Killing the goose that lays the golden egg

Hydrocarbon rich nations increasingly see E&P companies as the geese that lay the golden eggs for their treasuries. Companies already face ever rising E&P expenditure and any shift to higher taxation of hydrocarbon assets will further slow new field development. Ruud Weijermars* and Crispian McCredie, Alboran Energy Strategy Consultants, predict that a massive growth of coal usage is impending due to crude oil pricing itself out of energy markets. Unfortunately, a quick shift to sustainable energy sources remains an improbable alternative for Western governments without subsidies.

The fiscal burden
Two major factors contribute to higher oil and gas prices – tax take and capital expenditure (capex). Oil companies hungry for reserves replacement have moved E&P into more remote areas of the globe in search of the elusive ‘elephant’ field (>500mn barrels). With the search comes the need to increase internal cost control and assess externalities, such as the uncertainty of the long-term fiscal regime in these new locations. Taxation of hydrocarbon production varies considerably from country to country. The fiscal burden for oil producers can be as low as 45% for offshore production in the US, yet twice as high in Algeria. Indeed, there are as many variants on licence costs, royalties, production sharing agreements and corporation tax as there are hydro-
carbon-rich countries. With the fiscal burden being so different across the globe, companies must work hard to contain a rise in overall tax burden by skillful portfolio management. For example, Shell produces from 37 different countries, which exposes it to government tax takes ranging from 32% in Ireland to 97% in the UAE. Four There is a distinct trend where the highest tax rates are applied in non-OECD countries. Most non-OECD nations opt for so-called production sharing systems, where the state demands an unpaid equity stake in the field asset, and production revenues are further levied back to the state via corporation tax.

Many emerging oil-rich nations have been successful in their struggle for progressively bigger profit shares from their geological endowments. Where there exists weak institutions, unstable governments or state-controlled judiciary systems, earlier fiscal agreements may be easily replaced by new terms less favourable to the operators and more favourable to the resource owner. Energy companies’ assessments of fiscal risk in terms of changes in taxation during a project’s lifetime cannot be helped by the fact that of the 16 countries where receipts from hydrocarbon revenues as a share of total government revenues are over 60%; eight nations, or 50%, were ranked in the bottom quartile of Transparency International’s survey of perceived levels of public sector corruption. At the other end of the spectrum are OECD countries, which generally apply a concessionaire system comprised of royalty and income tax payments, sometimes accompanied by an upfront auction bonus payment. The deeper water part of the Gulf of Mexico is now one of the most challenging drilling environments, but companies are attracted by a stable fiscal regime on which to calculate their return on investment. The bonuses for concessions tend to become costlier over the years. For example, the US Interior Department held a record-setting 2012 sale of oil and gas drilling rights in the central Gulf of Mexico. Companies submitted $1.7bn to win bids for 454 offshore tracts, with Statoil establishing a new high-water mark with its $157mn offering for a single lease. However, these signing bonuses may be subtracted from corporate income tax and in essence are an advance tax payment rather than an extra cost.

Rising costs

Although global taxation’s take on oil and gas production has risen in step with oil prices, the present fiscal burden is not what has caused the escalation in field development costs. It is the rising complexity of oil fields and demands on technology, which has pushed up capex over the past decade, as companies seek to maintain their reserve replacement ratios. The rising cost of capex for reserves replacement by major western oil companies is shown in Figure 1. Total production has declined by 6% over the period, so the rise in cost translates directly to an increase of cost per barrel by over 350% for the past decade. A steep increase in reserve replacement cost is also seen for Russian oil companies (Figure 2), albeit less steep when factoring in production growth, with a doubling of capex spent per new barrel added. One can conclude that the rising capex cost is germane to 3rd Millennium oil and gas projects. It will have to be tempered by overall tighter project cost control to survive in a $100/b-plus price deck.

The rising capex costs imply that sustained growth of global oil and gas production is only possible if prices remain high enough to justify investment in the costly new fields. Companies must increasingly invest in R&D to open up new frontiers. More retained earnings are needed to pay for new field development projects. In spite of the rising capex, production output of all the oil companies portrayed has not grown significantly. This signals a global struggle to produce affordable oil and gas given higher capex and rising government tax takes in many hydrocarbon areas. The E&P companies are left with little choice. Their share prices are underperforming relative to principal market indices in all the major world bourses.

As E&P companies struggle to find affordable new projects, the global economy will have to cope with sustained $100/b-plus prices. The danger here, in a low inflationary environment in the OECD countries, is to depress growth and the much needed economic recovery. As a consequence, it is in all governments’ interests to ensure that the tax takes from oil and gas projects do not continue to climb. Even-handed taxation strategies are needed to ensure the global energy system remains intact. High taxation on oil and gas projects in some nations will delay investment in new fields, which in turn will contribute to the escalation of oil prices. The average total tax take stands at 70% from net income of oil sales. Daily global oil production now averages 90mn barrels (2013 demand). Assuming an
operating surplus of about $40/b, governments jointly net $2.5bn from daily upstream sales of crude oil.

Looking ahead
Europe is no longer a major oil and gas producer, as it now imports 50% of its gas and 70% of its oil. Importing 10% of global oil and gas production (10mn b/d and 300bn cmy respectively), Europe transfers annually over $500bn to oil and gas exporters. If energy supply remains tight due to political upheavals such as insurgency or sanctions, then prices will rise further. For example, Russia accounts for 30% of European gas importation. Simultaneously, governments may be tempted to extract greater fiscal rewards when their economies start to falter. While shale gas and oil may save North America, European shale production lies well into the next decade. Politically, for the next 10 years, gas is still seen as the replacement fuel of choice for base-load power generation, with wind and solar generation meeting off-peak demand. Failure to adhere to a policy of fiscal restraint in oil-producing nations poses a significant threat to Europe’s fragile economy. Higher oil and gas prices will shrink consumer surplus and adversely impact the economy.

Should the EU decide to reduce its dependence on Russian gas, coal is once again likely to be the immediate beneficiary. There is little doubt that the accelerating shift to coal consumption is an unintended consequence of oil-rich nations, especially in the non-OECD world, increasing the size of the tax take on oil field development. To avoid killing the goose that lays the golden egg and suffocating the OECD world with CO₂ from the over use of coal, two events need to take place. Governments must curb their enthusiasm for oil taxation. Oil companies must look to better management of their field development costs to ensure that the goose does indeed lay the golden egg from which all parties can benefit. Neither is likely to happen any time soon, which is why coal, in spite of all the talk about the need to avert a climate crisis, is on a steady rise.

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