

# Capital Allocation and Global Portfolio Review: Discussion Slides for the Alaska House

Discussion Slides for the Alaska House Resources Committee

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# Oil & Gas Company Decision Making: Capital Allocation, Budget and Long-Range Planning

## Points to Address: Discussion of Company Behaviors and Decision Making

- Key considerations for companies in making investment decisions, including decisions on whether to develop particular resources in the near term or postpone development
- Key metrics including ROCE, NPV, IRR, consideration of asset metrics versus portfolio metrics, and differences between integrated vs non-integrated companies



# **Annual Planning Cycle**

Oil and gas companies follow a standardized process linking the annual Budget cycle to the Long Range Plan and corporate Strategy



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# Strategy, Planning and Positioning



## Annual Planning Cycle





# **Planning Cycle and Capital Allocation**



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# Annual Planning Cycle





# Attracting Capital: The Project Approval Process

- Materiality, total capex exposure, full-cycle economics/metrics, are all considerations in determining whether an IOC will position, or continue to invest, in a particular asset, basin, country.
- Each project is disaggregated into "discrete investment decisions", in the form of Project Approval Requests (PARs), creating a natural *stage-gate* for capital approval and allocation.
  - A PAR can extend beyond a single fiscal year budget, depending on scope of the work program. Represents *non-discretionary* capex at the start of the budget year
  - Each PAR has one or a series of associated Approval for Expenditure (AFE) documents for a specific activity or capex element
  - Sum of AFEs for a calendar year = *capital Budget*
- Each stage-gate creates an opportunity for the Company to <u>continue, amend, suspend, or</u> <u>exit/divest</u>

## Asset Modelling and Decision Process: Materiality and Total Capex Exposure



Request for capital budget allocation; decision to continue, amend, suspend, or divest

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## **Business Control Architecture:** PAR => AFE => Budget



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# **Upstream Financial Metrics: Measuring Performance**

- Growth .. Ability to manage the "top line."
  - CAGR in Production and Reserves relative to target
  - Quality of growth .. Where, how, consistent or not
  - Plowback Rate... To show relative growth intentions between different regions
- **Profitability** .. Ability to manage the "bottom line."
  - Upstream Cash flows
  - Upstream Net Income
  - Upstream Production Costs
- Efficiency .. Ability to manage capital.
  - Upstream ROCE
  - Finding costs, F&D costs, Replacement Costs
- Cash Flow .. Ability to manage investment/re-investment in the portfolio.
  - Financial Strategy (debt targets, debt/capital ratio, dividend requirements)
  - Self-financing nature of portfolio (free cash flow versus capex: regional and global)
- **Risk** .. Ability to manage a diversified portfolio.
  - Financial Risk: Debt-to-Capital ratio, financial flexibility
  - New Source Risk: Thinner margin barrels dominating new source volumes

Absolute and "per boe" basis

Energy companies employ a variety of Benchmarks or Metrics to rank investment opportunities and to allocate financial capital. Some of the more common include:

- <u>Pay-out period</u>; length of time required to recoup financial capital being placed at risk. Simplest selection metric, important to firms with scarce capital resources. No reference to project value after pay-out
- Internal Rate of Return; discount rate at which PV of costs = PV of revenues
- <u>Net Present Value</u>; PV of costs less PV of revenue flows (using discount rate reflecting cost of capital, cost of borrowing, or other);
  - <u>NPV/boe</u>; incorporates concept of investment efficiency
  - <u>NPV/Investment</u>; incorporates assessment of return to the investment dollar. Also referred to as **PVPI**
- <u>Recycle Ratio</u>: Netback or profit per boe divided by F&D cost per boe. A measure of project or corporate profitability (target >1)
- <u>Discounted and Undiscounted Net Cash Flow Profiles</u>; measure of availability of free cash flow for follow on or alternative investments
- <u>Maximum Negative Cash Flow Exposure</u>; useful in situations where access to financial capital is an issue. What is the maximum exposure being undertaken by the firm
- <u>Net Booked Reserves</u>; contribution of the projects to corporate value (based on bookable reserves, amongst other measures)
- <u>Capex/boe</u>; cost per barrel of production capacity. Burdens the projects by the cost of infrastructure, facilities, etc. Tends to favor less complex, more mature capex alternatives

# **Project Metrics: Net Present Value**

- <u>Net Present Value (NPV)</u>: The estimated value of a project when all future net cash flows are discounted to the present at an appropriate rate (the "discount factor"). If NPV > 0, then the project is expected to deliver a return greater than the cost of development, <u>including</u> a return on capital invested (accounted for in the discount rate).
- Advantages:
  - Time value at corporate rate included
  - Can be calculated exactly
  - Can accommodate risk
    - NOTE: Above ground risk incorporated through discounting of costs and/or revenue flows, NOT through use of alternative discount rates
  - Useful for valuing projects
  - Discount rate reflects corporate preference for opportunity cost of investment capital (e.g., market interest rate, cost of equity capital, weighted average cost of capital (debt and equity))
- Disadvantages:
  - Difficult to rank projects. Significantly different capital and expenditure profiles can deliver the same NPV, due to the effect of discounting.
    - E.g., very large cash flows in a future time period can have the same "present value" as small cash flows in forward years. This may <u>not</u>, however, have the same impact and value for the company treasury

# Project Decision Variables: Internal Rate of Return

- Internal Rate of Return (IRR): The discount rate that equates all future cash inflows to outflows at a point in time (usually the present)
- Advantages:
  - Easy to understand.
  - Incorporates time value
  - Can be compared to a required minimum (or hurdle rate)
  - Independent of magnitude of cash flows.
- Disadvantages:
  - Multiple rates of return are possible in cases of material cash flow volatility (e.g., large positive and negative swings over project life); uncomfortable for decision makers looking for unique decision criteria
  - Doesn't measure absolute worth of the project
  - Not useful for single project analysis
  - Implicit assumption that interim cash flow is invested at calculated IRR (issue for high return projects) => overstates the true project value

# Capital Allocation: IRR Hurdle Rate

- Eligible projects ranked by IRR:
  - Eligibility based on series of discrete project metrics within each PAR
  - Metrics change at each stage of the project cycle, as risks are addressed and estimates become more certain
  - Examples:
    - NPV10 > 0
    - PVPI > 1.3
    - Payback < 3 years</p>
- Corporate establishes a "hurdle" IRR number. Projects with IRR's in excess of the hurdle rate attract budget capital, while those below the hurdle rate are not funded
- Issues with IRR Hurdle Rate:



**Capital Projects** 

- Increase in free cash flow (due to, say, rise in energy prices) => increased capital budget => lower Hurdle rate in order to undertake additional projects => reduce overall portfolio quality and lower efficiency of capital employed. Evidenced in *cycles of value destruction* within the industry
- Gaming the system: Project managers have an incentive to overstate the "size of the prize" or understate costs, in order to attract investment capital to proposed projects
- IRR ranking does not speak to *materiality* => equivalent IRR's can have substantially different capex and revenue profiles

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### Capital Allocation using IRR Hurdle Rate



# Portfolio Efficiency: Return on Capital Employed (ROCE)

## • <u>Return on Capital Employed:</u>

- ROCE = [(Net profit before interest and taxes) / (Gross Capital employed)] x 100
- Where:
  - Gross capital employed = Fixed assets + Investments + Current assets <u>OR</u>
  - Gross capital employed = Share Capital + General & Capital Reserves + Long term loans
  - (+) Correlation with production, commodity prices
  - (-) Correlation with upstream spending
- Indicates how well management has used the investment made by owners and creditors into the business.
- The higher the return on capital employed, the more efficient the firm is in using its funds. Over time, ROCE reveals whether the profitability of the company is improving or eroding

#### Global Players Peer Group: ROCE (3-year roll, 2008-2010)



International Players Peer Group: ROCE (3-year roll, 2008-2010)



# Portfolio Efficiency: Return on Capital Employed (ROCE)

### Issues with ROCE:

- Major capital project investments increase the denominator in advance of revenue (profit) impacts in the numerator
   *penalizes the IOC for major capital investment undertakings*
  - Explains in part why it is unusual to find companies with high ROCE <u>and</u> high growth metrics
- Once in place, the scale of major capital project investments tend to deliver superior ROCE performance => bias toward large asset portfolios
  - Exception is deepwater developments, where high, short plateaus and steep production declines can result in highly volatile ROCE outcomes
- Depreciation creates bias in favor of mature portfolio: More mature the asset base, the lower the denominator (capital exposed) and the higher the ROCE (all else being equal)



#### Global Players Peer Group: Growth v Efficiency

Efficiency (Upstream ROCE 3-yr roll)



# Special Issue: Integration vs. De-Integration

## **Arguments For Integration**

- Superior market/financial management over commodity cycle
  - <u>Counter</u>: Collapse in Downstream profitability has seen a rise in successful "pure play" refining companies
- Integration is important for molecule management; ensures sophisticated refining capacity is in place for particular crudes
  - <u>Counter</u>: Independent energy producers are not hitting roadblocks in this regard; independent refiners are responsive to requirements.



- Integration is relevant for specific oil developments (e.g., Canadian oil sands, Venezuela heavy, high wax or acid content)
- Integration is a technical differentiator amongst energy companies => enhance ability to secure projects
  - <u>Counter</u>: The ability to build a refinery—which few integrated energy players have actually done recently—has little in common with the ability to execute on complicated upstream projects
- Integration allows participation in the Downstream Non-OECD growth story
  - <u>Counter</u>: The rapid petroleum product demand growth regions (China, Middle East, India) are dominated by National Oil Companies (NOCs) or quasi-NOCs, that choose partners based on what they bring to the table



# Special Issue: Integration vs. De-Integration

## **Arguments Against Integration**

- Capital markets value integrated IOCs below the sum of their parts
  - <u>Counter</u>: Expensive to split a company => if there is any identifiable value, should remain integrated (e.g., refining-petchems)
- <u>Strategic focus</u>: In many integrated companies, the Downstream sector is neglected strategically at the expense of Upstream positioning and growth—particularly in the current climate of narrow refining margins and sustained, high oil prices.



#### Refining Capacity versus Upstream Oil Production Selected Integrated IOCs, 2010 (mboe/d)

- <u>Counter</u>: Unless the integrated IOC is certain that refining margins and economics will never recover, there is merit to retaining this mechanism for optimal capital allocation between sectors
- Materiality: There are few materially, physically integrated IOCs remaining
  - ExxonMobil and TOTAL have pursued integration between refining and petrochemicals, and there are strong arguments to continue this form of integration
  - Statoil, Eni, and Repsol are integrated on the basis of past roles as quasi-NOCs, and would likely face considerable government opposition to de-integration
- <u>The world has evolved</u>: more flexible and liquid trading markets and improved market & industry regulation have eroded whatever market management or cross subsidization benefits integrated IOCs derived from Downstream presence/dominance over the first 70+ years of their existence.

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# Special Issue: Integration vs. De-Integration

- Share appreciation appears the Number One driver for de-integration. Marathon and ConocoPhillips have both concluded that integration <u>hides</u> value that can otherwise be secured through greater management focus, transparency, and more appropriate strategy and execution within the deintegrated entities
- Market development arguments for a Downstream
   presence have largely ended
  - BP, TOTAL, Shell all divesting from Africa in favor of "pure play" refiners and marketers
  - No remaining examples where downstream presence is key to upstream success.

#### Weekly Share Price Performance, Selected IOCs (Week 1, January 2011 = 1.0)



- Improvements in internal decision processes and external regulation have eroded any value that could be secured through cross-subsidization or barriers to competitor entry
  - Rate of return regulation in midstream operations, open-access provisions, increased sophistication in both project and portfolio analysis => few opportunities remaining for active market manipulation
- There are *technical drivers* for integration, related to specific crude types and processing challenges (e.g., Canadian oil sands, Brazil waxy heavy crude, Venezuela ultra-heavy, Chad acidic crudes). However, these benefits can be secured through contracts and JV or partnering agreements with third party refiners

Conclusion: Pressure for further de-integration moves will come from "share appreciation" arguments, most likely directed to Chevron and Shell (and BP once its portfolio has re-stabilized)



"Core Area": Stable stream of net cash flows, and is material to the company. Can contribute to investment activity in other regions, but requires more than replacement level investment in order to maintain core area status. Tends to corresponds to a company's legacy assets.

**"Focus Area":** Significant contributor to projected new source production and reserves growth in the medium- to long-term. Typically a net consumer of free cash flow until significant production levels are achieved.

"New Venture": Areas new to the company—may be unexplored to fairly mature. Company has few, if any, assets and investment inflows can be modest (positions are usually characterized by exploration activity).

"Harvest Area": Produces positive net cash flow, with Investment activity typically at/below replacement level. Limits to growth from lack of geological potential, competitor landscape, limited "room to run", etc.



- "Sit & Hold": Substantial resource base but investment delayed due to unattractive fiscal terms or significant above ground risks. Company may hold large projects in this area but is holding back the pace of investment (more common for National Oil Companies).
- "Exit/Potential Exit": For reasons including lack of materiality, limits to future growth, change in strategy, the company has/is expected to make a decision to exit (asset sales, asset swaps, relinquishment of acreage).



# **Special Issue**: Basin Designation and Allocation of Free Cash Flow



2008-2010:

Along with Europe, Sub-Saharan Africa is now a key cash generating region for the large Upstream companies with surplus cash flow now supporting growth in North America

\* Includes data from the following companies: Anadarko, Apache, BG, BHP, BP, CNRL, Chevron, ConocoPhillips, Devon, EnCana, Eni, ExxonMobil, Hess, Husky Oil, Marathon, Murphy, Nexen, Noble Energy, Oxy, Petrobras, Repsol YPF, Santos, Shell, Statoil, Suncor, Talisman, TOTAL, Woodside

2003-2005:



# Example: Nexen Inc.

- Free cash flow from Yemen/Masila block directed to North Sea (Buzzard) assets; then from North Sea to Canadian oil sands and shale gas assets.
- Currently in Exit process in Yemen and shifting to Harvest in the UK





# **Questions & Discussion**



# Global Strategy & Portfolio Overview of Major Alaska Producers

- BP
- ConocoPhillips
- ExxonMobil



# **BP: Company Overview**

#### **Strategic Signature**

- BP is a global integrated company, with production in 16 countries and upstream operations in an additional 10 countries.
- In 2011, total global production averaged ~3,400 mboe/d, making it the second largest company in the peer group (superseded by ExxonMobil (~4,513 mboe/d). The Russia & Central Asia (RCA) and North America regions accounted for ~55% of 2011 production.
- Much of the post-Macondo portfolio rationalization program (targeting \$30 bn in asset sales including mid/downstream assets) has been completed. The result is a pared down and more focused geographic portfolio.
- BP expects growth of 1%-2% per annum through 2015 from a 3-pronged growth strategy:
  - Deepwater Basins: US GOM, Angola, Egypt, Brazil
  - Global Gas: US, Trinidad & Tobago, North Sea
  - Giant Oil Fields: Russia, Alaska, Iraq, others.
- Committed ~\$20 bn net investment to 16 projects sanctioned over 2010-2011. Will curb ROCE performance for the coming 2-3 years.
- With the burden of the Macondo oil spill and reparations continuing through the mid-term, BP will be hard pressed to outperform its peers on any key metrics, leaving the company open to calls for more radical restructuring.

#### **Company Overview**

- HQ: London
- Employees: 79,700
- 2011 Reserves: 17,330 mmboe
- 2011 Production: 3,400 mboe/d
- 3 Yr Production Growth: -3.53% CAGR (2008-2011)
- April 2012 Market Cap: \$133 bn
- April 2012 P/E Ratio: 6.15
- 2011 Corp Revenue: \$375 bn
- 2011 Upstream Capex (Est.): \$17 bn

Technological Competence					
EOR & Recovery         Offshore         Heavy Oil         Unconven- tionals         Oil Sands         LNG					
$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

	Partnership History					
Date	Partner Region (or Country)		Туре			
2007	Husky	Canada	Sunrise Oil Sands			
2008	Chesapeake	US	Unconventional			
2009	CNPC	Iraq	Rumaila TSA			
2011	Reliance	India	Offshore Gas			



# **BP: Global Areas of Upstream Operations**

 Active in 26 countries, with production in 16 countries

	Liquids (mboe/d)	Gas (mboe/d)
Russia	856	107
US	594	364
T&T	36	412
ик	137	79
UAE	190	8
Angola	170	0
Argentina	75	63
Egypt	59	72
Azerbaijan	103	22
Australia	30	77
Indonesia	2	71
Norway	40	3
Canada	7	34
Algeria	17	21
Pakistan	10	25
Venezuela	23	2



	Liquids (mboe/d)	Gas (mboe/d)
hina	0	16
/ietnam	0	13
Bolivia	0	2
Brazil	0	0
Chile	0	0

	Liquids (mboe/d)	Gas (mboe/d)
Iraq	0	0
Oman	0	0
Jordan	0	0
Libya	0	0
India	0	0

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# **BP Global Production Portfolio - 2010**

Canada: modest conventional production, with future potential tied to oil sands

Russia: BP's largest producing country (963 mboe/d), representing ~26% of 2010 output. Substantial long term growth potential. Continued interest in Russia (and Arctic) expansion, despite limitations arising from the TNK-BP joint venture.



Argentina: onshore & shallow water assets (held by PAE) were to be sold to Bridas, but transaction failed in 4Q:11.

Sole presence in SSA is Angola: Angola deepwater. High growth from 2002-2009, now challenged with startup of several unsanctioned projects

Iraq: Development of Rumailia oil field



0

500

mboe/d

Azerbaijan: Participation in 2 large-scale projects: Azeri-Chirag-Guneshli &

Core position through equity affiliates, though concession are

2011 Partnership for exploration in shallow and

Australia and Indonesia are key gas producing areas tied to investments in LNG.



# Total Portfolio Evolution: BP vis-à-vis the Competition

#### Production (mboe/d) in 2000, 2010 and 2015 (PFC Forecast): BP and Peers



In 2010, BP was the second largest producer of the peer group. BP and COP are the only two companies forecast to deliver production declines over the 2010-2015 period.

**2000-2010:** Production increases from ~3,080 mboe/d to ~3,780 mboe/d due to addition of Russia (~960 mboe/d), Trinidad & Tobago (~250 mboe/d) and Angola (~170 mboe/d). This expansion offsets declines from Europe (-660 mboe/d and North America -350 mboe/d).

**2011-2015:** BP's production is expected to decline from 2000-2015, due mostly to the post-Macondo asset divestiture program, combined with curbed activity in the GOM deepwater.



# How the Portfolio is Financed: Sources and Uses of Cash (\$US millions)



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# Global Production: Evolution of the Portfolio



# Global Production: Country Growth Project Analysis

BP: New Source Production – Number of Projects by 2015 Production and Oil/Gas Split



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# **BP in Alaska**





# **BP Alaska Activity & PFC Energy Assessment**

Alaska Designation	Activity	PFC Energy Assessment
Harvest Area	<ul> <li>Most of BP's assets are located on the North Slope, where production volumes have generally declined because of the maturity of the asset base and/or gas infrastructure constraints. Liquid production has declined from ~224 mboe/d in 2006 to ~166 mboe/d in 2010, while gas production has fallen from ~67 mmcf/d to ~46 mmcf/d over the same period.</li> <li>BP's largest source of production is the Greater Prudhoe Area (26% w.i., operated), covering ~150,000 acres with more than 1,000 active wells. Gas resources are currently stranded because of the lack of pipeline capacity to southern markets. BP and ConocoPhillips had teamed up to propose a new natural gas pipeline (Denali) to run from Prudhoe Bay through western Canada to US markets. However, in May 2011, the partners announced that plans for the pipeline had been terminated, citing the lack of long-term purchase contracts. The proposed pipeline would have accommodated 4 bcf/d of natural gas.</li> <li>BP and partners are moving forward with the development of gas liquids on the ~8 tcf Point Thomson field (32% w.i., non-operator). The gas cycling project is expected to produce ~10 mb/d of liquids; first production is targeted for 2014. Full field development awaits gas transport infrastructure.</li> <li>In the Beaufort Sea, BP has suspended work on the extended-reach drilling program on the Liberty oil field (100% w.i.), pending revision of project design and schedule.</li> <li>BP is also seeking to develop viscous (Kuparuk) and heavy (Milne) oil resources on the North Slope.</li> </ul>	Current production volumes are modest and declining, yet significant potential lies in the long-term commercialization of Prudhoe Bay and Point Thomson gas resources. Cancellation of the Denali gas pipeline proposal leaves BP as a potential supplier to an alternative pipeline/LNG export option, should one be approved and developed.



# **PFC-Identified Challenges**

- <u>Re-establish its operator profile in the global deepwater</u>: While its competitors extend their commitments to global LNG, unconventional shale gas exploitation, and oil sands development in order to drive future portfolio growth, BP has deepened its commitment to the global deepwater play, despite the ongoing fallout from the Macondo oil spill. Expansion of its US GOM lease holdings (through the Devon portfolio acquisition), entry into the Brazil deepwater, and a material commitment to the K-G Basin deepwater play in India, together with phased field development offshore Angola and West Nile Delta in Egypt, positions BP as arguably the premier deepwater player in the Global Player peer group. BP will be under the spotlight regarding its future conduct and performance throughout the global deepwater basins.
- <u>Resolve shareholder relationship issues within the TNK-BP JV</u>: Accounting for ~29% of total worldwide production in 2011 (and ~40% of total worldwide oil production), the TNK-BP position is absolutely core to the BP portfolio from a volumetric perspective. However, the unsuccessful attempt to partner with Rosneft in the Russia Arctic raises concern over how much value TNK-BP can continue to create for BP. With TNK-BP now focused on international expansion, must BP settle for lower returns from what has until now been a highly lucrative position?
- <u>Complete the portfolio rationalization process</u>: The strength of the global asset transactions market prompted BP to expand its divestiture program from an initial \$20 bn to \$30 bn, divesting large swaths of its portfolio deemed non-Core and/or non-aligned with the company's growth focus. While the company did not plan on the depth of portfolio rationalization undertaken to date, this is a rare opportunity to high-grade asset holdings with the blessing of shareholders and analysts alike. BP is expecting to complete the divestiture process by end-2012.
- Determine a path forward in the Brazil deepwater: Having secured Brazil government approval to acquire the Devon asset portfolio, BP has established a foothold in the Brazil deepwater, with potentially the largest operated pre-salt portfolio outside Petrobras. The next step is to determine the appropriate approach to growth in the pre-salt play. With legislation now in place granting NOC Petrobras a minimum 30% w.i. and operatorship in all unlicensed pre-salt acreage, this may be another case of executing a strategic alliance (similar to that secured with Reliance in India and proposed with Rosneft in the Russia Arctic).
- Accelerate development of US Onshore unconventional gas resource: BP received a very competitive price for the Permian Basin and Western Canada conventional gas assets sold to Apache (totaling ~75 mboe/d of production and ~340 mmboe of reserves, equivalent to ~\$24.60/boe of reserves in the ground or ~\$109,000/flowing boe of production). This is particularly so given what is shaping up to be an extended period of gas price weakness in the North America market. To make up for lost volumes, BP may look to accelerate production from its ~10 tcf of reserves in the Woodford, Fayetteville, Haynesville, and Eagle Ford shale gas plays.
- Accelerate development of BP's oil sands leases: BP has built up a material oil sands lease portfolio in Western Canada, including 50% w.i. in the Sunrise in situ development project (sanctioned in November 2010), a 75% w.i. in the Terre de Grace in situ project (secured in March 2010 from Value Creation for ~\$900 mn), and 50% w.i. in the Kirby in situ oil sands leases (with the other 50% divested to Devon in March 2010). Full development of these projects could represent 500-600 mbo/d of stable, long-life oil production, complementing the "Giant Oil Fields" growth platform and providing a portfolio buffer against the steep decline production profiles associated with deepwater developments.



# **ConocoPhillips: Company Overview**

#### Strategic Signature

- March 2010, ConocoPhillips announces a new strategic pathway: Direct proceeds from a ~\$15 bn asset and joint venture divestment program to:
  - reduce its debt-to-capital position;
  - increase near-term shareholder returns;
  - shift further out of the downstream, and
  - position the company for future growth from a smaller but higher-value portfolio position.
- Since the 2010-2012 Restructuring Plan, ConocoPhillips has:
  - executed on ~\$7 bn in asset sales
  - divested its entire 20% equity interest in LUKOIL, and
  - directed proceeds from these sales to debt reduction and share repurchase.
- July 2011, ConocoPhillips announces a restructuring, to create *two separate corporate entities*, Downstream (Phillips 66) and a pure play, E&P company (ConocoPhillips).
- Production expected to decline to ~1.5 mmboe/d in 2012, recovering to 1.64-1.69 mmboe/d by 2015. The company will rely on a large, diversified upstream portfolio positioned heavily in OECD countries (US, Canada, Australia, UK, and Norway, which accounted for ~72% of worldwide production in 2010).
- Growth of 0.5% per annum from 2012 through 2015 is forecast to come from *Global Gas/LNG, SAGD Oil Sands,* and Unconventional Resource developments. However, as ConocoPhillips now stands to compete with the Independent, non-integrated oil & gas companies, the company's future strategy remains uncertain.

#### **Company Overview**

- HQ: Houston, TX
- Employees: 29,600
- 2011 Reserves: 8,387 mmboe
- 2011 Production: 1,610 mboe/d
- 3 Yr Production Growth: -30.68% CAGR (2008-2011)
- Apr 2012 Market Cap: \$93 bn
- Apr 2012 P/E Ratio: 8.12
- 2011 Corp Revenue: \$235 bn
- 2011 Upstream Capex: \$13.5 bn

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Technological Competence					
EOR & Recovery         Offshore         Heavy Oil         Unconven- tionals         Oil Sands         Other					
$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	

Partnership History					
Date	Partner	Region (or Country)	Туре		
2003	LUKOIL	Russia	Various		
2006	Cenovus	Canada	Oil Sands		
2008	Origin Energy	Australia	LNG		

# **ConocoPhillips:** Global Areas of Upstream Operations



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## **ConocoPhillips Global Production Portfolio - 2010**

**Russia: LUKOIL sale** leaves ConocoPhillips with modest production from its two joint ventures in Russia (Polar Lights Company and Naryanmarneftegaz). Regional production declines from **21% of worldwide production in 2009 to 3% in 2011**.

1,345 Canada: Among the largest natural gas producers in Canada. Three SAGD oil sands developments-Christina Lake, Foster Creek, and Surmont-have added long-life Asset Type production volumes to ConocoPhillips' portfolio. **Conventional Onshore Conventional Shallow** Deepwater US: Largest producing UK and Norway: Region **Oil Sands** country, with core L48 characterized by mature, production where liquid-rich Other declining assets: satellite China: Modest areas (Eagle Ford) will be projects planned to offset Unconventional offshore production prioritized over gas assets. regional base declines. from Bohai Bay. Declining mature assets in Continued Vietnam: Alaska could be offset by development of mature prospective deepwater Cuu Long Basin; potential volumes in long-term. divestment target. Qatar: Qatargas 3 (onstream in 2010) Malaysia: Development is key driver to deepwater fields of regional gas growth. (Gumusut-Kakap and Nigeria: Interests Kebabangan) will bring in six onshore Malaysia into serving assets. ConocoPhillips' producing as feedstock to country portfolio. LNG Nigeria Australia: APLNG Phase 1 Trains 4-6. sanctioned in 2011; longerterm upside in Australia Indonesia: Largest could stem from assets in Asia-Pacific contributor to the Browse Basin or Timor production; ongoing Sea (e.g. Greater Sunrise). development of Corridor PSC and South Natuna Block B.

Algeria: Onshore oil field production; additional volumes from El Merk (EMK) expected for 2012 start-up.

Libya: Legacy onshore Waha concession; above ground conflict will delay new source oil projects.

mboe/d

0

500

1.000

## Total Portfolio Evolution: ConocoPhillips vis-à-vis the Competition

Production (mboe/d) in 2000, 2010 and 2015 (PFC Forecast):



ConocoPhillips' 2010-2012 Restructuring Plan will see the company become the largest of the Independent, non-integrated international oil & gas companies, compared to its former position as the third-smallest of PFC Energy's expanded Global Player peer group.

**2000-2010:** Production increases largely driven by the merger of Conoco and Phillips in the beginning of the decade (growing volumes from 698 mboe/d in 2000 to 1,082 mboe/d in 2002) and the Burlington Resources purchase in 2006 (growing volumes from 1,824 mboe/d in 2005 to 2,358 mboe/d in 2006). The gradual acquisition of a 20% stake in LUKOIL was a key driver to mid-decade growth.

2011-2015: ConocoPhillips's production is expected to decline from 2010-2015, due the company's intensive asset to divestiture program (the initial ~\$15 bn asset and joint venture divestment program was expanded in 2011 when ConocoPhillips announced it would shed an additional \$5-\$10 bn in non-Core assets by end-2012). Volumes are forecast to decline from ~2,078 mboe/d in 2010 to ~1,674 mboe/d in 2015.



## How the Portfolio is Financed: COP Sources and Uses of Cash (US\$ millions)



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## **Global Production: Evolution of the Portfolio**



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### Global Production: Country Growth Project Analysis

ConocoPhillips: New Source Production - Number of Projects by 2015 Production and Oil/Gas Split



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### **ConocoPhillips in Alaska – North Slope**



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### **ConocoPhillips in Alaska – Cook Inlet**



ConocoPhillips' Interests in the Cook Inlet (Alaska)

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## **Regional Activity & PFC Energy Assessment**

#### Country | Activity

USA Alaska (Core)

- ConocoPhillips' assets in Alaska are legacy assets acquired from Arco Alaska in 2000 and include the Greater Prudhoe Area, Greater Prudhoe Bay Area, Greater Kuparuk Area, Western North Slope, and Cook Inlet Area. The company's largest producing area in Alaska is the Greater Prudhoe Area, a collection of mature, long-life fields. Production from the Alaska portfolio has been in slow decline since the late-1980s following a decade of growth made possible by commissioning of the ~2.1 mmbo/d capacity Trans Alaska Pipeline System (TAPS) in 1977. In 2010, net production from Alaska averaged 230 mb/d of oil and 82 mmcf/d of gas, accounting for ~36% of US production.
  - ConocoPhillips and BP have been joint proponents of the Alaska Gas Pipeline (or Denali Pipeline), intended to accelerate commercialization of Prudhoe Bay gas through Western Canada and into US markets. In 2010, the partners officially withdrew their support for the proposed project, in response to continued US gas price weakness and absence of buyer commitments. This places substantial uncertainty around further commercialization of ConocoPhillips' Alaska gas resources.
  - Activity in the ConocoPhillips-operated Greater Kuparuk Area (GKA), has recently focused on development of viscous oil resources. The GKA, located 40 miles west of Prudhoe Bay on the North Slope, includes the Kuparuk field and its satellites: West Sak, Tarn, Tabasco, Meltwater, and Palm. Heavy oil resources West Sak and Ugnu (52.2% w.i., operated) are potential projects currently in the appraisal phase. Expected gross peak production is ~23 mboe/d.

#### PFC Energy Assessment

**Material harvest position.** As Alaska's largest oil and gas producer, ConocoPhillips holds a leading position in the region. Although the company continues to target smaller projects within the GKA (West Sak and Ugnu) and NPR-A (Alpine West, Greater Moose's Tooth unit and Fiord West), ConocoPhillips will ultimately need expanded access to US and/or Asia gas markets in order to reverse the downward production trend in Alaska.

## COP Alaska Activity & PFC Energy Assessment

Alaska Designation	Activity	PFC Energy Assessment
Core Area	<ul> <li>In the Western North Slope, ConocoPhillips faces regulatory challenges surrounding project development in the NPR-A region. In order to offset declines at the Alpine field (78% w.i., operated) and its three satellites, Nanuq, Fiord, and Qannik, ConocoPhillips is exploring development of additional satellite fields in the adjacent NPR-A, an area that requires distinct permit approval. Alpine West (or CD-5), a proposed Alpine satellite project, has been significantly delayed due to local opposition and regulatory barriers. Most recently, in early 2010, the U.S. Army Corps of Engineers denied a permit for a bridge that would provide access to the CD-5 site, a move that will further delay the project (originally planned for 2012) and several additional developments that would depend on the infrastructure. Other possible projects on the NPR-A include the Greater Moose's Tooth unit and Fiord West, which are both in appraisal phases.</li> <li>While ConocoPhillips has three primary gas fields in the Alaska region—the North Cook Inlet, Beluga River, and Point Thomson–Point Thomson (5% w.i., non-operated) remains the only potential new source development. In 2010, development activities continued with the drilling of two appraisal wells. First production of gas liquids is anticipated in 2014. Longer-term growth potential lies in commercialization of the gas reserves, which is in turn dependent on construction of a long-distance gas trunk line.</li> <li>In 2010, ConocoPhillips and Statoil engaged in an asset swap wherein ConocoPhillips sold a 25% w.i. in 50 of its Chukchi Sea leases to Statoil in exchange for financial payment and a 50% w.i. interest in 16 Statoil-operated Gulf of Mexico leases, as well as Statoil's 25% w.i. in five additional GOM leases already operated by ConocoPhillips. All of the involved GOM blocks are in the emerging Lower Tertiary play. ConocoPhillips plans to begin exploratory drilling on its Chukchi acreage in 2013.</li> </ul>	



## **PFC-Identified Challenges**

- Competing as a "Pure Play" E&P Company: The separation of ConocoPhillips into two, stand-alone Upstream and Downstream entities is scheduled to be finalized in 1H:2012. The ~85% of total portfolio value residing in E&P assets will thereby become the largest "pure play" E&P Independent, a competitor landscape position the company held uncomfortably prior to the Burlington Resources acquisition in 2006. Can ConocoPhillips Upstream compete successfully in the Independent's space by delivering either leading shareholder returns or leading production growth? Or has it simply reestablished its original dilemma—too large to compete with the faster moving International Independents, and too small to compete with the Global Players? And if so, does it survive?
- Re-Establishing a Value Proposition: ConocoPhillips' new strategic focus on Sustained Value Generation is intended to reestablish the company's competitive advantage in the E&P space. In the near-term, the 2010-2013 Restructuring Plan will deliver a smaller company with limited medium-term production growth and improved, but unlikely to be leading, ROCE and financial performance. Clearly, the cannibalization of the company's assets and recycling of proceeds to shareholders in order to shore up share valuation and total shareholder returns is a stop-gap strategy at best. Given continuing financial and operational challenges (ROCE, production cost, upstream net income, etc.), ConocoPhillips may struggle to deliver a value proposition that will compete successfully in either the Global Player or International Independents peer group.
- Improving Operational Performance: While showing improvement in finding and development costs, ConocoPhillips ranks at or near the bottom of the expanded Global Players peer group in net income/boe, production costs/boe, and Upstream ROCE. The current portfolio high-grading has already delivered Upstream ROCE improvement (from 7% in 2009 to 10% in 2010) and should deliver improvement in operational metrics; both Syncrude and the LUKOIL holdings were arguably underperforming positions. With long lead time, large scale, capital intensive developments like Qatargas 3, Jasmine, Kashagan Phase 1, and Surmont poised to deliver material production and cash flow, ConocoPhillips should see the flow-through benefits in terms of more competitive ROCE and operational metrics.
- Delivering Production Growth: The share repurchase program accompanying portfolio rationalization under the Restructuring Plan is projected to deliver ~3% growth in per share production in 2010 and 2011. However, physical volumes will decline in absolute terms over the 2010-2011 period—by ~208 mboe/d in 2010 from 2009 levels, and a further ~360 mboe/d in 2011 from 2010. The only region poised to deliver higher production volumes in 2020 versus 2010 is the relatively minor MENA region, projected to reach ~177 mboe/d in 2020 versus 72 mboe/d in 2010. New source volumes in Canada and the North Sea will struggle to offset mature asset declines, delivering flat production in the core North America and Europe regions, while the LUKOIL sell-down will dampen what was once considered a core driver of future growth for the company. While boasting a 10 bn boe resource base, it is not clear how ConocoPhillips will deliver the promised surge in organic growth over the 2015-2020 period from its captured portfolio—although the enhanced capex spend in the Eagle Ford play is a good starting point. Barring a material acquisition (certainly not out of the question), the company will be looking to its exploration portfolio to deliver a medium term "engine of growth".



## **ExxonMobil: Company Overview**

### Strategic Signature

- ExxonMobil: largest global integrated oil and gas company
  - ~4,513 mboe/d in 2011; production in 21 countries, with upstream operations in an additional 20 countries.
- Growth strategy based on scale, basin dominance, and execution excellence => continuously seek access to investment opportunities of adequate size and materiality.
- Faced with (i) commissioning of the final elements of the company's Qatar project portfolio, (ii) declining production from its Europe and Asia-Pacific portfolios, (iii) roadblocks to materiality in Brazil deepwater, Venezuela extra-heavy, and Equatorial Margin, and (iv) already holding a considerable stake in the Canadian oil sands, ExxonMobil took an aggressive move into unconventional shale gas exploitation.
- The 2009 acquisition of XTO Energy brings materiality to ExxonMobil's technical expertise in tight gas, CBM, and shale oil and gas exploitation, with ~2.3 bcf/d and 87 mboe/d of production, proved reserves of ~2.3 bn boe, and a resource base of 7.5 bn boe.
- Will seek to leverage XTO into a global unconventional portfolio.
- Acquisition drove a 13% increase in production in 2010, returning ExxonMobil to first place amongst its peers

#### **Company Overview**

- HQ: Irving, Texas
- Employees: 83,600
- 2011 Reserves: 24,922 mmboe
- 2011 Production: 4,513 mboe/d
- 3 Yr Production Growth: 4.53% CAGR (2008-2011)
- Apr 2012 Market Cap: \$402 bn
- Apr 2012 P/E Ratio: 10.1
- 2011 Corp Revenue: \$3433bn
- 2011 Upstream Capex: ~\$28 bn

Technological Competence						
EOR & Recovery         Offshore         Heavy Oil         Unconven- tionals         Oil Sands         Other						
$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	

	Partnership History				
Date	Partner	Region (or Country)	Туре		
2011	Sinopec	China	Unconventional		
2011	Rosneft	Russia	Offshore Oil & Gas		

ExxonMobil has a limited history of partnership, preferring instead to purchase and operate material positions independently



## **ExxonMobil:** Global Areas of Upstream Operations

Country	Liquids (mboe/d)	Gas (mboe/d)
Qatar	232	644
USA	408	433
Nigeria	391	2
Norway	246	117
Netherlands	0	340
Canada	242	86
UAE	246	0
United Kingdom	80	92
Kazakhstan	127	24
Angola	141	0
Malaysia	48	86
Australia	51	55
Germany	0	91
Equatorial Guinea	53	0
Russia	43	8
Indonesia	13	36
Chad	43	0
Azerbaijan	21	0
Argentina	0	9
Papua New Guinea	7	0
Thailand	0	4



Brazil	0	0
Cameroon	0	0
Colombia	0	0
Congo	0	0
Greenland	0	0
Guyana	0	0
Hungary	0	0
Iraq	0	0
Ireland	0	0
Italy	0	0
Libva	٥	٥

Liquids (mboe/d)	Gas (mboe/d)	
0	0	N
0	0	
0	0	
0	0	
0	0	
0	0	
0	0	
0	0	
0	0	
	(mboe/d) 0 0 0 0 0 0 0 0 0 0 0	(mboe/d)         (mboe/d)           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0

Core	
ew Venture	
Focus	
Harvest	
Exit	



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### **ExxonMobil Global Production Portfolio - 2010**



Argentina: legacy, declining gas assets; recent acreage positioning in prospective shale Neuquen Basin. **Angola**: Multi-field new source developments (Kizomba Satellites Phase 1, Pazflor, and CLOV) drive regional growth.

**Papua New Guinea**: Formerly small contributor to the ExxonMobil portfolio, PNG will rise in prominence within the portfolio through the monetization of gas reserves at PLNG.



## Total Portfolio Evolution: ExxonMobil vis-à-vis the Competition



Averaging ~4.45 mmboe/d in 2010, ExxonMobil continues to lead its peer group in terms of production.

**2000-2010:** Production oscillated through the decade, landing in 2009 at roughly the same level as 2000 (~3.9 mmboe/d), before rising 13% in 2010 (~6% excluding the XTO acquisition), reaching ~4.45 mmboe/d. For a company that has prided itself on organic reserves and production growth, the XTO acquisition marks a considerable departure in growth strategy for ExxonMobil.

**2011-2015:** Modest volume growth, reaching ~4.54 mmboe/d in 2015. While PFC Energy estimates are lower than ExxonMobil targets, the absence of guidance regarding growth projects associated with the XTO portfolio makes the pace of future growth uncertain.

2



## How the Portfolio is Financed: Sources and Uses of Cash (US\$ millions)





## Global Production: Evolution of the Portfolio



**Asia Pacific:** Declines in ExxonMobil's relatively mature Asia-Pacific portfolio have been consistent for most of the past decade. A revival in regional production (though medium to long term in nature) is based primarily on two large gas export projects: Papua New Guinea LNG and Gorgon LNG (Australia).

**Europe:** Mature and generally declining production position. Positive net cash flow enables, in part, financing of frontier exploration in both unconventionals and the deepwater: ExxonMobil will seek to leverage the capabilities of XTO in Germany and Poland, while also assessing the prospectivity of the Turkish Black Sea.

**Latin America:** At 9 mboe/d, the region has no material impact on the ExxonMobil portfolio. Production is sourced solely from mature, declining gas assets in Argentina. The recent acquisition of 130,000 net acres of prospective shale gas resource in the Neuquen basin is part of a global strategy to leverage XTO capabilities in unconventional resource plays.

**Middle East & North Africa:** The rapid growth in MENA production that ExxonMobil experienced between 2002 and 2010 is on the cusp of reaching plateau, as the final Qatargas, RasGas, and Al-Khaleej phases have come onstream. While ExxonMobil will record growth from the West Qurna I project, upside in Iraq remains unclear.

**North America:** The acquisition of XTO Energy will drive a resurgence in regional production. A focus on Fayetteville, Haynesville/Bossier, Barnet, and Woodford shale gas plays, and transitioning portfolio to a more balanced oil:gas ratio in the out-years. A suite of Canadian oil sands developments and potential offshore projects will also contribute growth.

**Russia & Central Asia:** Major growth 2005-2010 was driven by a handful of mega-projects (Tengiz and Kashagan, Sakhalin I, and Azeri-Chirag-Guneshli); future performance relies heavily on subsequent development phases of these projects, most of which face challenges. The Rosneft partnership could provide additional long-term opportunity.

**Sub-Saharan Africa:** Growth in SSA has leveled off as new developments struggle to keep pace with steep deepwater decline rates. The primary bright spot in portfolio is Angola, where three new projects (Pazflor, Kizomba Satellites, and PSVM) are scheduled to come onstream over the next two years.

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Asset Type

Deepwater

Unconventional

Oil Sands

Other

Conventional Onshore

Conventional Shallow

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### **Global Production: Country Growth Project Analysis**

ExxonMobil: New Source Production – Number of Projects by 2015 Production and Oil/Gas Split



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## ExxonMobil in Alaska – North Slope





## ExxonMobil Alaska Activity & PFC Energy Assessment

Alaska Designation	Activity	PFC Energy Assessment
Harvest Area	<ul> <li>In Alaska, ExxonMobil holds interests in the Greater Prudhoe, Greater Point McIntyre, and Greater Kuparuk areas. The company is one of the largest North Slope producers, although production from the region is declining; 2010 net production averaged 117 mb/d of liquids.</li> <li>Development activities continued at Point Thomson in 2010 (35% w.i., operated), and first production of gas liquids is anticipated in 2014. The longer-term potential lies in commercialization of the gas reserves, which is dependent on building a gas pipeline.</li> </ul>	<b>Material harvest position.</b> As the largest holder of discovered gas resources on the North Slope and a co-operator of the Prudhoe Bay Western Region development, ExxonMobil holds a leading position in Alaska.

- Deliver on unconventional resource positioning: The XTO Energy acquisition and subsequent shale gas acreage transactions have made ExxonMobil a force in the North America unconventional resource play. That said, the company has provided limited guidance on pace of forward development despite continued acreage accumulation. Furthermore, given the weak US gas price environment, it is unclear how rapidly ExxonMobil's management will grow sales volumes. ExxonMobil is counting on additional long-term value arising from the XTO transaction through development of its expanding portfolio of International unconventional resource holdings.
- Execute on Asia-Pacific LNG Projects: ExxonMobil has a queue of LNG developments in Asia-Pacific, including Gorgon LNG (operated by Chevron), PNG LNG, and the potential Scarborough gas field development, all of which are poised to generate longer-term volume growth. Each of these projects comes with significant technical challenges—CO<sub>2</sub> capture and disposal at Gorgon LNG, remote gas field development and long distance pipeline transport in the case of PNG LNG, and the remote offshore location of the Scarborough field in the Carnarvon Basin (which may result in the field being dedicated as feedstock supply to the Pluto or Wheatstone LNG projects, rather than a greenfield LNG development). Performance will be critical to ensuring long-term regional portfolio growth.
- Maintain leadership in share buy-back and dividend performance: ExxonMobil has been a clear peer group leader in returns to shareholders, distributing ~\$19.7 bn through dividends and share buy-backs in 2010 and spending ~\$114 bn on share repurchase over the 2006-2010 period. With the increased emphasis being placed on unconventional gas resources to deliver future volume growth, shareholders will be looking for ExxonMobil to continue its leading dividend and share buy-back performance, as the core differentiator from its faster growing (in volumetric terms) peer group companies.
- <u>Replace volume growth from Qatar North Field commercialization</u>: With full ramp-up of the final four liquefaction trains at the RasGas and Qatargas LNG complexes, and continued imposition of a development moratorium for the North Field resource by the Qatar government, ExxonMobil will be challenged to deliver material global growth.
  - It is not clear how aggressively ExxonMobil will look to develop its US Onshore unconventional gas resources, given current and projected gas pricing in the North America market;
  - Monetization of captured frontier gas resources in North America (Alaska North Slope, Mackenzie Delta) continues to face delays in the form of regulatory hurdles (recently removed for the Mackenzie Valley gas pipeline project) and gas market supply-demand balances => renewed interest in Alaska LNG expansion;
  - Development of captured oil reserves in the Caspian region have experienced significant delays and cost over-runs, and are coming under increased political risk through accelerating resource nationalism;
  - ExxonMobil was successful in securing a growth position in Iraq through the West Qurna-1 redevelopment project, but positioning in Kurdistan exploration appears to have cost them a spot in Iraq's 4<sup>th</sup> Licensing Round. It is not clear that Iraq can become a Core growth area for the company.



# **Questions & Discussion**

2010	Alaska	% US	% Global	% Trend
BP	173 mboe/d	17	5	$\mathbf{I}$
COP	244 mboe/d	36	14	
XOM	117 mboe/d	14	3	$\mathbf{-}$



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