



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

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The Honorable Mark O. Hatfield
Chairman, Committee on Appropriations
United States Senate

APRIL 11, 1984

The Honorable William V. Roth, Jr.
Chairman, Committee on Governmental Affairs
United States Senate

The Honorable Jack Brooks
Chairman, Committee on Government Operations
House of Representatives



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The Honorable Jamie L. Whitten
Chairman, Committee on Appropriations
House of Representatives

Subject: Evaluation of Department of the Interior's Comments
on GAO's Report on Alternative Bidding Systems for
Leasing Offshore Lands

We have reviewed the Department of the Interior's September 15, 1983, response--required by the Legislative Reorganization Act of 1970 (31 U.S.C. §720)--to our report: Congress Should Extend Mandate to Experiment with Alternative Bidding Systems in Leasing Offshore Lands (GAO/RCED-83-139, May 27, 1983). The report discussed Interior's record in implementing the alternative bidding systems and their affect on (1) company participation and competition, (2) government revenues, (3) lease exploration and production, and (4) administrative costs to the government. We believe that further information from us may be useful to assist the Committee in evaluating Interior's comments.

The Outer Continental Shelf (OCS) Lands Act Amendments of 1978 authorized the Interior Department to use alternatives to the traditional bidding system in leasing offshore lands for oil and gas development. The amendments required the use of the alternative systems for at least 20 percent and not more than 60 percent of the offshore acreage offered for lease each year over a 5-year test period, which ended in September 1983. The alternative systems were designed to reduce the initial amount of money, in the form of bonus bids, required to obtain a lease and require the holder of the lease to pay the government a larger share of any follow-on production. These systems were supposed to increase company participation and competition in offshore lease

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sales by reducing up-front money--especially from smaller companies with limited financial resources.

In its response, the Interior Department disagreed with our recommendation that the Congress require continued use of the alternative bidding systems in leasing offshore lands for another 5-year test period. According to Interior, the initial 5-year mandatory testing period has been more than adequate to apply, analyze, and test all viable systems. In addition, Interior stated that further mandatory testing was unnecessary because it will continue to consider and apply alternative systems in future OCS lease sales.

Our report pointed out that additional time and testing are needed to generate enough information to assess all the effects of the alternative bidding systems. Insufficient time has elapsed for most tracts leased under the alternative systems to be explored and placed in production. The effect on royalty and profit share revenues to the government cannot be measured without production. In addition, we found that the impacts of the alternative systems compared with those of the traditional system are not the same in all OCS regions or leasing situations. Because Interior has not tested each of the alternative systems in all leasing regions, actual leasing results to date provide only part of the total impacts of using these systems. Thus, we continue to support the need for additional testing of alternative bidding systems over the next 5 years so that more information will be available to judge the systems' overall merits.

Also, we believe a statutory mandate is needed to encourage Interior to further test the various alternative systems. In this regard, our report noted that only three of the six alternative systems that the 1978 amendments authorized have been tested-- (1) cash bonus bid, sliding scale royalty system, (2) cash bonus bid, fixed net profit share system, and (3) royalty rate bid, fixed cash bonus system.¹ Only the cash bonus bid, sliding scale royalty system, is scheduled for additional testing at this time, while future use of the cash bonus bid, fixed net profit share system, will be limited to lease offerings adjacent to existing leases under this system. The royalty rate bid, fixed cash bonus system, has been used sparingly in the past, in one 1974 sale and one 1977 sale, and according to Interior will not be tested in future sales.

The Supreme Court determined in Watt v. Energy Action Foundation that while the OCS Lands Act Amendments required experimentation with at least some of the alternative systems, it left to the Secretary's discretion to choose which systems to test. Accordingly, Interior's approach in testing the alternative systems since the 1978 amendments has been to use only those systems

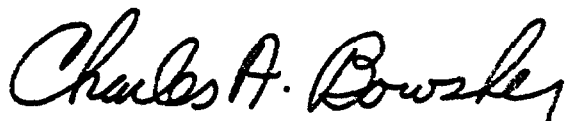
where the "upfront" cash bid (bonus) determines who receives the lease--essentially the same approach as the traditional system. Also, although Interior can use any system it determines to be beneficial, it has tested only those bidding systems specifically identified in the act. As a result, the extent to which other bidding systems can enhance the offshore program is difficult to measure. Currently, many unknown factors, such as future oil and gas prices, production needs, general economic conditions, and changes in the OCS program, suggest the need to test new variations and bidding systems that do not use a cash bonus as the bid variable. Such systems were designed to reduce the amount of upfront bonus money required to obtain a lease and, in return, require that the government be paid a larger share of any follow-on production.

The Interior Department did not comment on our recommendation to the Congress that responsibilities under the OCS Lands Act for the annual report on alternative bidding systems be transferred from the Department of Energy to Interior. However, Interior's fiscal year 1982 report, issued April 29, 1983, generally included the information that the act requires to be submitted by both the Departments of Energy and the Interior. Because Interior is currently in the best position to determine and report on the effectiveness of the alternative systems, we believe its report is the best vehicle for providing this information to the Congress.

Interior's response also included comments on other aspects of our report. Because of the extensive nature of Interior's comments, our responses have been annotated--paragraph by paragraph or section by section, as appropriate--to the full text of Interior's letter. (See enc. I.)

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Copies of this letter are being sent to the Director, Office of Management and Budget; the Secretary of the Interior; and other committees having oversight responsibilities for Interior's programs.



Comptroller General
of the United States



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

SEP 15 1983

Mr. Charles A. Bowshe
Comptroller General of the United States
Washington, D.C. 20548

Dear Mr. Bowshe:

We are pleased to comply with Section 236 of the Legislative Reorganization Act of 1970. This is in response to the General Accounting Office report entitled "Congress Should Extend Mandate To Experiment With Alternative Bidding Systems In Leasing Offshore Lands" (RCED-83-139), dated May 27, 1983.

The only recommendation to the Secretary of the Interior relates to the reporting requirements of section 15(2) of the Outer Continental Shelf Lands Act, as amended. Our specific response to the recommendation as well as our general comments on the report are presented in the enclosure. Our April 29, 1983, report transmittal to the Congress meets the reporting requirements of section 15(2). The Department of the Interior will continue to comply with the requirements of the Act.

Sincerely,


SECRETARY

Enclosure

Department of the Interior Response
to GAO Report
"Congress Should Extend Mandate to
Experiment with Alternative Bidding
Systems In Leasing Offshore Lands"
(RCED-83-139)

Prior to commenting on the report's recommendation to the Secretary of the Interior, we wish to offer some general comments on the report. We recognize that the GAO expended considerable time and effort on its investigation. However, a few critical, methodological errors limit the report's applicability and accuracy.

Report defines "alternative bidding systems" differently than the OCS Lands Act, as amended (OCSLAA).

GAO created its own definition for the phrase "alternative bidding systems." GAO states,

"Thus, Interior's use of a bonus bid with either a 12-1/2 or 33-1/3 percent royalty rate was treated as an alternative, although technically they are not so defined in the OCS Lands Act, as amended." (page 3)

Given GAO's inconsistent use of terminology, care should be taken when attempting to evaluate the performance of alternative bidding systems as defined by the OCSLAA based upon analyses performed under GAO's volitional definition of the phrase. For example, GAO uses its interpretation of the performance of the 33-1/3 percent fixed royalty system to augment its argument for continued testing of alternative bidding systems. Since the 33-1/3 percent fixed royalty system is not an alternative bidding system as defined by the OCSLAA, the performance and use of this "system" does not support the extension of section 8(a)(5)(B) regarding mandatory testing of alternative bidding systems. Moreover, the authority to use various fixed rates would not be affected by a change in this section of the OCSLAA.

[GAO COMMENT: The 1978 Outer Continental Shelf (OCS) Lands Act Amendments do not specifically define alternative bidding systems but refer to "competitive bidding systems" (see pp. 7-11 of our report). For purposes of our analyses, we defined the bonus bid, fixed 16-2/3 percent royalty rate system as the "traditional system" and all other bidding schemes as "alternative systems" (see p. 2 of our report). We defined the "traditional system" this way to isolate the effect of the bonus bid, 16-2/3 percent royalty rate system, the commonly used standard with which to compare other bidding systems, and to compare the results of using other fixed royalty rates on OCS leasing and development. Thus, Interior's use of a bonus bid with either

a fixed 12-1/2 percent or 33-1/3 percent royalty rate was treated as an "alternative system" for the purposes of our analysis.

We agree with Interior's response that the performance and use of the bonus bid, fixed 33-1/3 percent royalty rate system does not support extending the mandatory testing period for the alternative systems. Our recommendation to the Congress to extend the test period, however, was based on several factors. For example, we found that:

--The initial effects of the alternative systems have generally "equalled or bettered" the results of the traditional system (see p. 53 of our report). In fact, only 2 of the 10 alternative bidding systems have proven to be less effective than the traditional system.¹ Thus, we believe Interior should continue

¹The initial impacts of each of the alternative systems on participation, competition, and bonus bids are shown in the following table.

Initial Impacts of the Alternative Bidding Systems
Compared to the Traditional System

<u>Alternative systems</u>	<u>Impacts on</u>		
	<u>Participation</u>	<u>Competition</u>	<u>Bonus bids</u>
Royalty bid, fixed cash bonus	Similar	Increased	Decreased
Cash bonus bid, fixed 12-1/2% royalty	Similar	Similar	Similar
Cash bonus bid, fixed 33-1/3% royalty	Increased	Increased	Similar
Cash bonus bid, fixed net profit share	Decreased	Decreased	Decreased
Cash bonus bid, sliding scale royalty:			
Formula 1	Decreased	Similar	Similar
Formula 2	Similar	Similar	Similar
Formula 3	Similar	Similar	Similar
Formula 4	Increased	Increased	Increased
Formula 5	Similar	Similar	Similar
Formula 6	Increased	Increased	Decreased

testing the alternative systems to improve offshore leasing.

- The alternative systems have not always worked as theorized. Only three of the alternative systems that Interior tested reduced bonus levels as anticipated (see p. 53 of our report). The other seven systems resulted in bonuses similar to or higher than bonuses under the traditional system. Thus, we believe additional testing and analysis are needed to help determine the reasons why some impacts run counter to what was anticipated.
- The impacts of the alternative systems compared with the traditional system do not track evenly in all OCS regions or leasing situations. For example, some systems did extremely well in some but not in other regions. Because Interior has not tested each of the alternative systems in all regions, actual leasing results to date provide only a part of the total effect of using these systems. Additional testing in each of the OCS regions is needed before other effects of the systems are known.
- Insufficient time has elapsed for most tracts leased under the alternative systems to be explored and placed in production. The effect on royalty and profit share revenues to the government cannot be measured without production. Thus, additional time is needed to determine the actual effect the systems would have on government revenues and lease exploration and production.
- Administrative costs to the government of using the alternative systems have not been adequately ascertained. Thus, we believe Interior should develop such cost estimates to adequately assess potential advantages and disadvantages of each alternative system.

We agree with Interior's position that its authority to use various bidding systems would not be affected by our recommendation to the Congress to amend the OCS Lands Act. However, our recommendation, if implemented, would require continued use of alternatives to the traditional cash bonus bid, fixed royalty rate system, for at least 20 percent of the offshore acreage offered for lease each year until September 1988. This can be accomplished by changing section 8(a)(5)(B) of the act to read:

"The bidding systems authorized by paragraph (1) of this subsection, other than the system

authorized by subparagraph (A), shall be applied to not less than 20 per centum and not more than 60 per centum of the total area offered for leasing each year during the ten year period beginning on September 18, 1978."

Our recommendation for a mandatory 20-percent usage rate is needed to encourage Interior to thoroughly test the alternative bidding systems so that adequate information is available to assess all the effects of using these systems. In this regard, our report (see pp. 7-12) noted that only three of the six basic alternative systems authorized by the 1978 amendments have been tested--(1) cash bonus bid, sliding scale royalty system, (2) cash bonus bid, fixed net profit share system,² and (3) royalty rate bid, fixed cash bonus system. Only the cash bonus bid, sliding scale royalty system, is scheduled for additional testing at this time, while future use of the cash bonus bid, fixed net profit share system, will be limited to lease offerings adjacent to existing leases. The royalty rate bid, fixed cash bonus system, has been used sparingly in the past, in one 1974 sale and one 1977 sale, and according to Interior will not be tested in future sales.

Furthermore, Interior's approach in testing the alternative systems since the 1978 amendments has been to use

²The 1978 amendments allow the Secretary of the Interior discretion to use any bidding system he determines to be useful and specifically authorize six basic alternative arrangements to the traditionally used approach in leasing OCS lands. Interior has tested three of these systems:

--Cash bonus bid, sliding scale royalty system. Six variations of this system have been tested by Interior, using different formulas for establishing the sliding scale royalty rates.

--Cash bonus bid, fixed net profit share system.

--Royalty rate bid, fixed cash bonus system.

Interior has not used:

--Net profit share bid, fixed cash bonus system.

--Cash bonus bid, fixed royalty rate and fixed net profit share system.

--Work commitment bid, fixed cash bonus and royalty rate system.

only those systems where the cash bonus is the bid variable--conceptually the same approach as the traditional system. In addition, although authorized to use any system it determines to be beneficial, Interior has tested only bidding systems specifically identified in the act. The Supreme Court has determined that the OCS Lands Act Amendments leave to the Secretary's discretion which systems to test. However, as a result of Interior's approach, the extent to which other bidding systems can promote company participation and competition in the offshore program is difficult to measure. Currently, many unknown factors, such as future oil and gas prices, production needs, general economic conditions, and changes in the OCS program, suggest the need to test new variations and bidding systems that do not use a cash bonus as the bid variable. Such systems may prove to be advantageous to the government under several varying economic conditions or leasing situations.]

Report lacks a unifying framework.

GAO treated each individual mathematical formulation for the sliding scale royalty as a separate and distinct alternative bidding system. Accordingly, GAO did not take into account the relative degree to which the various formulas attempted to shift Government revenue from the cash bonus payment to downstream royalty payments, nor did GAO examine whether its "separate results" for individual formulas made sense when viewed as a whole. By failing to provide a unifying framework for the various specifications of the sliding scale, GAO would apparently have the Congress base important decisions solely upon "black box" results which are lacking in theoretical foundation, rationale, and explanation. GAO openly admits,

"Our analysis did not provide explanations as to why some alternative systems performed better, or worse, in comparison to the traditional systems." (page 54)

[GAO COMMENT: Our analysis considered the degree to which the various formulas shifted government revenues from bonuses to downstream royalties and provided varied effects on OCS leasing and development. To determine the effectiveness of each formula, the impacts of each had to be analyzed separately.

Our report (see pp. 3, 9, 10, 54, 94, and 95) described the mathematical formulations for each of the sliding scale systems and identified the impacts of the different formulas on downstream royalty payments to the government. Our report (see pp. 92-98) further explained that since each formula establishes the financial incentives under which companies must decide

to participate in a sale, compete for a lease, and explore for and produce oil and gas resources, each will have some different effect on these and other important factors. Thus, the separate results for individual formulas do make sense and were expected in our analysis of the cash bonus bid, sliding scale royalty system.

Furthermore, it should be noted that Interior routinely treats each individual mathematical formulation for the sliding scale royalty as a separate and distinct bidding system. For example, in a 1980 Interior-sponsored study, the test results for each of the different sliding scale formulas were presented separately.³ Also, each formula was considered distinct in a series of statistical reports prepared by Interior's OCS regional office in New Orleans, Louisiana. An Interior staff study, dated May 17, 1983, also discussed each of the formulas as separate and distinct.

Our report (see pp. 92-98) discussed in detail the theoretical foundation, rationale, and explanation of each of the alternative systems. Although we were able to identify how the alternative systems compared statistically with the results of the traditional system, our report (see p. 5) noted that determining specific reasons why some systems were more effective than others was beyond the scope of our review.]

Report bases many conclusions upon simple, unadjusted trends.

A large portion of GAO's report is devoted to the presentation of unadjusted, general trend data and GAO's subjective interpretation of the meaning of the trends. For example, statements like the following are common:

"Based on trends in the number of bids per tract and the percentage of the tracts receiving bids, competition in the Gulf of Mexico, for example, was greater under the alternative systems for all groups of tracts, aggregated by tract value and water depth, than under the traditional system." (page 27)

"Based on general trend data, the use of alternative bidding systems on both high- and low-valued tracts resulted in about the same amount of competition as

³The Effects of Alternative Leasing Systems on OCS Bidding Behavior: An Empirical Analysis, Resource Planning Associates, Inc., Sept. 22, 1980.

that received for similar tracts offered under the traditional system." (page 31)

"General trend data indicated that lessees tend to explore tracts leased under the alternative systems quicker, in terms of the average time from lease date to first well date, than tracts leased under the traditional system." (page 43)

Since GAO did not control for the different locations of alternative bidding system tracts or any of the other factors which affect bidding behavior, its conclusions based upon general trend data are absolutely untenable. For its conclusion regarding exploration, this problem is so obvious that GAO provides a disclaimer at the end of the very paragraph that announces the improved performance (page 43, paragraph 1). The general data provided captures the impacts of all factors (not just bidding system effects) which influence competition and participation levels, Government revenues, timing of exploration, and levels of production. As such, no valid conclusions on bidding system impacts can be abstracted from simple, unadjusted trends and averages.

Additionally, the report is not clear regarding GAO's definition of "general trend" or how the conclusions were derived from the data presented in the tables cited. Many tables cited as demonstrating "general trend" conclusions do not present trends but rather unadjusted means of variables partitioned by bidding system type or other criteria. It is generally accepted that conclusions based upon unadjusted trends or unadjusted means are tenuous inferences, at best. Although GAO's presentation of its "trend analyses" was apparently patterned after an uncited 1980 study completed by Resources Planning Associates, Inc., GAO evidently failed to use inferential statistics (that is objective analytical techniques) to test hypothesized differences in the performance of bidding systems. Resource Planning Associates, Inc., on the other hand, included the results of a variety of formal, statistical tests in its report. GAO's decision to replace objective, statistical tests with the subjective judgments of its staff is troubling.

[GAO COMMENT: A very small portion of our report is devoted to the presentation of general trend data and our description of these trends. Instead, we used analytical and statistical techniques to form a majority of our conclusions and recommendations. For example, we used regression analysis, which finds and predicts the association among related variables, measuring the strength of the association and its nature (positive or negative). Because numerous factors can affect industry's OCS bidding activities, regression analysis was an appropriate analytic method to isolate the effects of these variables in order to measure the

impacts of each alternative system independent of other factors. Our regression analysis controlled the influences that each of the following factors had on the bidding results: (1) the geographic region of the sale, (2) the expected value of the OCS tract, (3) the water depth of the tract, and (4) the price of oil at the time of the sale. Our conclusions were based primarily on the results of our statistical analysis, discussions with government and industry officials, a review of lease documents, and a review of the various studies related to alternative systems and their effect on OCS leasing.

Our next level of analysis involved identifying and reviewing historical trends in OCS leasing and development. This type of information was used when the universe was not large enough to use regression analysis or where the data were not readily adaptable to such techniques. Our report (see pp. 5 and 71) specifically states that tests were not conducted to determine whether the difference in these trends were statistically significant, but they were presented only to show historical trends in OCS leasing and development for consideration in future lease sales. In each case where we present general trend information, it is clearly identified and explained. Our report (see p. 5) clearly defines trend data as providing the historical perspective on what has occurred in the offshore program and does not draw any conclusions from this type of data.

Our analysis was not patterned after any other study as indicated by Interior's response. While the Resources Planning Associates, Inc., 1980 study (see footnote 3) is a good source document, it only discussed the results of 12 lease sales and 5 alternative systems--the royalty rate bid with a fixed cash bonus system, cash bonus bid with a fixed 33-1/3 percent royalty rate system, and three formulas tested under the sliding scale royalty system. Also, the 1980 study did not discuss all the impacts identified in our report.

In summary, our report was based primarily on analytical and statistical techniques to test hypothesized differences in the performance of the alternative bidding systems (see p. 53 of our report for the results of our statistical tests) and was not based, as indicated in Interior's response, on subjective judgments.]

Report's major conclusions are weak and not fully consistent with GAO's analyses.

GAO's major conclusions include:

"Company participation under most alternative systems has paralleled or bettered the traditional system" and "Competition under most alternative systems has paralleled or bettered the traditional system." (Titles for Chapters 3 and 4, respectively)

Statements like these are not useful and are actually misleading since GAO's own analytical results equally support the opposite conclusion, which is that the initial effects of the alternative systems on company participation and competition have generally not bettered the results of the traditional system.

Additionally, while the GAO tends to emphasize its general "paralleled or bettered" conclusions, it appears to downplay results regarding a stated, major purpose behind its study and, indeed, the major reason behind the Congressional mandate to conduct experiments with alternative bidding systems. That is,

". . . one of the major reasons for testing the alternative bidding systems was to determine whether they permit more small companies, having limited financial assets, to participate and compete in OCS lease sales." (page 3)

With regard to this primary reason for testing the alternative systems, GAO's conclusion is clear and unequivocal.

". . . GAO's analysis indicated that small companies and companies bidding for the first time in offshore lease sales have favored the traditional system rather than the alternative systems. The reasons why these impacts run counter to what was anticipated are not readily determinable." (page iv)

Given these results, one could argue that the recommendation for further testing is not supported by the quantitative analysis conducted by the GAO. While it may be a useful academic exercise to attempt to determine why alternative systems have failed to stimulate small firm participation and competition, it hardly justifies an extension of the legislative testing mandate. A review of past sale results and related data would provide more meaningful answers.

[GAO COMMENT: Concerning Interior's comment that our analytical results support the conclusion that alternative systems have not bettered the traditional system, our analyses clearly showed that most alternative systems have equalled or bettered the traditional system

in generating company participation and competition in OCS lease sales. In fact, only two of the alternative systems have proven to be less effective than the traditional system. Also, we found that the impacts of the alternative systems compared with the traditional system do not track evenly in all OCS regions or leasing situations. For example, some systems did extremely well in some but not in other regions. Because Interior has not tested each of the alternative systems in all regions, additional testing is needed before other effects of the systems are known. Our analyses also showed that it was too early to tell what impacts the alternative systems would have on total government revenues, prompt lease exploration and production, and specific administrative costs to the government. Consistent with these analytical results, we concluded that the 5-year test period provided in the OCS Lands Act, as amended, should be extended.

Interior's response noted that overall trend data indicated that small companies tended to participate less on tracts offered for lease under the alternative systems compared with the traditional system; however, it did not recognize that our regression analysis identified three alternative systems that generated more participation from small companies than the traditional system and that four systems generated levels of participation similar to the traditional system (see p. 20 of our report). Recognizing these results, we continue to believe that the 5-year test period should be extended.

We agree with Interior's position that a review of past sale results and data would provide some meaningful answers to whether an extension of the legislative testing mandate is justified. For example, we found that the initial effects of the alternative systems have generally equalled or bettered the results of the traditional system. In fact, only 2 of the 10 alternative systems have proven to be less effective than the traditional system (see footnote 1). Thus, we believe Interior should continue testing the alternative systems to improve offshore leasing.]

Faulty methodology is the cause of GAO's conclusion that sliding scale formulas 4 and 6 result in increased participation and competition.

Basic principles of experimental design and regression methodology indicate that the most appropriate test technique is to construct and partition trials such that the only difference relates to the hypothesis being tested. Since this obviously cannot be fully implemented for the case of alternative bidding systems, the next best method is to make the control and test groups as uniform as

possible and adjust statistically for those remaining differences which can be identified. The GAO attempts to explain variations in participation, competition, and the magnitude of the high bid due to variation in the Government's presale value, water depth, the price of oil, and dummy variables for alternative bidding systems. As defined by GAO, ten alternative systems were used.

The specific method chosen by GAO is simple regression analysis of the combined data of 23 OCS lease sales conducted over the 8-year time period from 1974 through 1981. The GAO's stated purpose for its regression analyses is "to isolate the effects of these variables in order to measure the impacts of each alternative system on industry bidding behavior independent of other factors." Unfortunately, the particular specifications chosen by GAO do not fully capture the many individual lease sale differences which exist among the 23 lease sales. This fact, combined with GAO's decision to treat each individual sliding scale formula as a separate bidding system, leads to the inevitable result of specification bias which invalidates GAO's conclusions regarding the effectiveness of the sliding scale royalty bidding system. The following two examples document this assertion.

Based upon its regression analyses, GAO concludes that sliding scale formula 6 resulted in significantly lower bonus bids, significantly higher levels of competition, and significantly higher levels of participation by all companies because the coefficients of the dummy variable representing this specific sliding scale formula were significantly different from zero in the GAO regressions. However, even a cursory review of the data indicates that these "results" are attributable more to spurious correlation than causality. This occurs because GAO's failure to take individual sale differences into account causes these effects to be confounded with the dummy variables for the various sliding scale formulas.

Specifically, sliding scale formula 6 was used for only one lease sale, Sale 53 in Southern California on May 28, 1981. Measures of competition and participation for this sale were far above average, not just for the sliding scale royalty tracts which received bids (an average 4.05 bids per tract) but also for tracts bid upon under the traditional cash bonus bidding with fixed 16-2/3 percent royalty system (an average of 3.93 bids per tract). These results reflect the geologic attractiveness of the sale area, the degree of industry optimism, existing cash flow positions, and other sale specific factors rather than any inherent advantages of a specific sliding scale formula. Since individual sale differences which led to the "above average" results were not explicitly adjusted for in GAO's model even for "similarly valued prospects," they were at least partially captured by the dummy variable for sliding scale royalty formula 6. Thus, the particular coefficient of this dummy variable reflects the combined effects of sliding scale royalty formula 6 and all other individual effects particular to Sale 53 differences.

For tests regarding the effectiveness of sliding scale royalty formula 6, basic statistical theory clearly indicates that statistical control can best be accomplished by using data from the only sale in which the formula was used, Sale 53. This would eliminate differences which might be caused by changes in such fundamental variables as quantity and quality of data available to exploration firms, cash flow positions, maturity of basins, regional geology, industry optimism, etc. To illustrate this point, we reran GAO's specification for Sale 53 data only. If differences can be attributed to the use of sliding scale royalty formula 6 as compared to cash bonus bidding with a fixed 16-2/3 percent royalty, they certainly should appear in the only sale in which both systems were used.

A replication of GAO's method solely upon Sale 53 data indicates that although use of sliding scale formula 6 decreased bonus bids significantly (an average in excess of \$26 million) compared to the traditional cash bonus bidding with fixed 16-2/3 percent royalty system, slight and statistically nonsignificant decreases in competition and participation resulted. Thus, a head-to-head comparison of sliding scale formula 6 with the traditional system indicates GAO's conclusions regarding this system were wrong.

The GAO also concluded that sliding scale formula 4 resulted in significantly greater participation and competition than the traditional cash bonus bidding with fixed 16-2/3 percent royalty system, even though the cash bonus bid was found by GAO to be significantly greater than that obtained under the traditional system. Again, these results can be shown to be spurious.

Sliding scale formula 4 was used in only two lease sales, i.e., Gulf of Mexico Sales A62 and 62 held approximately 1-1/2 months apart in late 1980. As with Sale 53, these sales had above normal competition and participation rates. A re-analysis, including only those sales in which sliding scale formula 4 was used, clearly indicates that its use had no significant effect upon bonus bids, competition, or participation.

The two examples above show the seriousness of the flaws in the GAO's statistical design and methodology. Accordingly, GAO's conclusion of the effectiveness of the sliding scale royalty system and of alternative bidding systems in general must be taken with some skepticism. In fact, our analysis indicates that there is little, if any, evidence in the 8 years of lease sale data from 1974-1981 to support the hypothesis that the use of alternative bidding systems has or will lead to increases in competition and participation. Other studies conducted by the Department of Energy, Resource Consulting Group, and Resource Planning Associates, Inc. reach this same conclusion.

Although the GAO was fully aware of studies conducted by the Department of Energy and also by Resource Planning Associates, Inc., it failed to question or analyze why its conclusions were so

different. Specifically, GAO chose to ignore the inconsistency with its own analyses although it does make the following acknowledgement:

"The Secretary (of Energy) concluded that the fixed net profit share and sliding scale royalty bidding systems did not appear to have achieved Congress' intent to increase company participation and competition in OCS lease sales." (page 15)

For example, regarding the GAO's inconsistent results pertaining to sliding scale formula 4 (previously shown above to be biased), the report states:

"While we were not able to determine the reasons for the increases in participation and competition without a correlating reduction in bonus bids these results suggest that additional testing of the system is warranted." (page 38)

Perhaps it is this latter statement that best reveals a seemingly unifying thread within GAO's report, i.e., a predisposition to recommend further testing even when their own analysis might indicate the contrary. For example, empirical analyses, including GAO's analysis consistently reveal that the fixed net profit sharing system has been a failure and in fact has led to significant decreases in company participation and competition, especially for small companies. Yet, the GAO and other supporters of this alternative bidding system fail to recommend action based upon these findings, and, instead, prefer to call for further testing and experimentation.

[GAO COMMENT: Our methodology was based on accepted regression analysis techniques, which controlled for individual sale and time frame differences. Our regression analysis measured the impacts of each alternative system on the number of companies placing bids (company participation), the number of bids per tract (sale competition), and the size of bonuses received by the government. It accounted for the influences that (1) the geographic region of the sale, (2) the expected value of the tract, (3) the water depth of the tract, and (4) the price of oil at sale time had on the bidding results. By controlling the influences of these factors, we were able to distinguish the effects of these factors from the effects of each alternative system on company participation, sale competition, and bonus revenues.

Interior criticized our regression analysis for leaving out ". . . geologic attractiveness of the sale area, the degree of industry optimism, existing cash flow positions and other sale specific factors" If

specific data on these factors had been available, we would have used them. However, such data have never been collected. To best account for individual sale differences, we used water depth (the only geologic data uniformly available), the price of oil (to capture industry optimism and future cash flow), and--most important--the presale value of the tract (which explicitly measures the overall attractiveness of the prospect). These variables are simply the best available and are adequate to make up for individual sale and time frame differences.

We agree with Interior's position that factors unique to each company will clearly influence whether they choose to bid and how much they offer. For example, company profits, drilling capabilities, portfolio of drilling prospects, supply position, perceptions of risk, management, and other variables would be important in explaining overall bidding behavior. However, our goal was to explain the impact of those policy variables under the government's control, namely the tracts offered for sale and the bidding system attached to each tract.

Although Interior's analysis for sliding scale formulas 4 and 6 may be plausible, the Department did not provide sufficient detail to examine and verify the methodology and conclusions presented in the response. During our examination of the alternative systems, we considered using sale specific data for our regression analysis, but decided after reviewing the levels of competition and participation for prior OCS sales that our methodology was adequate to make up for individual sale differences. (Measures of competition and participation for Sales 53, A62, 62, and others are shown in enclosure II.) Interior's analysis for the sliding scale formula 4 system appears to be based on 55 tracts leased in Sale 53 and for the sliding scale formula 6 system on 183 tracts leased in Sales A62 and 62. The universe for our analysis was the 1,618 tracts leased in the 23 test sales employing alternative systems through January 1982. Such a large universe of data, which included a large number of tracts leased under the traditional and alternative systems, made the results of our regression analysis highly reliable and statistically significant at the 95-percent level or better. In conclusion, we believe our regression analysis was an appropriate analytic method to measure how each alternative system affected industry bidding behavior in OCS lease sales.

Assuming that Interior's analysis may be plausible--that is, using sliding scale formulas 4 and 6 provided

the same effect as the traditional system in Sales 53, A62, and 62--our recommendation to the Congress to extend the test period is still valid. Our recommendation was based on several factors:

- Only 2 of the 10 alternative systems have proven to be less effective than the traditional system (see footnote 1). Thus, we believe Interior should continue testing the alternative systems to improve offshore leasing.
- The alternative systems have not always worked as theorized. Thus, we believe additional testing and analysis are needed to help determine the reasons why some impacts run counter to what was anticipated.
- The impacts of the alternative systems compared with the traditional system do not track evenly in all OCS regions or leasing situations. Because Interior has not tested each of the alternative systems in all regions, additional testing is needed before other effects of the systems are known.
- Most tracts leased under the alternative systems have not been explored and placed in production. Thus, additional time is needed to determine the actual effect the systems would have on lease exploration and production.
- Administrative costs to the government of using the alternative systems have not been ascertained to adequately assess potential advantages and disadvantages of each alternative system.

The inconsistencies between Interior's and our analyses for sliding scale formulas 4 and 6 point out the need for Interior to continue testing the alternative bidding system so that additional information would be available to determine their overall merit. Similarly, comparisons among the various studies on the alternative bidding systems do not always provide the same conclusions. Inconsistencies in the results of different studies cited in Interior's response are due, in part, to the different assumptions and criteria used to evaluate the various bidding systems and different time frames and lease sales. For example, Interior's fiscal year 1982 annual report on the alternative systems and the Energy Department's studies are mostly based on theoretical analyses, general trend data, and simulation studies that have not been tested with actual leasing results. Our recommendation to continue testing the alternative systems, so that more information

would be available to judge their overall merits, should help resolve some of these differences.

Our conclusion that the positive effects of using the sliding scale royalty system tend to warrant further review and testing is similar to the study results and analyses of Interior and other organizations interested in OCS leasing arrangements. In Interior's fiscal year 1982 annual report on alternative systems, for example, the Department selected the cash bonus bid, sliding scale system, for further detailed testing. In fact, Interior has continued to use this system in its most recent areawide lease sales. An Interior staff study, dated May 17, 1983, also stated that sliding scale formulas with steeper increasing royalty rates tend to reduce bonuses, which should increase company participation and competition. A 1982 study issued by the State of New York further identifies the cash bonus bid, sliding scale royalty system, as promoting competition in OCS lease sales.⁴ In Energy's fiscal year 1981 annual report on alternative systems, it found that the adjusted average number of bids per tract offered under the sliding scale royalty system exceeded that obtained for the traditional system by 0.7 bids per tract.⁵ The Resources Planning Associates report (see footnote 3) also noted that, while test results did not indicate a clear effect overall on competition, the sliding scale system did moderately increase competition in certain sales.]

GAO overlooks other approaches to study exploration and production effects.

Extending the test period for another 5 years does nothing to aid in the study of exploration and production effects or administrative costs. For such studies, it is additional future data from existing leases issued with alternative bidding systems, not bidding on new leases, that is needed. As the GAO report documents, over 600 leases were issued under alternative systems as of January 1982. Additional leases have been issued since that time. These provide an adequate basis for the study of the effects on exploration and production and of administrative

⁴A Discussion of Outer Continental Shelf Bidding and Leasing Systems, New York State Department of Environmental Conservation, June 15, 1982.

⁵Fourth Annual Report to the Congress on Various Bidding Options Utilized in Fiscal Year 1981 Lease Sales on the Outer Continental Shelf, Department of Energy, Mar. 1982.

costs. A requirement to continue offering leases with alternative systems would do nothing to promote such analysis.

Although it is true that certain data on exploration, development, production, and revenues is not currently available, the GAO apparently fails to recognize that theory and simulation analyses can provide some guidance to policymakers regarding the expected impacts of alternative bidding systems. Many such studies have been conducted by the DOI and others. In general, these studies indicate no clear, positive, competitive benefit attributable to the alternative bidding systems while it appears that these "higher contingency payment systems" tend to result in reductions in production, Government revenues, and social value; delays in production; and higher administrative burdens to both Government and industry. Given the high potential for detrimental impacts upon the exploration and production goals of the OCSLAA relative to uncertain and apparently meager benefits, extended use of certain alternative bidding systems could compound existing inefficiencies or create new ones. A detailed treatment of these concerns is contained in the Department's Report to Congress on Fiscal Year 1982 Outer Continental Shelf Lease Sales and Evaluation of Alternative Bidding Systems.

[GAO COMMENT: Interior's comments that "extending the test period for another 5 years does nothing to aid in the study of exploration and production effects or administrative costs" and that "for such studies, it is additional future data from existing leases issued with alternative bidding systems, not bidding on new leases, that is needed" do not recognize all of the factors we considered in forming our recommendation. For example, we found that:

- The initial effects of the alternative systems generally equalled or bettered the results of the traditional system. Thus, we believe Interior should continue testing the alternative systems so that additional improvements may be achievable in offshore leasing.
- The alternative systems have not always worked as theorized. Thus, we believe additional testing and analysis are needed to help determine the reasons why some impacts run counter to what was anticipated.
- The impacts of the alternative systems compared with those of the traditional system do not track evenly in all OCS regions or leasing situations. Thus, additional testing in each of the OCS regions is needed before other effects of the systems are known.

During our examination of the alternative bidding systems, we reviewed and considered the various

analytical theories and analyses related to the alternative systems and their effect on exploration and production goals of the OCS Lands Act. At this time, there is no actual production evidence to indicate that the alternative systems compound existing production deficiencies or create new ones. Our report (see pp. 92-98) devoted an appendix to describing in detail the theoretical benefits and shortcomings of each of the alternative systems, although no one system emerged as clearly superior to all the others. And, while simulation may provide some meaningful comparisons between systems, the Energy Department recognized in 1978 that computer simulation models could not fully reflect all the complexities of OCS bidding activities.⁶ Thus, the scope and methodology for our review was based primarily on the actual leasing results of each of the alternative systems tested by Interior.]

Report incorrectly states Agency position.

GAO provided the Minerals Management Service (MMS) with an incomplete draft of the subject report just prior to its closeout briefing. Since MMS officials and staff were not given the opportunity to review and comment formally upon the report nor were they given adequate time to evaluate the incomplete draft prior to the closeout briefing, MMS officials indicated clearly to the GAO representatives that MMS could make no judgment regarding the appropriateness of GAO's methods and analysis, the adequacy and accuracy of GAO's results, conclusions and recommendations, or any other facet of the report. Subsequent to the GAO closeout briefing and prior to the report's completion, an MMS official contacted the GAO to inform it that serious contradictions of fact exist between some of the analytical results contained in the GAO report and those presented in other reports and studies which addressed similar issues.

Accordingly, the report's statement that "Agency officials indicated that they had no major problems with our analysis and review results" (page 6) is not true.

[GAO COMMENT: Although Interior's response only addressed the close out briefing, we met and worked with agency officials many times during our review with no indication of any problems or disagreements with the approach for our analysis. Interior officials in the Office of Policy Analysis and Minerals Management Service, responsible for analyzing the various bidding systems, reviewed and agreed with the assumptions,

⁶Regulatory Analysis: Outer Continental Shelf Bidding Systems Regulations, Department of Energy, Dec. 1, 1978.

scope, and methodology for our analysis of the alternative bidding systems. They also reviewed our initial review results and told us that our results were similar to their analyses.

Our report accurately states the position given to us by Interior program officials at the close out briefing. Interior officials attending the briefing included the Director, Minerals Management Service; representatives of the Resource Evaluation Section, which is responsible for evaluating and using the alternative systems; officials from the Minerals Management Service's Office of Program Review; and other senior officials. At the subcommittee's request, we did not provide our written conclusions and recommendations to Interior for formal comment. However, we did provide a draft of our review results and findings to Interior on April 5, 1983. Agency officials and staff had 8 days to review the appropriateness of our methodology and review results until the close out briefing on April 13, 1983. At the briefing, we also summarized for Interior officials the results of our analyses and discussed our tentative recommendations for the Congress and the Secretary of the Interior. Interior officials had no major disagreement with our analysis and review results. After the briefing, officials told us that our analysis appeared to go beyond any study Interior had done and our draft report was very professional in its context. They also requested more time to review the draft report, which we agreed to, and stated that they would contact us at a future date if problems arose. Interior officials did not contact us with further comments until after our report was issued on May 27, 1983. Two months later, on July 21, the Assistant Director for Program Review for Interior's Minerals Management Service requested that we provide Interior the data base we used to produce our review results. He said that without this information, it would be difficult for Interior to meaningfully review and comment on our report. We have provided the data base to Interior.

In summary, our report accurately reflects the positions given to us by Interior officials during our review and at the close out briefing. At no time prior to issuance of our report did agency officials indicate disagreement with the appropriateness of our methodology and analysis; the adequacy and accuracy of our review results, conclusions, and recommendations; or any other facet of our report. Accordingly, our statement that "agency official indicated that they had no problems with our analysis and review results" is accurate.]

Report strays markedly from the Congressional request cited.

The Congressional request cited (Appendix I, pages 60-61) was specific and twofold:

- °to "investigate the Department of the Interior's rationale and practices in setting royalty rates for offshore oil and gas production" and
- °to provide "an analysis of whether the Department of Interior has indeed significantly reduced the use of front end cash bonus bidding."

The request specified a completion date of July 1982. The first topic regarding royalty rates was examined in a GAO report submitted on December 20, 1982.

Apparently on its own initiative, GAO significantly expanded its second Congressional charge:

"We also reviewed the Interior Department's use of the alternative systems to determine the impacts of the new systems on (1) company participation in offshore lease sales, (2) competition for leases, (3) revenues to the Government, (4) prompt lease exploration and production, and (5) additional administrative costs to the Government." (page 2)

This ostensibly self-initiated investigation is the major concern addressed in GAO's report, dated May 27, 1983, to which we are currently responding. Since the GAO investigation is seemingly internally originated and linked to a dated Congressional request (March 8, 1982) which does not include direction to forego formal Agency comment, GAO's decision to deviate from the normal policy and practice of obtaining formal Agency comments is puzzling. This is especially true since a timely and formal review by MMS officials or even a peer review by other knowledgeable parties could have led to substantial improvements in GAO's product.

[GAO COMMENT: In regard to Interior's opinion that this was an "ostensibly self-initiated investigation," in fact, our review was initiated in response to a request from the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations. Our report (see p. 61) notes that another GAO report, Interior Should Continue Use of Higher Royalty Rates for Offshore Oil and Gas Leases (GAO/RCED-83-30, Dec. 20, 1982), was also prepared in response to the same request. While the original request letter did specify a completion date of July 1982, the scopes of both reviews were expanded at the Subcommittee's request and revised reporting dates were approved commensurate with the expansion of work.

Request letters are not generally rewritten to reflect expanded scopes of review or revised reporting dates. The subcommittee also requested that we not obtain formal agency comments on a draft of our report. However, as we discussed previously on page 20, we did brief Interior program officials on its contents-- including our review scope and methodology, data sources, findings, and tentative recommendations for the Congress and the Secretary of the Interior. Interior officials indicated that they had no disagreement with our analysis and review results.]

Specific comments regarding the report's recommendations to the Secretary of the Interior and to the Congress follow.

Recommendation to the Secretary of the Interior:

We recommend that the Secretary of the Interior comply with the existing reporting requirements of section 15(2) of the OCS Lands Act, as amended, to provide the Congress adequate and timely information on the impacts of using the alternative bidding systems. Interior's report should also include a determination of the administrative costs to implement the different alternative bidding systems.

Response:

On April 29, 1983, the Department of the Interior transmitted to Congress a report on fiscal year 1982 OCS lease sales and evaluation of alternative bidding systems. This report includes an extensive discussion regarding the administrative costs of implementation of the different alternative bidding systems. Although separate reports prepared by the Department of the Interior were not transmitted to the Congress in prior years, the Department provided extensive consultation and data to the Department of Energy during the preparation of its Annual Report to Congress on Alternative Bidding Systems. Additionally, the Department provided bidding system information in the annual report required under section 15(1) of the OCS Lands Act, as amended.

The Department of the Interior will continue to comply with the reporting requirements of section 15(2) of the OCS Lands Act, as amended.

[GAO COMMENT: In its response, the Interior Department stated that it would continue to comply with the reporting requirements of the act and noted that the required report for fiscal year 1982 was transmitted to the Congress on April 29, 1983. Although we requested a copy in our April 13 close out conference, we were not given the report until after our report was issued on May 27. Also, Interior's report did not include an

extensive discussion regarding the administrative costs of implementing the different alternative bidding systems, as indicated in its response.

Our report (see p. 14) pointed out that both the Departments of Energy and the Interior were required by the 1978 OCS Lands Act Amendments to annually report the results of using the alternative bidding systems to the Congress. While most of the reporting requirements were similar, there were some differences. However, at the time of our review only the Department of Energy had complied with the requirement to report to the Congress. Interior, although in the best position to determine the effectiveness of the alternative systems, had never issued a report to the Congress discussing the results of using the systems. We made our recommendation to the Secretary of the Interior because Interior had never issued the report, even though one was required each year since 1978. In our report (see p. 15), we acknowledged that Interior had drafted a report which was due for issuance.

Interior's comment that "the Department provided bidding system information in the annual report required under section 15(1) of the OCS Lands Act, as amended" is misleading. We have reviewed each annual report issued under section 15(1) of the act and none of the reports provided detailed bidding system information or analysis. Instead, these reports discuss OCS leasing management, leasing and operational activities, safety and enforcement activities, receipts and expenditures, and the 5-year offshore leasing program.]

Recommendation to the Congress:

We recommend that Congress amend section 8(a)(5)(B) of the OCS Lands Act, as amended, to provide for continued use of alternatives to the cash bonus bid fixed royalty bidding system in leasing offshore lands for another 5-year period. This can be accomplished by changing section 8(a)(5)(B) to read:

"The bidding systems authorized by paragraph (1) of this subsection, other than the system authorized by subparagraph (A), shall be applied to not less than 20 per centum and not more than 60 per centum of the total area offered for leasing each year during the ten year period beginning on September 18, 1978."

Response:

The recommendation is unnecessary. The Department continues to consider alternative systems and to apply these systems to its lease offerings. Specifically, sliding scale royalty and fixed

net profit share bidding systems are scheduled for use in future lease offerings as alternatives to the traditional fixed royalty system. The Department's comments on GAO's report indicate a number of serious methodological deficiencies which raise questions about the validity of GAO's findings. To move toward further mandatory testing on the basis of the flawed GAO analysis when the Department continues to consider and selectively test alternative bidding systems appears unnecessary. Five years has proved to be more than adequate as a mandatory testing period for alternative bidding systems' use of the OCS. All viable systems have either been actually applied or theoretically analyzed and found to present undue risks compared to estimated advantages. The DOI has gathered exceedingly large samples using our simulation models. If future effects demonstrate that specific alternative systems better satisfy the goals of OCSLA than the conventional cash bonus bid, fixed royalty system, there is sufficient authority in the statute to expand the use of those systems. We will continue to provide to Congress the basis of our selection of a particular system prior to each lease offering in conformance with section 8(a) of OCSLA. Given the complexity of this issue it would appear unwise to remove the discretion to use the best available system.

[GAO COMMENT: Our recommendation is necessary, in our opinion, to assure that Interior will continue to thoroughly test the alternative bidding systems so that adequate information is available to assess all the effects of using these systems. Although the Interior Department stated in its response that further mandatory testing was unnecessary because it will continue to consider and apply alternative systems in future lease offerings, this is not the case. In its fiscal year 1982 report on the alternative systems, Interior stated that only the cash bonus bid, sliding scale royalty system, is scheduled for use at this time and that future use of the cash bonus bid, fixed net profit share system, will be limited to lease offerings adjacent to existing leases under this system. No other alternative system is scheduled for further testing.

Also in this regard, our report (see pp. 7-12) noted that only three of the six basic alternative systems authorized by the 1978 amendments have been tested-- (1) cash bonus bid, sliding scale royalty system, (2) cash bonus bid, fixed net profit share system, and (3) royalty rate bid, fixed cash bonus system. Interior's tests of the alternative systems since 1978 have been limited to those which feature the cash bonus as the bid variable--basically the same approach as the traditional system. Also, although authorized by the OCS Lands Act to use any bidding systems it determines to be useful, Interior has tested only those specifically authorized by the act. As a result, it is

difficult to measure the extent to which other bidding systems can enhance the offshore program. Given many unknown factors, such as future oil and gas prices, production needs, general economic conditions, and current changes in the OCS program, we believe further testing of new variations and bidding systems that do not use a cash bonus as the bid variable is warranted. These systems may prove to be advantageous to the government under several varying economic conditions or leasing situations.

We concluded that 5 years has not proven to be an adequate testing period to generate enough information to assess all the effects of the alternative bidding systems. For example, the impacts of the alternative systems compared with those of the traditional system do not track evenly in all OCS regions or leasing situations. Because Interior has not tested each of the alternative systems in all leasing regions, actual leasing results to date provide only a part of the total impacts of using these systems. Recognizing these results and that the initial effects of the alternative systems have equalled or bettered the traditional system, we believe Interior should continue testing the alternative systems until adequate information is available to assess other effects of these systems.

In its response, Interior stated that "all viable systems have either been actually applied or theoretically analyzed and found to present undue risk compared to estimated advantages." Of those systems applied, however, we found that only 2 of the 10 alternative systems have proven to be less effective than the traditional system. Also, theoretically, no one bidding system emerged as clearly superior to all the others. In fact, we found that the alternative systems have not always worked as theorized (see pp. 34-39 of our report). Accordingly, we believe additional testing and analysis are needed to help determine the reasons why these impacts run counter to what was anticipated.

In its response, Interior also stated that it would "continue to provide to Congress the basis of our selection of a particular system prior to each lease offering in conformance with section 8(a) of OCSLA." While we believe that this data is useful to the Congress, it provides only a portion of the picture of using the alternative bidding systems. It does not discuss the actual effects of the alternative systems on the offshore leasing program and their compliance with the objectives of the OCS Lands Act, as amended.

In summary, our report (see p. 57) recognized that the Secretary of the Interior should continue to have the discretion to tailor the bidding system to the tract being offered for lease, recognizing the variance of each system's performance. Bidding systems should also be tailored to meet the different, sometimes conflicting, objectives of the offshore leasing program and their relative importance to the federal government. For example, bidding systems that tend to generate increased competition may not necessarily encourage expeditious exploration, both of which are objectives of the offshore program. A mandate for the Secretary to continue testing alternative bidding systems--within the framework of such a flexible approach--in our opinion, offers the best assurance that the objectives of the OCS Lands Act will be achieved.]

CHARACTERIZATION OF BIDDING

<u>Sale</u>	<u>Sale date</u>	<u>Region</u>	<u>Average of the no. of bids per tract (for tracts bid on)</u>	<u>No. of participants</u>	<u>Total no. of bids</u>
1	10/13/54	Central GOM	3.73	27	327
2	11/09/54	Western GOM	4.74	16	90
3	07/12/55	Cen. & West.GOM	3.17	32	384
5	05/26/59	Eastern GOM	1.00	2	23
7	02/24/60	Cen. & West.GOM	2.57	32	444
9	03/13/62	Central GOM	2.54	37	538
10	03/16/62	Cen. & West.GOM	3.17	40	666
16	06/13/67	Central GOM	4.31	47	742
18	05/21/68	Western GOM	3.94	51	556
22	12/15/70	Central GOM	8.21	55	1,043
24	09/12/72	Central GOM	4.38	56	324
25	12/19/72	Central GOM	5.80	72	690
26	06/19/73	Cen. & West.GOM	5.30	76	551
32	12/20/73	Eastern GOM	4.19	51	373
33	03/28/74	Central GOM	3.53	82	402
34	05/29/74	Western GOM	2.86	78	352
36	10/16/74	Central GOM	2.47	80	387
37	02/04/75	Western GOM	1.97	49	281
38	05/28/75	Cen. & West.GOM	1.87	67	191
38A	07/29/75	Cen. & West.GOM	2.24	65	179
35	12/11/75	So. California	2.37	41	166
41	02/18/76	Gulf of Mexico	1.98	53	81
39	04/13/76	Gulf of Alaska	3.01	39	244
40	08/17/76	Mid-Atlantic	4.06	51	410
47	06/23/77	Cen. & West.GOM	2.79	80	424
CI	10/27/77	Lower Cook Inlet	2.64	31	240
43	03/28/78	South Atlantic	1.74	11	99
65	10/31/78	Eastern GOM	1.77	15	62
51	12/19/78	Cen. & West.GOM	3.27	80	288
49	02/28/79	Mid-Atlantic	1.68	16	74
48	06/29/79	California	2.04	27	112
58	07/31/79	Cen. & West.GOM	3.59	100	316
58A	11/27/79	Cen. & West.GOM	3.35	82	322
BF	12/11/79	Beaufort Sea	2.48	20	62
42	12/18/79	North Atlantic	2.59	31	189
A62	09/30/80	Central GOM	3.44	88	506
55	10/21/80	Gulf of Alaska	1.73	9	64
62	11/18/80	Western GOM	3.62	73	268
53	05/28/81	California	3.72	43	301
A66	07/21/81	Cen. & West.GOM	2.59	86	419
56	08/04/81	South Atlantic	2.22	15	120
60	09/29/81	Lower Cook Inlet	1.15	2	15
66	10/20/81	Cen. & East.GOM	2.18	65	233
59	12/08/81	Mid-Atlantic	2.40	20	240

Source: New Orleans OCS Regional Office, Bureau of Land Management