

consumer and producer surplus relative to a status quo or baseline amount that would occur in the absence of the incentive. Consumer surplus is the difference between the value consumers place on the additional production and its market value. Producer surplus is the difference between the market price and the cost of additional production (including the cost of drilling unsuccessful wells). Transfer payments, on the other hand, consist primarily of changes resulting from the rule in the amount of Federal royalty payments and domestic expenditures to purchase status quo quantities of gas. This summary reviews the performance of the superior options based on several criteria—added production, forgone royalty, and net social benefits from production that would not have occurred without an incentive for deep gas drilling.

We estimate that option A, the proposed royalty suspension level, would generate a cumulative added production of 2.36 TCF of gas and 0.51 TCFE of condensate over the next 15 years. In contrast, option B would generate added production of 2.15 TCF of gas and 0.46 TCFE of condensate over the same time frame, while option C will generate 1.94 TCF of gas and 0.42 TCFE. Added production consists of production from reservoirs unlikely to be drilled under normal conditions and from a portion of reservoirs only likely to be drilled in the future after information, technology, and costs improve, *i.e.*, accelerated production.

Using assumptions about prices, discount rates, and well flow rates, we estimated the net social benefits to society from increased deep gas production. As discussed above, this primary measure of social welfare effects eliminates the sizeable transfers from producers to consumers associated with reduced prices, and from government to producers in the form of reduced royalty payments. The incremental supply added to domestic stocks as a result of the incentive generates a net gain to society. Under option A, the proposal, we estimate a net social gain of \$153 million in present value versus \$139 million under option B and \$121 million under option C.

Another perspective on the effects of the rule is provided by comparing increased production to forgone royalty-bearing production. We estimate that royalty would be forgone under option A, the proposal, on 2.1 TCF of gas production that would have occurred anyway. That implies a ratio of extra production to foregone royalty bearing production of 1.36 [(2.36 TCF + 0.51

TCFE)/2.1 TCF]. For option B this ratio is 1.50 [(2.15 TCF + 0.46 TCFE)/1.74 TCF], and for option C it is 1.49 [(1.94 TCF + 0.42 TCFE)/1.59 TCF]. Hence, any of the three deep gas incentive options is preferable to no such incentive.

Some of the forgone royalty would be offset by royalty collections on the condensate and on added gas production after the royalty suspensions have been used. Taking those into account and distributing the production over the next 15 years, we estimate a net reduction in present value of royalty receipts of \$267 million under the proposal versus \$124 million for the second alternative and \$114 million for the third alternative. These results suggest that options B and C provide slightly less production effects and somewhat lower net social benefits at more than proportionately lower forgone royalty revenues.

Regulatory Flexibility (RF) Act

Several factors make promulgation of this rule at this time important. U.S. demand for natural gas is expected to rise strongly over the next decade while domestic supplies are dwindling. Imported gas provides only a small share of domestic supplies because of the inherent difficulty and danger of transporting gas. A large and promising source of domestic gas, deep reservoirs on existing OCS leases in the shallow water part of the GOM, has been little explored. This is because the costs and risks of drilling deep reservoirs are high relative to drilling shallow reservoirs on these same leases. Further, these higher costs would rise if much of the extensive infrastructure (platforms and pipelines) developed to support the production of shallow reservoirs gets removed as the shallow reservoirs deplete. That means there is a significant chance these deep resources would never be produced if not encouraged now.

Objectives of, and Legal Basis for, the Proposed Rule

To accelerate and increase drilling into deep reservoirs, this rule proposes to:

- (1) Suspend royalty payments for specified volumes of deep production that begins in the 5 years after the rule becomes effective; and
- (2) Allow producers to apply designated amounts of royalty suspension supplements to other lease production for deep drilling that fails to encounter producible reserves.

Together, these measures will reduce the royalty costs associated with deep drilling and production below the

royalty costs of other production on the same lease.

Title 30 CFR part 203 regulates the reduction of oil and gas royalty under 42 U.S.C. 1337(a)(3). Under section 1337 (a)(3)(B), we may reduce, modify, or eliminate royalties on certain producing or non-producing leases or categories of leases to promote development or increased production or to encourage production of marginal resources, in the GOM west of 87 degrees, 30 minutes west longitude.

Estimate of the Number of Small Entities to Which the Proposed Rule Will Apply

Companies that extract oil, gas, or natural gas liquids, or are otherwise in oil and gas exploration and development activities and operate leases on the OCS, will be most affected by this rule. The Small Business Administration (SBA) defines a small business as having:

- Annual revenues of \$6 million or less for exploration service and field service companies.
- Fewer than 500 employees for drilling companies and for companies that extract oil, gas, or natural gas liquids.

Under the North American Industry Classification System Code 211111, Crude Petroleum and Natural Gas Extraction, MMS estimates that a total of 1,380 firms drill oil and gas wells onshore and offshore. Of these, approximately 130 companies are active offshore in the GOM. Merger and acquisition activity is constantly adjusting the exact number of operators. Publicly available data (from Compustat, Standard and Poor's, McGraw-Hill, and from Dunn & Bradstreet via Hoovers' sites on the internet) indicate that 39 (30 percent) of these companies active in offshore activities qualify as large firms according to SBA criteria, leaving up to 91 (70 percent) companies that qualify as small firms with fewer than 500 employees. Further breakdown of the small entity operators indicate that 28 percent have between 100 and 500 employees, 53 percent have between 1 and 100 employees, and the rest have no employees as they are fully staffed by contractors. As explained in the next section, compliance costs are minimal for small as well as large entities.

Reporting, Recordkeeping and Other Compliance Requirements

The proposed rule requires reporting within the meaning of the Paperwork Reduction Act in four situations. These situations are: