CAPEX TRACKER:
A LEADING INDICATOR OF CARBON SUPPLY & CORPORATE ACTION

Fulton, Capalino, Drew

Throughout 2014 our Carbon Supply Cost Curve reports examined the financial risks to capital expenditures associated with high-cost fossil fuel projects. In this work we argued that (1) continuing cost reductions for low-carbon technologies and more stringent environmental policies may reduce future demand for fossil fuels below current projections; and (2) constrained fossil fuel demand can undermine the economics of many higher-cost fossil fuel projects, imperiling capital committed to such projects. We concluded that responsible investors ought to engage more robustly with fossil fuel producers to understand the resilience of their business models to a lower-carbon future.

To aid investors seeking to monitor what is being done with their money, we are now tracking the capital expenditures (capex) of fossil fuel companies. Commitment of capex is the necessary precursor to production of fossil fuels (and, eventually, combustion of carbon into the atmosphere)[1]; as a result, fossil fuel capex is a key leading indicator of future carbon emissions.[2] In addition to benefitting investors seeking to analyze individual companies or projects, tracking fossil fuel capex in the *aggregate* also illuminates whether efforts to reduce future carbon emissions are having an impact – meaning that such announcements are also relevant for policymakers, NGOs, and concerned citizens. With respect to future emissions from the global energy system, today's capex commitments are truly where the rubber meets the road!

Capex Tracker 1.0: monitoring company announcements

The two major sources of data on capex trends are company announcements and industry databases. Today we begin by surveying recent announcements from major oil and gas companies (we will cover coal companies separately). Amid a plunge in oil prices from over $100 per barrel in June 2014 to below $50-60 per barrel at the time of writing, the last few months have seen a flurry of announcements relating to reductions in planned oil and gas capex. For example, Figure 1 below shows expected 2015 combined capex for thirteen major oil and gas producers to be $38 billion (15%) less than then 2014 level.

It is important to note, however, that such announcements are usually aggregated to the level of a company (including both upstream and downstream segments) and do not specify changes to individual projects. Going forward we will monitor fossil company announcements related to fossil fuel capex via a new section on our

[1] Our concern is chiefly with *upstream* capex. For integrated producers with both upstream and downstream operations, total capex figures will contain capex related to both of these segments (as well as any others, such as chemicals). Upstream capex, however, tends to dominate overall capex for these companies, generally accounting for 80% or more of total capex.

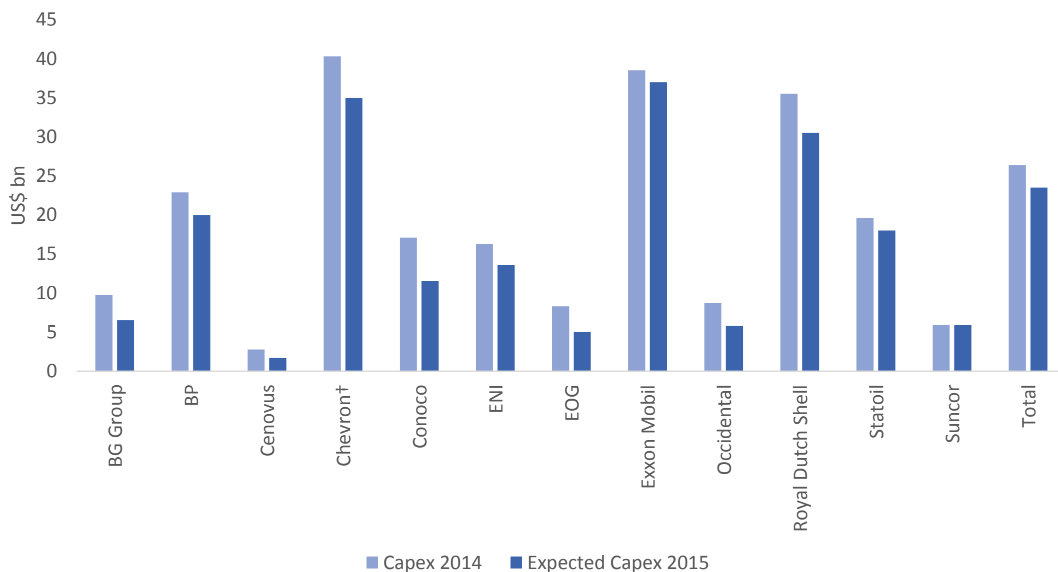
[2] Specifically, the roughly 75% of global carbon emissions that result from the combustion of fossil fuels.

website.

Capex Tracker 2.0: relating changes in capex to the level of future production
Having recorded changes in planned fossil fuel capex, the next phase is to relate such commitments to the level of expected fossil fuel production. To do this, we will draw on industry databases that contain estimates of the project-level production potential for individual companies. We will be tackling this (at times rather complex) analysis over the coming year.

Delving further into company announcements – focus on the oil and gas sector
As a sample illustration of Capex Tracker 1.0, we detail recent capex announcements from a selection of major oil and gas companies.[3] These figures display recent changes in capex along two dimensions. Figure 1 shows a company's *expected* 2015 capex versus its *actual* 2014 capex. *Looking only at the thirteen companies for which figures are readily available, combined capex in 2015 is set to be over $38 Billion (i.e. 15%) lower than in 2014*. Note that the combined capex of just three companies - ConocoPhillips, Chevron and Shell – is in 2015 expected to decline by $15.9 billion (i.e. 18%) below the 2014 level.

Figure 1 Total capital expenditures for leading oil and gas companies, 2014-2015E (billion USD)



†Includes Chevron affiliates

Note: Capex totals include all segments (i.e. not just upstream).

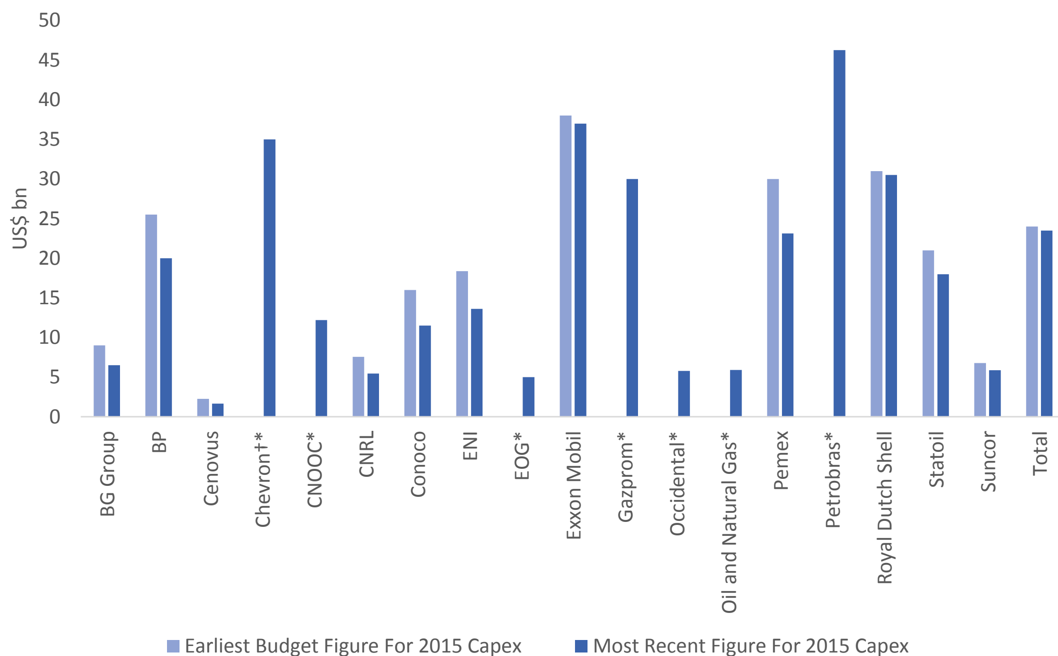
---

[3] Note that oil companies differ in the specific capital-related metrics they publish. Some companies, such as BG Group, Shell, and Conoco Philips disclose capital *investment*, which, generally includes capital expenditures as well as exploration expense; other companies, such as Anadarko, Occidental, and Statoil disclose just capital *expenditures* (which may exclude exploration expense). Other inconsistencies in disclosed capital numbers include the addition of acquisition and lease costs, which we have deducted where possible. Note that figures for Shell required adjustment to account for $1.8bn of leases included in their capital investment figure.

Source: Carbon Tracker analysis of company reports and announcements

Similar to Figure 1, Figure 2 also contains the latest data from company budgets on expected capex for 2015. Rather than comparing these data points against actual capex from 2014, however, Figure 2 compares these data points against the earliest budgetary estimate for 2015 capex since the first quarter of 2013[4]. Tracking the evolution of capex projections over time sheds light on how companies are adapting their business plans to changing economic conditions. For example, Figure 2 shows that, since the first quarter of 2013, 2015 capex budgets for nineteen major oil and gas producers have been revised downward by $32.7 billion (i.e. 10%). Spurred by the need to conserve cash amid a sharp decline in oil prices, the last quarter of 2014 alone saw $12.4 billion stripped away from the 2015 capex budgets of these companies.

Figure 2 Change in budgeted 2015 capital expenditures for leading oil and gas producers , earliest published estimate (dating back to 2013Q1) – 2015Q1 (billion USD)



†Includes Chevron affiliates
*Only one 2015 budget estimate provided
Note: Capex totals include all segments (i.e. not just upstream). Note that the date of the "earliest" published estimate varies by company.
Source: Carbon Tracker analysis of company reports and announcements

Tracking the evolution of capex along these two dimensions – year-on-year change from 2014 to 2015, and the change in expectations for 2015 capex – provides valuable glimpses into the thinking of fossil fuel companies. Capex Tracker 1.0 will continue to monitor such company announcements in order to establish a richer understanding of the existing landscape for fossil fuel capex.

[4] Note that the date of the "earliest" budget estimate for 2015 capex varies by company.

Taking account of Wall Street estimates
As part of our coverage of fossil fuel capex, we will also be following what sell-side investment research analysts are writing in their industry and company reports. For example, a recently-published Morgan Stanley[5] note estimates that – assuming oil prices remain around $50 per barrel – an average 11% year-on-year decline for capex of oil and gas companies in 2015. Within the upstream segment of these companies, Morgan Stanley projects the year-on-year decline in capex to be much more substantial – on the range of 20-30%. Echoing the data in the figures above, Morgan Stanley cites particularly notable examples of year-on-year capex cuts to include those from ConocoPhillips (which is reducing development capex by 28%, chiefly related to US unconventional projects), Chevron (which is reducing upstream capex by 12%, chiefly related to deepwater projects), and Occidental Petroleum (which is reducing domestic and international upstream capex by 30%). Morgan Stanley also notes that companies are slashing exploration capex budgets by an average of 15% year-on-year (with exploration capex budgets at some companies, such as Total, falling by 30%).

Going forward we will continue to follow such analyses from the investment research community as a complement to our own coverage of company announcements.

[5] Morgan Stanley Research, "How Much Earnings Risk from O&G CapEx Cuts," February 9 2018.