

# How Likely is the Consensus Projection of Oil Production Doubling in the Persian Gulf?

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## Abstract

We examine a consensus in most recent long-term projections of the world oil market that OPEC oil capacity and production will increase rapidly over the next two decades to unprecedented levels, more than doubling in the Persian Gulf by 2020. Such projections are not based on behavioral analysis of Gulf countries' decisions; they are merely the calculated residual demand for OPEC oil, the difference between projected world oil demand and non-OPEC supply. We focus especially on the detailed projections of the *International Energy Outlook 2001* (IEO-2001) by the Energy Information Administration within the U.S. Department of Energy (DOE). Their projections exhibit only minimal price-responsiveness, which leads to conclusion that the underlying model is internally inconsistent. If it accurately represents the price-responsiveness of world oil demand and non-OPEC supply, then both the Reference Case and the High Price Case project future oil prices that are far too low – because these cases rely on supply behavior by Gulf producers that is not in their own self-interest. The IEO-2001 projections of world oil prices *could* be reasonable, but only if world oil demand and/or non-OPEC supply are much more price-responsive than are represented in their numerical projections. Then, using an updated version of the model from Gately (1995), we demonstrate that the effect of greater price-responsiveness for world oil demand and non-OPEC supply is to make faster output growth – not higher prices – the reliable path to higher OPEC revenue. We conclude with comments about the plausibility of consensus projections. Oil price in the range \$20 to \$25 (1999 \$/barrel) is plausible, but it requires substantial growth in non-OPEC supply and much greater price-responsiveness than is assumed in IEO-2001. Projections that Persian Gulf capacity and output will double by 2020, however, seem very implausible. It requires not only that Gulf producers experience high price-responsiveness to any slowdown in their output growth, but also that aggressive output growth must make them significantly better off than more modest expansion efforts. However, it was shown in Gately (1995) that discounted export revenue for the Gulf countries is relatively insensitive over a fairly wide range of output-growth strategies: modest output growth will do just about as well as aggressive growth.

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