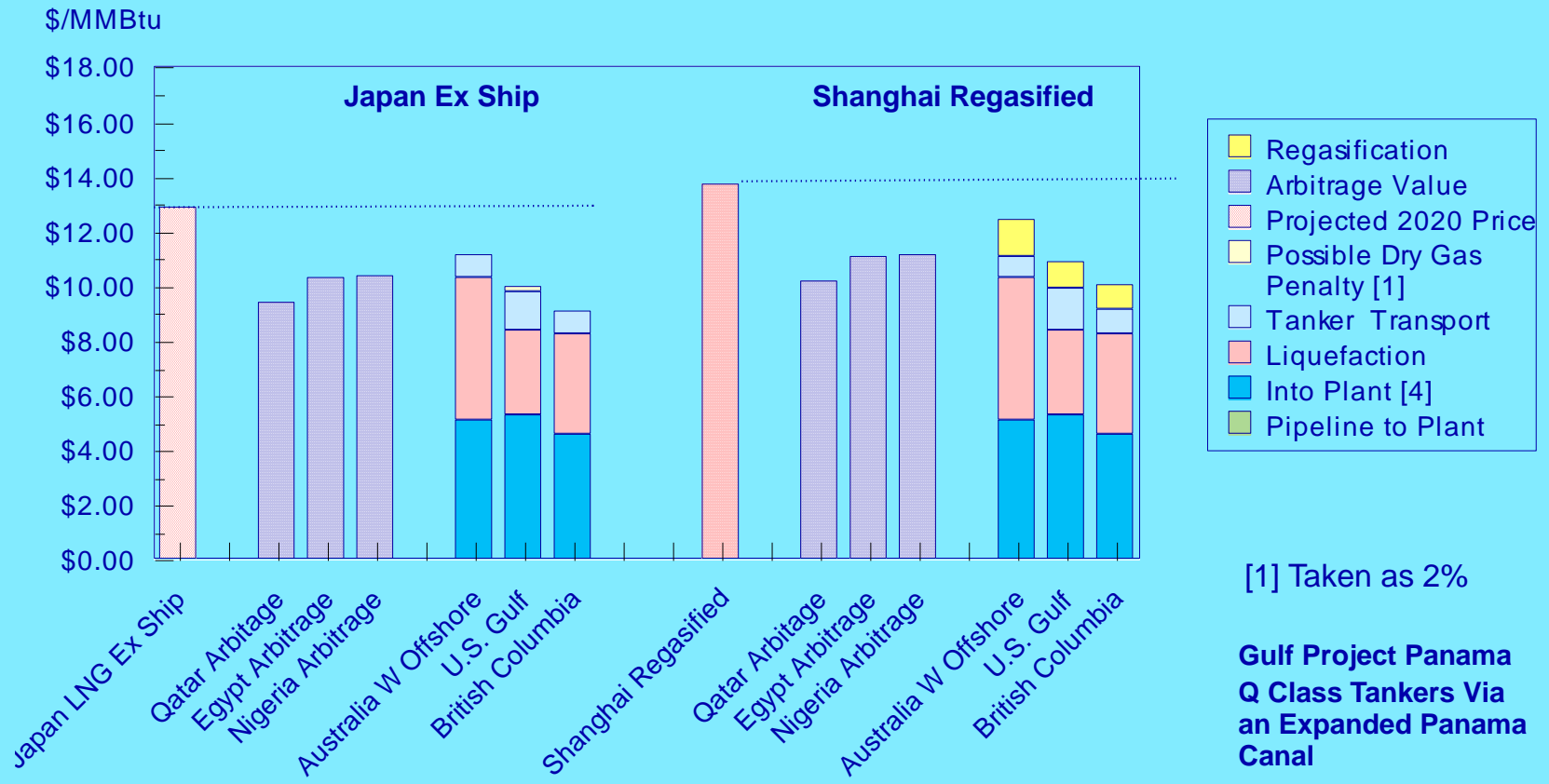
- Three Developments Have the Potential to Undermine This Asian Premium Price Structure
 - U.S. LNG Exports
 - Possible Atlantic Basin Arbitrage of Asian Prices
 - New, Large and Cheap Supplies Seeking Markets
- Most North American Contracts Differ from Traditional LNG Export Contracts
- LNG Projects Have Traditionally Been Driven by Producers Who Wanted to Monetize Stranded Gas Discoveries
- While That May Remain True in British Columbia and Alaska, the Gulf Coast Projects Will Rely on Freely-Traded Commodity Supply Where Monetization is Not an Issue

- Since so far the Buyers are Contracting For fob Purchases With a Henry Hub Escalator, the Typical Logic of Sellers Discounting For Market Share Doesn't Apply; Buyers Get the Rent and Have a Vested Interest in Price Stability
- The Principal Advantage the Buyers Have is the Use of Weak Henry Hub Prices and Weak Tanker Rates as a Bargaining Lever in Other Contract Negotiations; It Not Clear How Effective This Will Prove to be.
- Another Potential LNG Supply Which Could Undermine Asian Prices is the Possibility of Arbitraging European Prices via Some Other LNG Exporter
- While Qatar Has That Potential, So Far it Seems to be More Interested in Preserving the Existing Price Level Than Discounting for Market Share

- But Suppliers in North and West Africa Could Also be Price Spoilers; the Following Figure Illustrates the Economics of Three Potential Arbitragers Using the Spread Between the IEA's European and Japanese Prices for 2020
- And Finally, There is Also the Possibility of Large, New, Low-Cost Discoveries That Can Threaten the Established Price Structure
- At the Moment a Prime Candidate is Offshore East Africa Where Mozambique, and to a Lesser Extent Tanzania, Have Made Significant Finds
- If This Gas is, as Rumored, of High Quality with Good NGL Content and is Developed by Outside Companies Without a Stake in Asian Price Stability, It Could be an Asian Game Changer

Figure 14

ILLUSTRATIVE COSTS OF ARBITRAGING EUROPEAN 2020 PRICES TO JAPAN AND SHANGHAI IN 2020 ASSUMING 2011 COSTS



IN CONCLUSION

- I Believe That Long-Term Contracts in Continental Europe and Asia are Likely to Remain, But in an Uneasy Mix With Commodity Competition
- Europe May Resolve the Issue by a Clumsy "Administered Market" Approach That May Model as if It is a Actually a Gas-to-Gas Commodity Market
- Asia is Likely to Retain Oil-Linkage, But the Level of Discounting is Uncertain; As More and More Suppliers Seek its Premium Prices, The Prices Become Vulnerable to Arbitrage and New Low-Cost Competition
- As to Pricing Among Russia, China and the Caspian States - Churchill's Quote About Russia May Apply, "A Riddle, Wrapped in an Enigma, Inside a Mystery"

