REPORT TO CONGRESS

OFFICE OF NATURAL RESOURCES REVENUE
ROYALTY IN KIND PROGRAM

FISCAL YEAR 2010

ENERGY POLICY ACT OF 2005 - SECTION 342

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AUGUST 2011

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Executive Summary

Overview

The Fiscal Year (FY) 2010 Report to Congress fulfills the annual requirement under section 342 (e) (2) of the Energy Policy Act of 2005 that the Secretary of the Interior submit to Congress a report that describes the performance, benefits, and savings associated with the Royalty in Kind (RIK) Program administered by the Office of Natural Resources Revenue (ONRR) (formerly the Minerals Revenue Management program within the Minerals Management Service). This report also serves as the annual update for other RIK Program stakeholders, detailing the history, current status, and operational condition.

On September 16, 2009, the Secretary of the Interior announced that ONRR would begin the orderly termination of the RIK Program. Secretary Salazar signed a memorandum to terminate the RIK Program on December 8, 2009 (see Appendix E). This memorandum provides direction and guiding principles for the RIK Phase-Out Project. The memorandum stated that no further RIK sales would be held; however, ONRR had existing contracts to sell oil and natural gas through September 30, 2010. Therefore, ONRR has prepared a FY 2010 RIK Annual Report to Congress, which will be the final RIK Report to Congress.

Under the RIK program, ONRR received royalty payments from Federal oil and gas leases volumetrically (or "in-kind") rather than monetarily ("in-value"). ONRR then sold the in-kind product on the open market via competitive bids. Depending on market conditions and program staffing, the RIK Program provided economic benefit for the American public, such as:

1. **Lower Administrative Costs**

   The program reduced administrative costs by reducing the number of costly reviews, audits, and disputes over payment.

2. **Time Value of Money**

   Additional benefits accrued to the Federal government due to earlier receipt of royalty payments under the RIK Program, as RIK sales contracts required earlier payments than in-value royalties.

3. **Increased Revenue**

   The Federal government received increased royalty returns by obtaining higher sales values through sales of RIK production in higher-priced markets and by paying lower operational costs for transporting and processing RIK products.

During FY 2010 (October 2009 through September 2010), the RIK Program generated benefits estimated at $7.5 million, depending on various assumptions regarding markets and administrative costs.

TOTAL BENEFITS OF RIK PROGRAM - FY 2010

	CRUDE OIL	NATURAL GAS	TOTAL
ADMINISTRATIVE COSTS	($516,000)	($181,000)	($697,000)
TIME VALUE OF MONEY BENEFIT	$46,700	$4,760	$51,500
REVENUE PERFORMANCE	$4,740,000	$3,400,000	$8,140,000
TOTAL BENEFITS	**$4,270,000**	**$3,220,000**	**$7,490,000**

NOTE: Totals in this and other tables may not add due to rounding.

The RIK Program's FY 2010 range of estimated benefits, established by adjusting the revenue performance using different marketing assumptions, is from a low of $1.85 million to a high of $11 million. Appendix C provides the details behind the revenue performance range, including changes made to the various marketing assumptions.

REVENUE PERFORMANCE

ONRR measured the financial success and economic benefits of the RIK Program by comparing RIK sales receipts to a fair market value (FMV) benchmark range. ONRR devised the FMV methodology in collaboration with an independent energy consulting firm, Lukens Energy Group (see Appendix B for a detailed description of this FMV methodology, including the underlying principles that drove its development). The FMV benchmark is an approximation of the value for which an average third-party may have sold the same production and is an estimate of what ONRR would expect to see, on average, through RIV. The following are the FY 2010 revenue performance results for RIK sales of natural gas from Wyoming and the Gulf of Mexico (GOM) and RIK sales of crude oil from the GOM.

RIK NATURAL GAS PROGRAM

Overall estimated revenue gains for the 21 GOM natural gas packages in FY 2010 were $4.8 million. ONRR attributed these estimated revenue gains to lower costs paid for processing and transportation services, sales in higher-priced markets, and premiums received over index prices. The Wyoming RIK natural gas program's three sales packages saw an estimated loss of approximately $1.3 million. This loss was due to diversification of pricing terms on a portion of the sales volume and an unfavorable processing arrangement.

RIK CRUDE OIL PROGRAM

The RIK Crude Oil Program consisted of the following three main sub-programs:

- The Unrestricted Program
- The Small Refiner Program
- The Strategic Petroleum Reserve Program (SPR)

In FY 2010, the Unrestricted and Small Refiner Programs realized estimated revenue gains above FMV of over $4.7 million. These estimated gains are primarily attributable to the RIK Program obtaining premiums from purchasers on certain crude packages for which the purchaser entered into lucrative downstream financial transactions and passed on a portion of those benefits. In FY 2010, the RIK Program also provided approximately 2.2 million barrels of crude oil to the Department of Energy (DOE) for the SPR fill to strengthen national energy security.

OFFICE OF NATURAL RESOURCES REVENUE ROYALTY IN KIND PROGRAM FY 2010 REPORT

AUGUST 2011

1. REPORT REQUIREMENTS

This report covers the information required by section 342 (e) (2) of the Energy Policy Act of 2005 (EPAct). The EPAct requires that, for each of Fiscal Years 2006-2015 in which the United States takes oil or natural gas royalties in kind from production in any state or from the Outer Continental Shelf (OCS), excluding royalties taken in kind and sold as part of the small refiner program, the Secretary shall submit to Congress a report that describes the following:

1. The one or more methodologies used by the Secretary to determine that royalties taken in kind provide benefits that are greater than or equal to the benefits that likely would have been received had royalties been taken in value, including the performance standard for comparing amounts received by the United States derived from royalties in kind to amounts likely to have been received had royalties been taken in value
2. An explanation of the evaluation that led the Secretary to take royalties in kind from a lease or group of leases, including the expected revenue effect of taking royalties in kind
3. Actual amounts received by the United States derived from taking royalties in kind and costs and savings incurred by the United States associated with taking royalties in kind, including administrative costs savings and any new or increased administrative costs
4. An evaluation of other relevant public benefits or detriments associated with taking royalties in kind

This required information is contained within this report. Please see Section 5 for a summary of the information.

Due to the termination of the RIK Program, this will be the final report prepared by the Department of the Interior (DOI) and submitted to Congress.

2. RIK PERFORMANCE METRICS

The Outer Continental Shelf Lands Act mandates that the Secretary receive at least fair market value when production is sold in kind. The potential benefits of using the RIK strategy included the following:

- Lower administrative costs
- Time value of money benefit
- Increased royalty revenues

Within the RIK Program, the Economic Analysis Office (EAO)[1] was a separate, independent group that measured and reported performance. The EAO staff computed performance on a semi-annual basis with performance results reported annually to the public. ONRR estimated that the total value of the benefits of the RIK Program was $7.49 million in FY 2010. Table 2.1 and Chart 2.1 present the RIK performance history since FY 2004.

TOTAL BENEFITS OF RIK PROGRAM

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
ADMINISTRATIVE COST / SAVINGS	$1,447,051	$3,725,372	$2,368,227	$3,553,392	$5,220,000	$4,020,000	($697,000)
TIME VALUE OF MONEY	$892,875	$1,528,550	$2,633,470	$3,089,072	$3,070,000	$131,000	$51,500
REVENUE PERFORMANCE	$17,242,415	$30,790,482	$26,254,845	$56,534,729	$97,700,000	$19,200,000	$8,140,000
Total Benefits	**$19,582,341**	**$36,044,404**	**$31,256,542**	**$63,177,192**	**$106,000,000**	**$23,400,000**	**$7,490,000**

Table 2.1

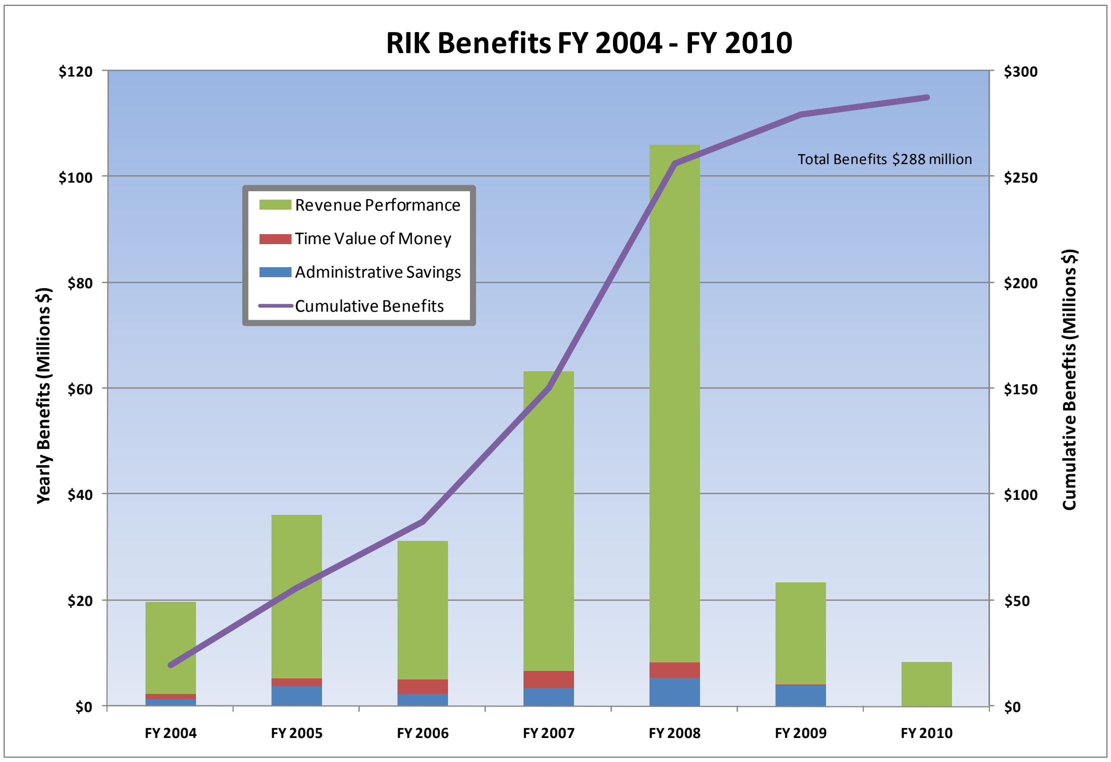

Chart 2.1

The RIK Program's FY 2010 range of estimated benefits, established by using different marketing assumptions, was from a low of $1.85 million to a high of $11 million[2].

2.1 ADMINISTRATIVE COST PERFORMANCE

ONRR performed an annual comprehensive comparative cost analysis between administering the RIK and the Royalty-in-Value (RIV) Programs. In the RIV Program, ONRR is required

[1] ONRR reorganized in FY09, and, effective October 1, 2009, RIK is now called Asset Sales and Accounting, while EAO is called Economic and Market Analysis Office.

[2] ONRR has rounded all FY 2008, 2009, and 2010 revenue performance numbers because they are now presented as a range, as well as to emphasize that these figures represent estimates.

to validate the value and the transportation and processing costs associated with the sales and movement of Federal royalty production. This validation is highly labor-intensive, primarily due to the complexities involved in mineral lessees' application of valuation regulations defining royalty payment standards.

The RIK Program sold royalties taken in kind under standard commercial contract terms. These standard industry contracts provided a level of transparency in the valuation and transportation of royalties taken in kind that typically lead to a more-efficient process with decreased conflicts and costs. These differences equated to a potential cost savings through taking royalties in kind versus in value.

FY 2010 was the seventh year in which ONRR performed this analysis. Both RIK and RIV administrative costs per barrel of oil equivalent (BOE)[3] increased in FY 2010[4]. Table 2.2 presents the historical Administrative Cost Performance analysis.

Administrative Cost Performance

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Royalty in Kind Cost Per BOE	$0.056	$0.059	$0.076	$0.071	$0.083	$0.126	$0.293
Royalty in Value Cost Per BOE	$0.073	$0.102	$0.108	$0.114	$0.156	$0.199	$0.260
Cost Per BOE Difference	$0.017	$0.043	$0.032	$0.043	$0.073	$0.073	($0.033)
RIK Administrative Cost / Savings	**$1,447,051**	**$3,725,372**	**$2,368,227**	**$3,553,392**	**$5,220,000**	**$4,020,000**	**($697,000)**

Table 2.2

A dramatic rise in RIK administrative costs led to an Administrative Cost Performance of negative $697,000 in FY 2010. The RIK per BOE cost increase was caused by a significant drop in RIK volumes (see Chart 2.2) but no corresponding drop in personnel costs because the RIK employees remained to provide an orderly shut down of the RIK Program. Once the program is closed out, RIK employees will be transitioned into ONRR's RIV program.

The RIK Program also incurred direct Information Technology (IT) obligations of $1.5 million in FY 2010 out of total ONRR IT obligations of $22.4 million. Certain IT costs that are driven by ongoing business operational needs and not by movement of volumes between RIV and RIK are excluded from the Administrative Cost Analysis. These IT costs can include RIK and/or RIV computer system upgrades that are not incurred on a regular basis and the costs of IT systems shared by RIK and RIV.

[3] The barrel of oil equivalent measure converts natural gas volumes into barrels by assuming 5.8 MMBtu of natural gas has the same heating content as one barrel of oil.

[4] RIV payments are audited three years after the production year so royalties paid in calendar year (CY) 2007 were audited during CY 2010. Therefore, the RIV costs use 2007 BOE RIV volumes as a basis for the cost per BOE.

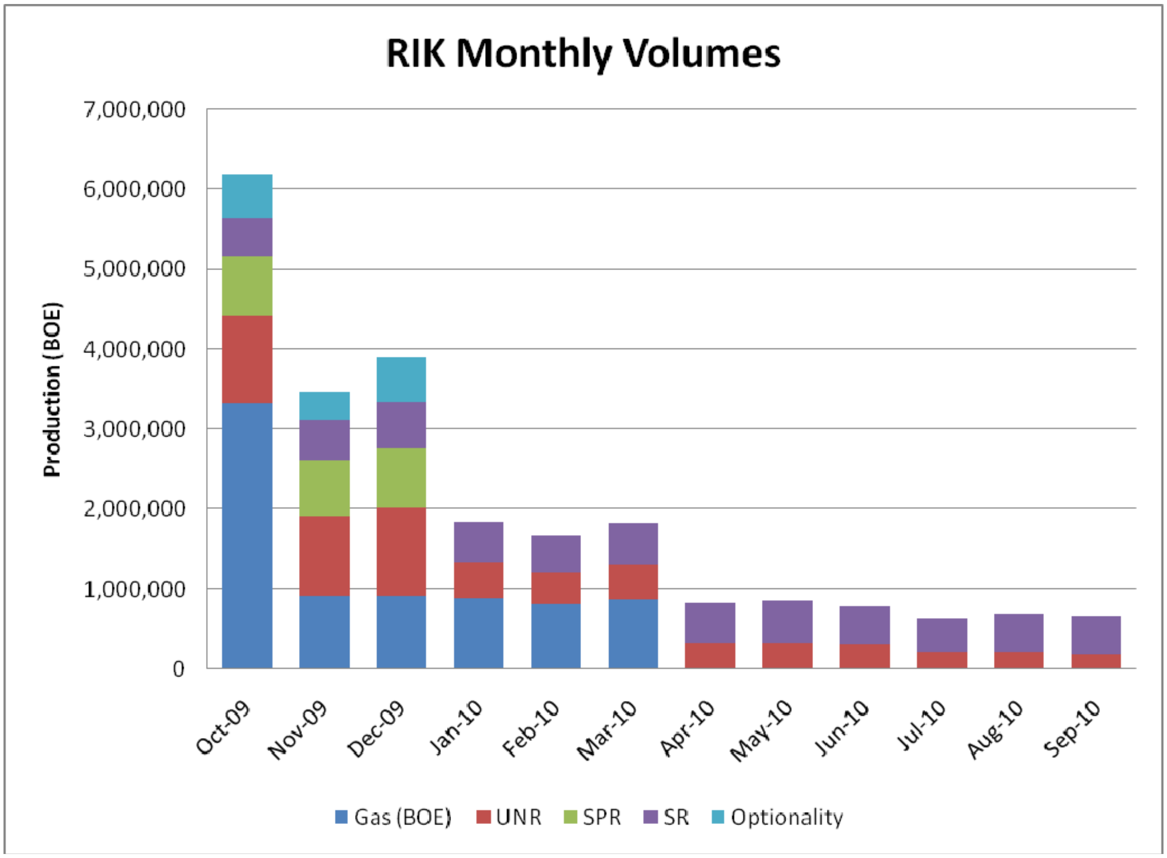

Chart 2.2

2.2 Time Value of Money

Revenue Collection Time (RCT) is a measure of the number of days after each production month that ONRR takes to collect outstanding receivables. ONRR received payments in the RIK Program, on average, five (natural gas) and ten (crude oil) days before the end of the month following production, which gave RIK an RCT between 20 and 25 days. Conversely, RIV payments are due at the end of the month following the month of production, which gives RIV an RCT of 30 to 31 days.

The difference in RCT between RIK and RIV provided a time value of money (TVM) component. Because ONRR received RIK payments earlier than RIV payments, EAO calculated and reported a TVM component. The TVM component provided an estimated revenue gain for the RIK Program of $51,500, or $0.002 per BOE, in FY 2010. As shown in Table 2.3, this total is down significantly from earlier years due to the extremely low interest rate.

RIK Time Value of Money Benefit

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Interest Rate Used for TVM	3%	3%	3%	3%	2.92%	0.26%	0.16%
TVM Earned - Oil	$461,030	$1,023,548	$1,996,859	$2,306,589	$2,150,000	$102,000	$46,700
TVM Earned - Gas	$431,845	$505,002	$636,111	$782,483	$922,000	$29,400	$4,760
Total TVM Earned - RIK	$892,875	$1,528,550	$2,633,470	$3,089,072	$3,070,000	$131,000	$51,500
Total TVM per BOE	$0.010	$0.026	$0.035	$0.034	$0.042	$0.002	$0.002

Table 2.3

2.3 Revenue Performance

The RIK Program realized higher royalty revenue than ONRR would expect to earn through RIV. These higher revenues came from more-favorable natural gas processing and transportation contracts, selling production into higher-price markets, healthy competition among multiple purchasers, and the ability to aggregate production from many different producers and to sell a larger volume of oil and natural gas. The RIK Program had a well-defined process using economic modeling to measure and record overall RIK revenue performance. ONRR developed this detailed process with the assistance of Lukens Energy Group. Although minor adjustments and modifications altered the models during their five-year application, the general approach and calculation process did not change.

ONRR computed a fair market value (FMV) benchmark for each sales package. This FMV benchmark approximated the value for which an average third party may have sold the same production and estimated what ONRR would expect to see, on average, through RIV. The FMV benchmark recognized the FMV as a range for either crude oil or natural gas based, in part, on certain marketing assumptions and compared it to the RIK sales. Table 2.4 and Chart 2.3 display total RIK revenues and the corresponding estimated revenue gains for each year since FY 2004.

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Total RIK Revenue							
Oil	$579,025,456	$1,263,075,756	$2,665,248,146	$2,498,530,659	$2,669,451,462	$1,567,164,345	$1,001,576,827
Gas	$923,909,425	$1,265,625,121	$1,450,733,883	$1,829,363,142	$2,342,461,208	$833,433,401	$207,233,367
Total	$1,502,934,881	$2,528,700,877	$4,115,982,029	$4,327,893,801	$5,011,912,670	$2,400,597,746	$1,208,810,194
RIK Revenue Gain							
Oil	$8,470,124	$12,150,397	$3,490,618	$18,614,613	$19,100,000	$7,680,000	$4,740,000
Gas	$8,772,291	$18,640,086	$22,764,227	$37,920,116	$78,600,000	$11,500,000	$3,400,000
Total	$17,242,415	$30,790,483	$26,254,845	$56,534,729	$97,700,000	$19,200,000	$8,140,000
Total % Gain							
Oil	1.46%	0.96%	0.13%	0.75%	0.72%	0.49%	0.47%
Gas	0.95%	1.47%	1.57%	2.07%	3.35%	1.38%	1.64%
Total	1.15%	1.22%	0.64%	1.31%	1.95%	0.80%	0.67%

Table 2.4

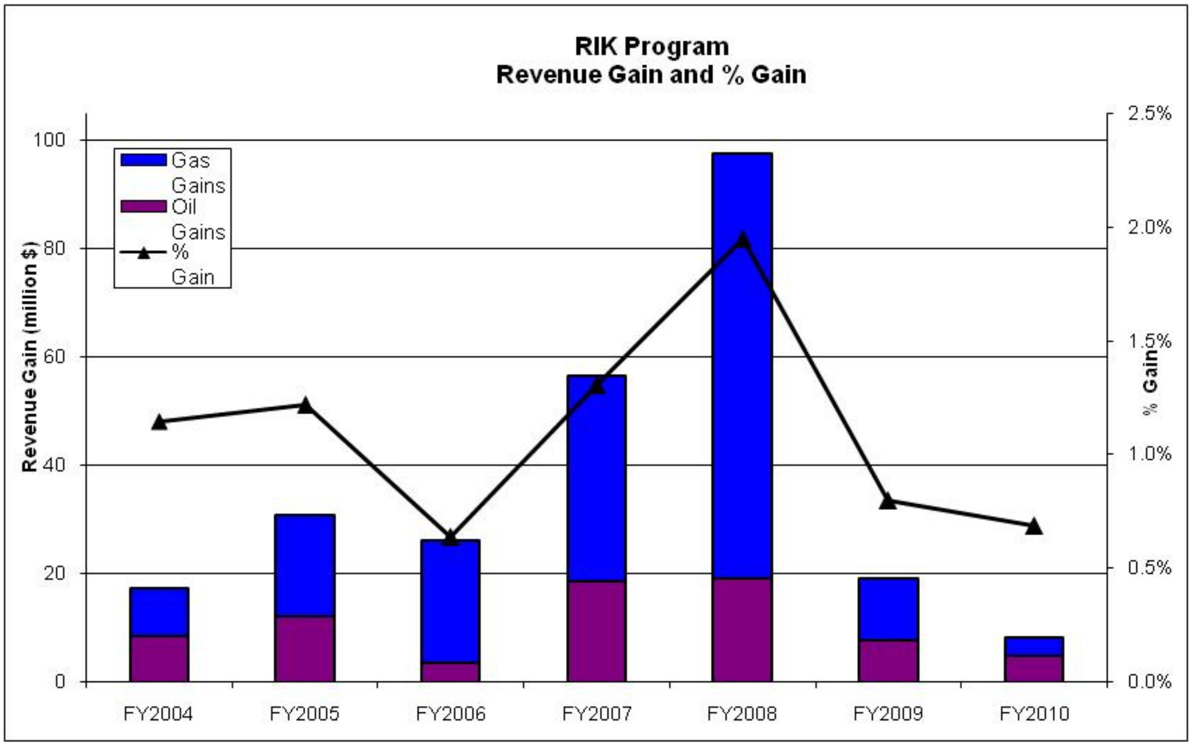

Chart 2.3

These revenue gains, as a percentage of total RIK revenues, have fluctuated between 0.6 percent and almost 2 percent over the past seven years. FY 2010 gains were lower due, primarily, to decreased volumes associated with the phase-out of the RIK Program. Percent gains, however, were in line with past years.

ONRR calculated a range of performance values based on changing the marketing assumptions used in the FMV benchmark calculations. See Appendix C for details of those calculations, including the marketing assumption changes.

Chart 2.4 provides an overview of RIK's FY 2010 monthly revenue performance.

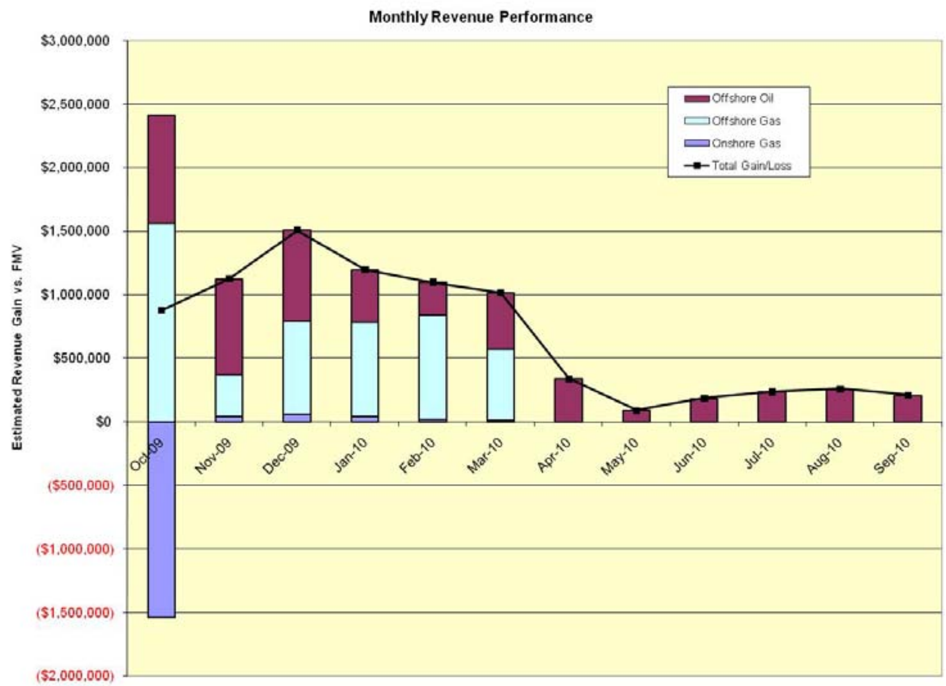

Chart 2.4

3. RIK NATURAL GAS PROGRAM

The RIK Natural Gas Program began as a pilot program in the GOM in 1999. The program expanded in 2006 with the addition of Wyoming production. As shown in Chart 3.1, GOM RIK gas volumes dropped considerably in FY 2010 due to the termination of the RIK program. ONRR removed 12 sales packages on October 31, 2009, and the remaining nine sales packages on March 31, 2010. Overall revenues dropped significantly due, primarily, to the lower levels of production and, partially, to lower natural gas prices.

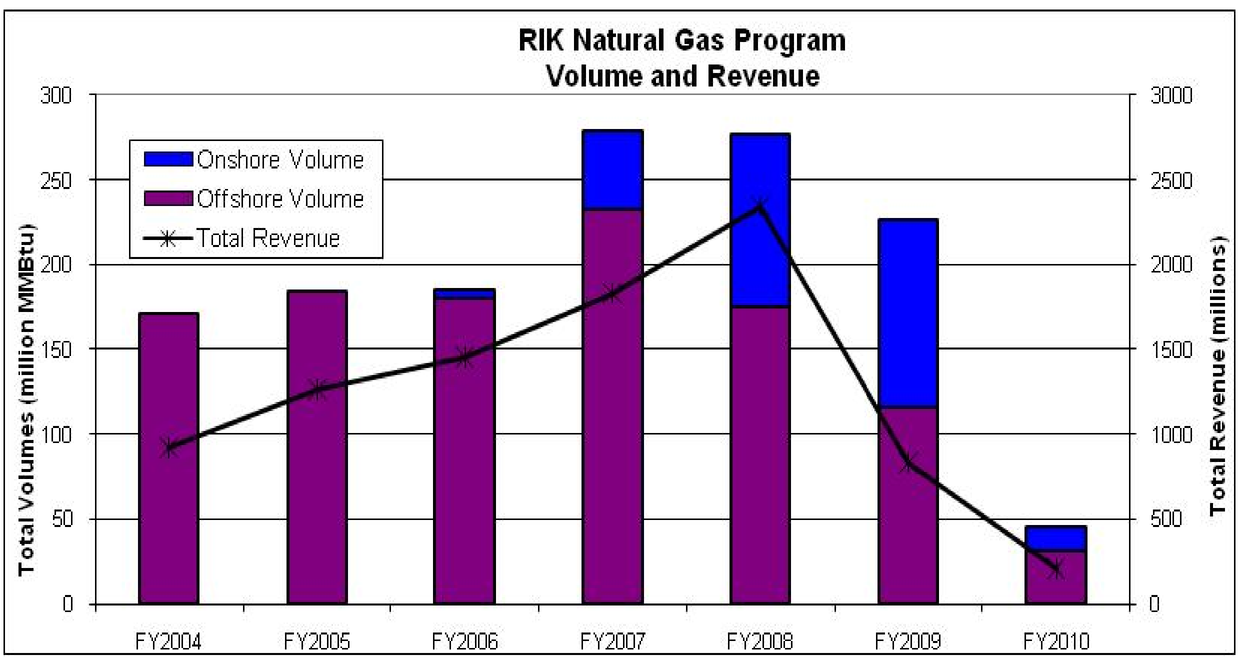

Chart 3.1

3.1 GULF OF MEXICO RIK NATURAL GAS PROGRAM

The GOM RIK Natural Gas Program began with the 1999 RIK Natural Gas pilots. ONRR achieved an estimated 1 to 2 percent revenue gain on RIK natural gas sales over the past seven years, as shown in Table 3.1. FY 2010 had a record percent revenue gain of 2.9 percent despite the significant decrease in RIK volumes. Benefits under the RIK Natural Gas Program are due, in a large part, to decreased costs under RIK processing and transportation contracts and increased revenues by taking natural gas to higher-valued markets.

RIK GOM Program

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
TOTAL VOLUME (MMBTU)	170,707,071	183,997,321	180,212,534	232,887,752	175,205,800	116,017,013	31,776,432
TOTAL REVENUE	$923,909,425	$1,265,625,121	$1,422,637,294	$1,632,382,454	$1,685,741,898	$545,830,772	$162,363,103
REVENUE GAIN (LOSS)	$8,772,291	$18,640,086	$23,083,864	$24,302,030	$34,600,000	$10,000,000	$4,760,000
REVENUE GAIN (LOSS) / MMBTU	$0.05	$0.10	$0.13	$0.10	$0.20	$0.09	$0.15
PERCENTAGE GAIN / (LOSS)	0.95%	1.47%	1.62%	1.49%	2.05%	1.83%	2.93%

Table 3.1

3.2 ONSHORE RIK NATURAL GAS PROGRAM

The onshore RIK Natural Gas Program consisted of the following:

- Sales from the decommissioning of the National Helium Reserve on behalf of BLM
- Sales of natural gas from Federal leases in the State of Wyoming

3.2.1 BLM NATIONAL HELIUM RESERVE

ONRR sold approximately 10,000 MMBtu/day of Federal natural gas produced from the Cliffside Helium Enrichment Unit (CHEU) on behalf of BLM. The CHEU is located in Potter County, Texas, near the city of Amarillo. As the helium reserve is drawn down, natural gas is produced. Revenues from these sales are collected by BLM and are not reported in RIK revenues or performance metrics because the natural gas is not royalty gas. This contract with BLM began in March 2003 and ended in September 2010.

3.2.2 WYOMING

The major component of the onshore RIK Natural Gas Program was production from three major fields in the State of Wyoming. ONRR took Federal royalties in kind from the Madden, Jonah, and Pinedale Anticline fields. The first production taken in kind was from the Madden field beginning in April 2006. In January 2007, ONRR added production from the Jonah and Pinedale fields to the RIK Program.

3.2.3 REVENUE PERFORMANCE

Estimated Wyoming revenue performance results by year are shown in Table 3.2.

Transportation discounts, favorable pricing terms, and percentage-of-proceeds[5] processing contracts contributed to the success of the Wyoming RIK Program. The Wyoming Gas program experienced a revenue loss during FY 2010 due to diversification of pricing terms on portion of the sales volume and an unfavorable processing arrangement.

WYOMING GAS PROGRAM

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
TOTAL VOLUME (MMBTU)	5,453,918	45,662,862	101,729,254	110,075,758	13,258,727
TOTAL REVENUE	$28,096,588	$196,980,687	$656,719,310	$287,602,629	$44,870,264
REVENUE GAIN (LOSS)	($319,637)	$13,618,085	$44,000,000	$1,470,000	($1,360,000)
REVENUE GAIN (LOSS) / MMBTU	($0.06)	$0.30	$0.43	$0.01	($0.10)
PERCENTAGE GAIN / (LOSS)	(1.14%)	6.91%	6.70%	0.51%	(3.03%)

Table 3.2

4. RIK CRUDE OIL PROGRAM

In FY 2010, the RIK Crude Oil Program consisted of three main sub-programs as follows:

- The Unrestricted Program (UNR) in the GOM
- The Small Refiner Program (SR)
- The Strategic Petroleum Reserve Program (SPR)

Chart 4.1 shows the total estimated revenue performance by program and details the changes in total volumes and revenues in the RIK Crude Oil Program from FY 2004 through FY 2010. FY 2010 RIK crude oil volumes and revenues dropped, primarily, because of the RIK termination. Timing of the RIK Oil phase-out is detailed below, where ONRR removed:

- 46 properties on December 31, 2009
- 6 properties on March 31, 2010
- 4 properties on June 30, 2010
- The remaining 36 properties on September 30, 2010

Contributions to the SPR ended December 31, 2009.

[5] In a percentage-of-proceeds processing contract, the producer compensates the gas plant operator through the plant's retention of a percentage of the volume of the liquids extracted from the natural gas.

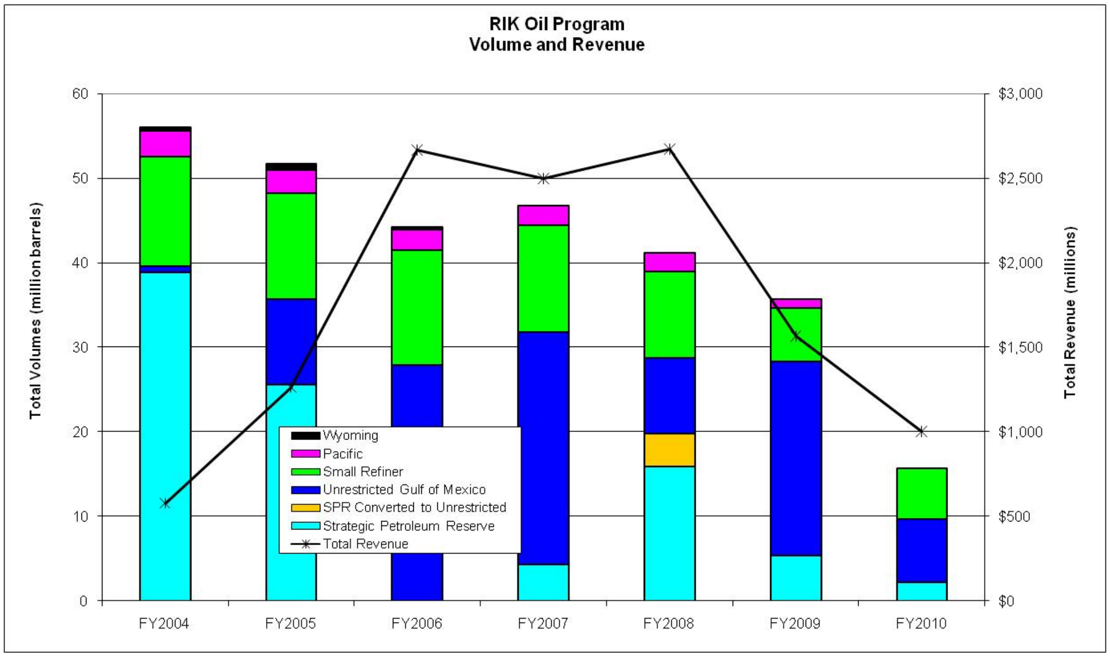

Chart 4.1

4.1 UNRESTRICTED OIL PROGRAM

As the name implies, there were no mandated eligibility requirements to participate in this program. Any and all companies meeting basic credit requirements were eligible to participate as buyers of RIK oil. Over the years, diverse companies participated in this program, ranging from major oil companies to financial holding companies.

Table 4.1 summarizes the estimated revenue performance measurements for the Unrestricted Program over the past seven years. In FY 2010, the GOM Unrestricted Program realized estimated gains of $2.37 million, significantly lower than the previous year attributed, primarily, to the termination of the RIK program. The RIK Program realized these gains by obtaining premiums from purchasers for bundled volumes of crude and by selling oil in more lucrative markets. In FY 2010, the unrestricted program realized a revenue gain of $.32 per barrel of oil, up from FY 2009 but still in line with the historical gains.

Unrestricted Program

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Total Volume (bbls)	778,876	10,079,297	27,865,100	27,458,666	8,956,846	22,954,571	7,477,716
Total Revenue	$28,634,061	$527,705,356	$1,685,390,839	$1,590,416,840	$910,491,043	$1,170,533,017	$547,831,743
Revenue Gain (Loss)	$330,971	$5,741,065	$1,504,870	$11,267,888	$6,340,000	$3,390,000	$2,370,000
Revenue Gain (Loss) / bbl	$0.42	$0.57	$0.05	$0.41	$0.71	$0.15	$0.32
PERCENTAGE GAIN / (Loss)	1.16%	1.09%	0.09%	0.71%	0.70%	0.29%	0.43%

Table 4.1

4.2 SMALL REFINER PROGRAM

The Small Refiner Program began in the 1970s as a program designed to assist domestic small refiners by providing a reliable supply of crude oil at equitable prices. Historically, these eligible refiners have supplied United States military operations with jet fuel and other energy needs on military bases. Because these small refiners do not typically have production of their own, the RIK Small Refiner Program served an important role in helping small refiners acquire feed stock. A Small Refiner, as defined in 30 CFR section 208.4(a) and by the Small Business Administration, is a refiner of crude oil with a total operable atmospheric crude oil distillation capacity of less than or equal to 125,000 barrels per calendar day, and fewer than 1,500 employees.

Small Refiner Program

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Total Volume (bbls)	12,942,188	12,556,031	13,586,984	12,627,650	10,214,429	6,380,658	5,954,922
Total Revenue	$447,297,868	$597,608,325	$833,577,818	$781,158,791	$1,086,726,850	$356,529,219	$453,745,084
Revenue Gain (Loss)	$2,873,433	$1,803,837	($1,377,911)	$3,043,275	$9,140,000	$2,490,000	$2,370,000
Revenue Gain (Loss) / bbl	$0.22	$0.14	($0.10)	$0.24	$0.89	$0.39	$0.40
PERCENTAGE GAIN / (Loss)	0.64%	0.30%	(0.17%)	0.39%	0.84%	0.70%	0.52%

Table 4.2

In FY 2010, ONRR sold all RIK packages in its Small Refiner Program for a term of one year, providing an estimated revenue gain of $2.37 million or $0.40 per barrel of oil. The revenue gain per barrel was attributable to the premiums paid by purchasers as described in the Unrestricted Oil Program section.

4.3 STRATEGIC PETROLEUM RESERVE (SPR) PROGRAM

ONRR partnered with DOE to fill the remaining capacity of the SPR. ONRR arranged for delivery of the royalty oil from offshore production facilities to onshore market centers and then transferred the production to DOE. In order to receive crude oil that meets the quality specifications for the SPR sites, DOE contracted with industry partners to exchange the royalty oil for oil of the appropriate specifications at SPR sites.

Provided by the U.S. Department of Energy

ONRR previously worked with DOE to add crude oil to the SPR from 1999 to 2000 and from 2002 to 2005. These efforts brought the volume of the SPR to 700 million barrels. ONRR and DOE restarted the SPR fill initiative in July 2007 to fill the SPR to its capacity of 727 million barrels; however, Congress passed legislation to suspend delivery of RIK oil for that initiative at the end of June 2008. The SPR program resumed shipments from April 2009 until December 2009. These shipments helped DOE "top off" the SPR at its capacity of 727 million barrels. Table 4.3 shows volume and estimated market value of the production transferred to DOE for SPR purposes. This information is as reported in DOI's Agency Financial Report[6].

Strategic Petroleum Reserve Program

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Total Volume (bbls)	38,813,488	25,608,852	0	4,304,386	15,943,420	5,347,920	2,205,067
Total Value	$1,213,007,293	$1,194,617,678	$0	$306,190,550	$1,608,621,400	$268,536,879	$154,216,769

Table 4.3

5. ENERGY POLICY ACT OF 2005 REPORT REQUIREMENTS

This report provides the information required by section 342 (e) (2) of the Energy Policy Act of 2005 (EPAct). The EPAct requires that, for each of Fiscal Years 2006-2015 in which the United States takes oil or gas royalties in kind from production in any State or from the OCS, excluding royalties taken in kind and sold to refineries under subsection (h)[7], the Secretary shall submit to Congress a report that describes the following:

1. The one or more methodologies used by the Secretary to determine compliance with subsection (d)[8], including the performance standard for comparing amounts received by the United States derived from royalties in kind to amounts likely to have been received had royalties been taken in value
2. An explanation of the evaluation that led the Secretary to take royalties in kind from a lease or group of leases, including the expected revenue effect of taking royalties in kind
3. Actual amounts received by the United States derived from taking royalties in kind and costs and savings incurred by the United States associated with taking royalties in kind, including administrative costs savings and any new or increased administrative costs
4. An evaluation of other relevant public benefits or detriments associated with taking royalties in kind

5.1 METHODOLOGIES TO COMPARE RIK AND RIV VALUES

5.1.1 CONVERSION FROM RIV TO RIK

ONRR did not convert any properties in FY 2010.

5.1.2 REVENUE PERFORMANCE METRICS

Given the fiduciary responsibility to the taxpayer, ONRR measured the performance of the RIK Program against a calculated FMV benchmark that approximated the royalty value that the RIV Program would have received. Market price and basis volatility create risk exposure that RIK performance could be below the FMV benchmark due to the difference between the pricing mix used by RIK for selling the commodity and the pricing mix used in the FMV benchmark.

[6] U.S. Department of the Interior, Agency Financial Report FY 2010, http://www.doi.gov/pfm/par/afr2010/AFR_2010.pdf.

[7] Subsection (h) refers specifically to the Small Refiner Program.

[8] Subsection (d) states that "Benefit to the United States Required—The Secretary may receive oil or gas royalties in-kind only if the Secretary determines that receiving royalties in-kind provides benefits to the United States that are greater than or equal to the benefits that are likely to have been received had royalties been taken in-value."

ONRR computed the FMV benchmark range specific to the commodity and used the result as the performance standard for measuring RIK performance. To compute the FMV benchmark, ONRR established a benchmark price that reflected major liquid pricing point(s) close to RIK properties. This benchmark price was adjusted to reflect transportation, quality, processing, and various marketing possibilities and any adjustments that may have been derived from RIV or other commercial market transactions. The result was a FMV benchmark for comparison to RIK actual values netted back to the lease.

These measures meet statutory requirements to reflect commercial fair market value and a proxy for RIV. They recognize fair market value as a range of values, differentiate between forward-looking decision analysis and backward-looking measurement, use as much RIV data as possible, and use RIV data to calibrate commercial market data. (See Section 2.3 Revenue Performance in this report for more information.)

5.2 EVALUATION SUPPORTING CONVERSION OF PROPERTIES TO RIK STATUS IN FY 2010

ONRR did not convert any properties in FY 2010.

5.3 REVENUES, COSTS, AND SAVINGS INCURRED BY RIK

The quantitative benefits of the RIK Program included reduced administrative costs, a time-value-of-money benefit from receiving payments earlier than RIV payments, and additional royalty revenue. During FY 2010, the estimated benefits of the RIK Program were approximately $7.5 million, as shown in Table 5.1.

TOTAL BENEFITS OF RIK PROGRAM - FY 2010

	CRUDE OIL	NATURAL GAS	TOTAL
ADMINISTRATIVE COST	($516,000)	($181,000)	($697,000)
TIME VALUE OF MONEY BENEFIT	$46,700	$4,760	$51,500
REVENUE PERFORMANCE	$4,740,000	$3,400,000	$8,140,000
TOTAL BENEFITS	**$4,270,000**	**$3,220,000**	**$7,490,000**

Table 5.1

Details of these benefits are presented in Section 3 of this report.

5.4 OTHER RELEVANT BENEFITS OR DETRIMENTS

Through the activities of the RIK Program, ONRR staff gained significant market knowledge regarding specific oil and natural gas markets. The RIK staff shared this knowledge with other ONRR offices, such as Audit and Compliance, to improve ONRR operations. Also, after the hurricanes in 2005 and 2008, the RIK Program was in a unique position to answer special information requests from both the DOE and the DOI regarding GOM infrastructure, pipelines and production.

APPENDIX A

ADDITIONAL ESTIMATED REVENUE PERFORMANCE INFORMATION

RIK Natural Gas - RIK Values vs. FMV Benchmark Values FY 2010 Totals					
	RIK Volumes Sold (MMBtu)	RIK Revenues	Revenue Gain (Loss) vs. FMV Benchmark Price	Revenue Gain (Loss) Per MMBtu	Percent Gain / (Loss)
Gulf of Mexico	31,776,432	$162,363,103	$4,760,000	$0.15	2.93%
Wyoming	13,258,727	$44,870,264	($1,360,000)	($0.10)	(3.03%)
Total	**45,035,159**	**$207,233,367**	**$3,400,000**	**$0.08**	**1.64%**

Table A.1

RIK Crude Oil - RIK Values vs. FMV Benchmark Values FY 2010 Totals					
	RIK Volumes Sold (bbls)	RIK Revenues	Revenue Gain (Loss) vs. FMV Benchmark Price	Revenue Gain (Loss) Per bbl	Percent Gain / (Loss)
Small Refiner	5,954,922	$453,745,084	$2,370,000	$0.40	0.52%
Unrestricted	7,477,716	$547,831,743	$2,370,000	$0.32	0.43%
Total	**13,432,637**	**$1,001,576,827**	**$4,740,000**	**$0.35**	**0.47%**

Table A.2

RIK Totals - RIK Values vs. FMV Benchmark Values FY 2010 Totals					
	RIK Volumes Sold (BOE)	RIK Revenues	Revenue Gain (Loss) vs. FMV Benchmark Price	Revenue Gain (Loss) Per BOE	Percent Gain / (Loss)
RIK Total	**23,402,387**	**$1,208,810,194**	**$8,137,000**	**$0.35**	**0.67%**

Table A.3

NOTES:

1. EAO calculated revenue performance metrics by individual property for oil and by pipeline for gas. EAO then rolled-up the results into the reporting categories above in order to protect proprietary information regarding RIK sales.

2. ONRR used a portfolio approach in its RIK sales; therefore, losses may have occurred in individual sales packages due to diversification in purchasers, pricing, and other contract terms for overall risk mitigation.

APPENDIX B
PERFORMANCE METRICS METHODOLOGY

The RIK Program used a well-defined revenue performance calculation process as part of the RIK Performance Metrics and Measurement Tools Procedures Manual and Module. ONRR initiated this process with the assistance of an outside consulting organization, Lukens Energy Group (LEG). Although minor adjustments and modifications have altered the models during their 7-year-old application, the general approach and calculation process did not change. The procedures are outlined in detail in documents from LEG and are maintained in both paper and electronic copy.

The principles that drove the development of the Fair Market Value (FMV) benchmark methodologies were as follows:

1. The benchmarks implemented should adhere to statutory requirements to reflect commercial fair market value and the value that ONRR would have received as royalty in value (RIV).
2. The FMV benchmarks should recognize that fair market value is a range of values rather than an absolute number.
3. The FMV benchmark methodology should be a well-defined and repeatable procedure.
4. The FMV benchmark methodology should be applicable across different time periods and across different groupings of properties and programs.
5. The FMV benchmark methodology should ensure reasonable statistical accuracy.
6. The FMV benchmark methodology should have reasonable labor requirements.
7. The FMV benchmark methodology should prescribe maintaining detailed documentation within a performance measurement system.
8. The FMV benchmark methodology should differentiate between forward-looking decision analysis and backward-looking performance measurement, incorporating recent market conditions.
9. The FMV benchmark methodology should use RIV data as much as possible.
10. The FMV benchmark should be based on transparent market intelligence, as much as possible, when sufficient RIV data of reasonable accuracy is not available. Where appropriate, market intelligence should be calibrated with available RIV data.

ONRR computed a FMV benchmark range specific to the commodity, and compared it to the RIK sales value. To compute the FMV benchmark, the Economic Analysis Office established a benchmark price that reflected major liquid pricing point(s) proximal to RIK properties. EAO adjusted this benchmark price to reflect transportation, quality, processing, and various marketing possibilities and any adjustments that may have been derived from RIV or market intelligence data. This resulted in a FMV benchmark for comparison to RIK actual values, netted back to the lease.

There are a number of marketing assumptions ONRR made when calculating the FMV benchmark. The FY 2010 assumptions included the following:

1. **CALENDAR AND TRADE MONTH PRICING**

   ONRR calculated a crude oil FMV benchmark using 97.8 percent Calendar Month pricing and 2.2 percent Trade Month pricing. These percentages were determined using RIV royalty payments to establish the percent of payments using each pricing method.

2. **PROCESSING MODELING**

   ONRR calculated the natural gas processing component of the FMV benchmark using contractual terms found in standard third-party processing contracts at each individual plant.

3. **TRANSPORTATION MODELING**

   ONRR calculated both crude oil and natural gas transportation components of the FMV benchmark price using the tariff specific to each individual pipeline.

4. **FIRST-OF-MONTH BASELOAD VS. DAILY SWING PRICE WEIGHTING**

   ONRR calculated a natural gas FMV benchmark price using a First-of-Month/Daily price weighting equal to the same proportion that ONRR sold production.

5. **FINANCIAL KEEPWHOLE**

   ONRR included any financial keepwhole charges incurred during the course of the natural gas sales in the FMV benchmark price.

6. **PRICING MODELED USING MIDPOINT AVERAGES**

   ONRR calculated the natural gas FMV benchmark price using the First-of-Month and Daily midpoint prices, rather than either the high or the low price in the range.

APPENDIX C
FMV BENCHMARK RANGE OF VALUES

RIK revenue performance measured the financial success and estimated economic benefits of the RIK Program by comparing RIK sales receipts to a Fair Market Value (FMV) benchmark. The FMV benchmark is an approximation of the value for which an average third-party may have sold the same production and estimates what royalty revenues ONRR would expect to see, on average, through Royalty in Value.

Both the Government Accountability Office (GAO) and Royalty Policy Committee (RPC) recommended that RIK present a range of estimated performances based on the FMV benchmark calculations. The GAO stressed that uncertainty exists in the revenue performance calculation because of underlying assumptions made by the Economic Analysis Office (EAO) and that this method did not meet Office of Management and Budget guidelines (GAO-08-942R).

ONRR believes that the most effective method to present this range of possible performances is to vary key assumptions ONRR made about each specific product. This provided sensitivity for all underlying assumptions.

FY 2010 RIK Revenue Performance as Range of Values			
	Low	**Reported**	**High**
Natural Gas	($2,885,608)	$3,400,000	$6,260,000
Crude Oil	$4,740,000	$4,740,000	$4,740,000
Total	$1,850,000	$8,140,000	$11,000,000

Table C.1

C.1 OIL

Historically, the primary assumption in calculating a FMV benchmark for GOM crude oil was to use a weighting of 90 percent Calendar Month Average (CMA) and 10 percent Trade Month Average (TMA) in an attempt to mirror the ratio found in the oil markets. This ratio was based on unsubstantiated market intelligence obtained from Oil Front Office personnel and from third-party oil marketing representatives.

In an effort to establish a more measureable, repeatable, and defendable assumption, EAO conducted an analysis of FY 2009 GOM RIV crude oil values to determine the percent of RIV volumes sold on a trade month and calendar month prices. This was possible due to the large crude oil price swings in the later half of FY 2008 and the first half of FY 2009. The difference between the calendar and trade month price was as much as $30 due to the large swings in crude oil prices. The disparity in prices allowed ONRR to estimate which price basis payors used for a particular RIV payment. EAO determined that, on average, payors reported 97.8 percent of RIV royalty payments on a calendar month basis and the remaining 2.2 percent on a trade month basis.

To manage uncertainty in this analysis, EAO developed a range using the highest and lowest crude oil differentials by month, giving the benefit of the doubt to calendar and trade month pricing. The chart below shows the percentages used based on this analysis and the respective revenue gain by program.

FY 2010 RIK Crude Oil Estimated Revenue Performance Range			
	Revenue Gain (Loss) Using 87.8% CMA, 12.2% TM	Revenue Gain (Loss) Using 97.8% CMA, 2.2% TM	Revenue Gain (Loss) Using 98.2% CMA, 1.8% TM
Small Refiner	$2,030,000	$2,370,000	$2,370,000
Unrestricted	$2,710,000	$2,370,000	$2,370,000
Total	**$4,740,000**	**$4,740,000**	**$4,740,000**
		Reported Revenue Gain	

Table C.2

There was no range of values for oil in total for FY 2010, although both the Small Refiner and Unrestricted programs did exhibit a small range. This was because oil prices were relatively stable during the year and properties dropped off at varying times during the year.

C.2 Natural Gas

For natural gas, one assumption ONRR made to calculate a FMV benchmark was to use a weighting between First-of-Month (FOM) and Gas Daily pricing equal to the baseload and swing volume weightings of the actual RIK sales by month and package. ONRR calculated alternative gas revenue performance numbers using weightings of 70 percent FOM, 30 percent Gas Daily (a weighting that market research indicates is common in the industry), 100 percent FOM, and 100 percent Gas Daily pricing to create a range of value around critical marketing assumptions.

Another assumption made by ONRR was to calculate the FMV benchmark price using the midpoint average prices for both FOM and Gas Daily. Publications survey companies selling gas at fixed "cash" prices on the spot market to develop a range of gas prices for a particular day or month and pricing point. The publications then use these fixed prices to develop the "index" or midpoint price. ONRR sold all RIK gas at this midpoint index price, as do most other producers, but ONRR recognized that gas was sold at both these low and high prices. As such, ONRR created a revenue performance range using the low and high prices as the benchmark price, rather than the midpoint price. The average difference between the midpoint price and both the low and high price, using the Henry Hub index for GOM production and the Colorado Interstate Gas (CIG) index for Wyoming production, is shown in the following chart. ONRR created a "Midpoint Price Variance" range by adjusting the estimated revenue performance both up and down by these differences.

	FY 2010 Midpoint Price Variance			
	GOM Henry Hub Index		Wyoming CIG Index	
	Low Price	High Price	Low Price	High Price
Avg. Variance From Midpoint	($0.032)	$0.008	($0.122)	$0.100

Table C.3

ONRR also assumed in performance calculations that the financial keepwhole costs[9] should be treated with neutrality in the gas revenue performance. ONRR calculated an alternative gas revenue performance number, assuming that financial keepwhole costs should only apply to RIK revenues, not the FMV benchmark calculation.

The natural gas price weighting methodology was most appropriate because it allowed individual revenue elements, such as transportation, processing, and market pricing, to be more-readily measured. Likewise, measuring performance using midpoint pricing was appropriate, given that the use of the low or high price in the range made the unreasonable assumption that all gas was sold at that price. Lastly, the methodology for handling the financial keepwhole was appropriate because a producer, similarly situated as ONRR, would have to include this provision in order to sell their gas.

The table below presents the difference between the reported estimated natural gas revenue gain and the revenue gain calculated using the specified alternative marketing assumptions. The low and high range adds together the extremes in each assumption. The "high" performance in the financial keepwhole assumption occurs in our reported performance, so no adjustment is made for this component in the high range.

FY 2010 Reported Estimated Revenue Gain			
Reported Revenue		$3,400,000	**(1)**
Revenue Differentials to Reported Gain			
Price Weightings			
	70% FOM - 30% GD	($870,000)	
	100% FOM	$1,280,000	**(2)**
	100% GD	($3,620,000)	**(3)**
Midpoint Price Variance			
	Using Lowest Price in Range	$1,580,000	**(4)**
	Using Highest Price in Range	($2,628,000)	**(5)**
Financial Keepwhole			
	Keepwhole Total	($37,608)	**(6)**
Revenue Range			
	(1) + (3) + (5) + (6) Low	($2,885,608)	
	(1) + (2) + (4) High	$6,260,000	

Table C.4

[9] Financial keepwhole is the method specified in natural gas sales documents to financially compensate either the purchaser or seller, depending on the monthly and daily natural gas prices, when the delivered volume is less than the agreed to baseload volume on any particular day.

APPENDIX D

OIL PERFORMANCE DETAIL BY SALES PACKAGE

The Government Accountability Office (GAO) recommended that RIK "disaggregate the oil sales data to show the variation in the performance of individual sales" by disclosing the number of properties with revenue gains and those with revenue losses. The GAO stated that this information could be useful to Congress in its evaluation of the RIK program. The following table shows totaled property gain/loss by Oil Program.

FY 2010 RIK OIL PERFORMANCE DETAIL BY PACKAGE			
OIL PROGRAM	# OF REVENUE GAIN PROPERTIES	# OF REVENUE LOSS PROPERTIES	TOTAL # OF PROPERTIES
UNR	63	2	65
SR	25	0	25
TOTAL	**88**	**2**	**90**

Table D.1

APPENDIX E

SECRETARY SALAZAR RIK TERMINATION MEMORANDUM

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

TAKE PRIDE IN AMERICA

December 8, 2009

Memorandum

To: Wilma A. Lewis
Assistant Secretary, Land and Minerals Management

From: Ken Salazar
Secretary

Ken Salazar

Subject: Termination of the Royalty in Kind Program

In my testimony before the House Natural Resources Committee on September 16, 2009, I announced my decision to terminate the Royalty in Kind (RIK) program. The decision to terminate the program comes after a thorough review and is based upon my strong conviction that the Department of the Interior should be regulating, not participating in, industry activities, as well as concerns that have been raised regarding the program's capacity to ensure transparency and a fair return to the taxpayer.

As we have discussed previously, you should proceed with the termination of the RIK program. Working with and through the Director of the Minerals Management Service, the program should be terminated in a manner that incorporates the following guiding principles:

- Our employees are the Department's greatest asset. You should therefore strive to minimize, to the greatest extent possible, adverse impact to our employees in the RIK program. You should work with the Department and other agencies to utilize all available tools and opportunities to minimize employment impacts. You should also endeavor, through appropriate communication, to keep RIK employees apprised of relevant information as the transition progresses.
- The effective performance of the Department's mission is our primary responsibility. You should ensure that the termination of the RIK program will not adversely affect the Minerals Management Service's commitment to ensuring that the nation's Federal and Indian energy and mineral revenues are accurately reported and paid in compliance with laws, regulations and lease terms and that the American people receive fair market value for their valuable energy and mineral resources.
- Conduct the termination in a deliberate and orderly fashion with adherence to proper internal controls, record keeping, accounting standards, applicable laws and regulations, and established procedures.
- Honor all existing RIK sales contracts.
- Cease all future RIK sales.
- Consult with the Office of the Solicitor regarding whether a new determination of need is necessary before a decision is made about the Small Refiner program.
- Work with the Bureau of Land Management to transition the sale of natural gas produced from the National Helium Reserve.

I look forward to receiving periodic reports on the progress of the activities associated with the termination of the RIK program.