

International Petroleum Fiscal Systems and World Trends



Santa Cruz Bolivia

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Bolivia Gas & Energia

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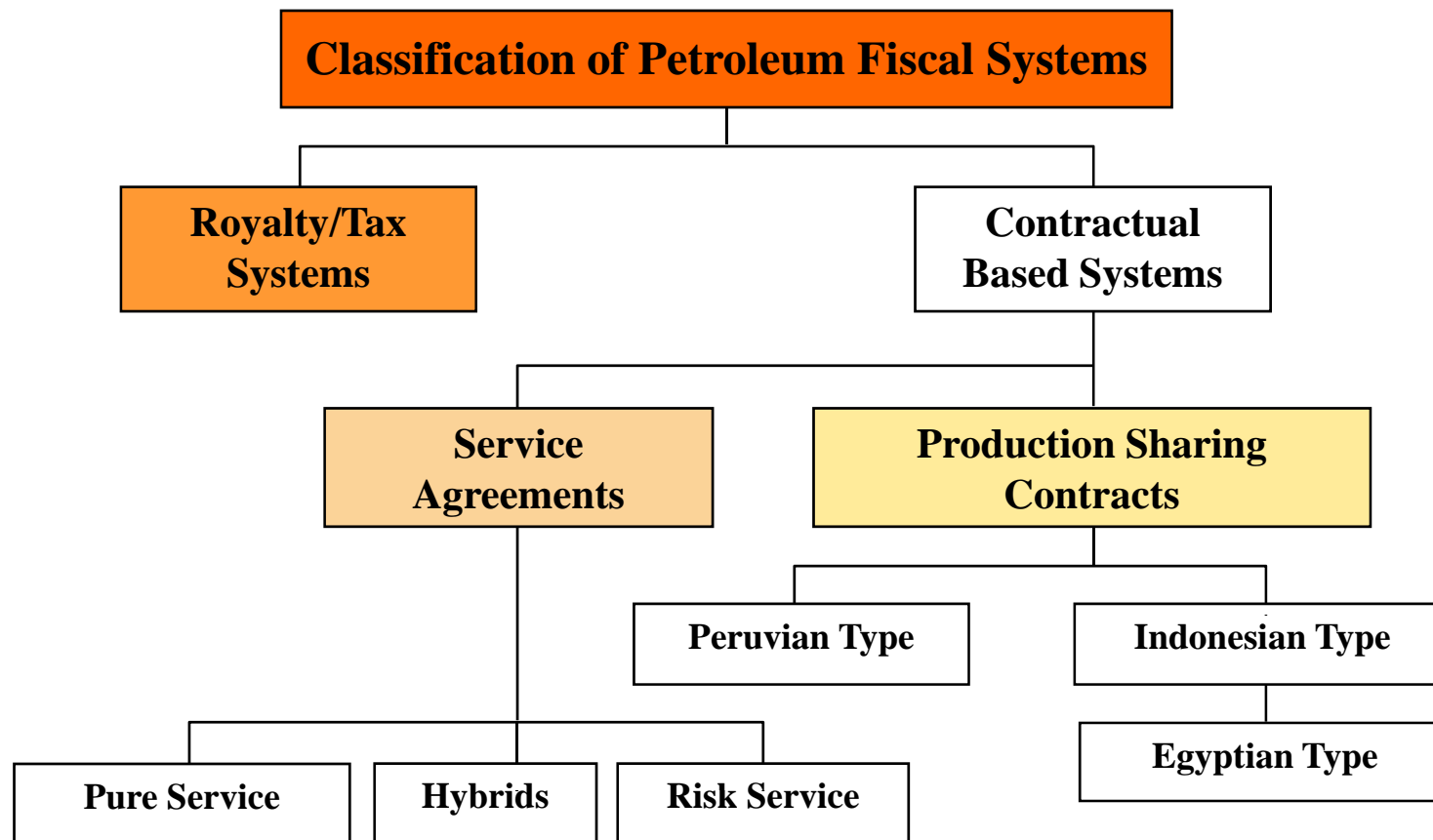
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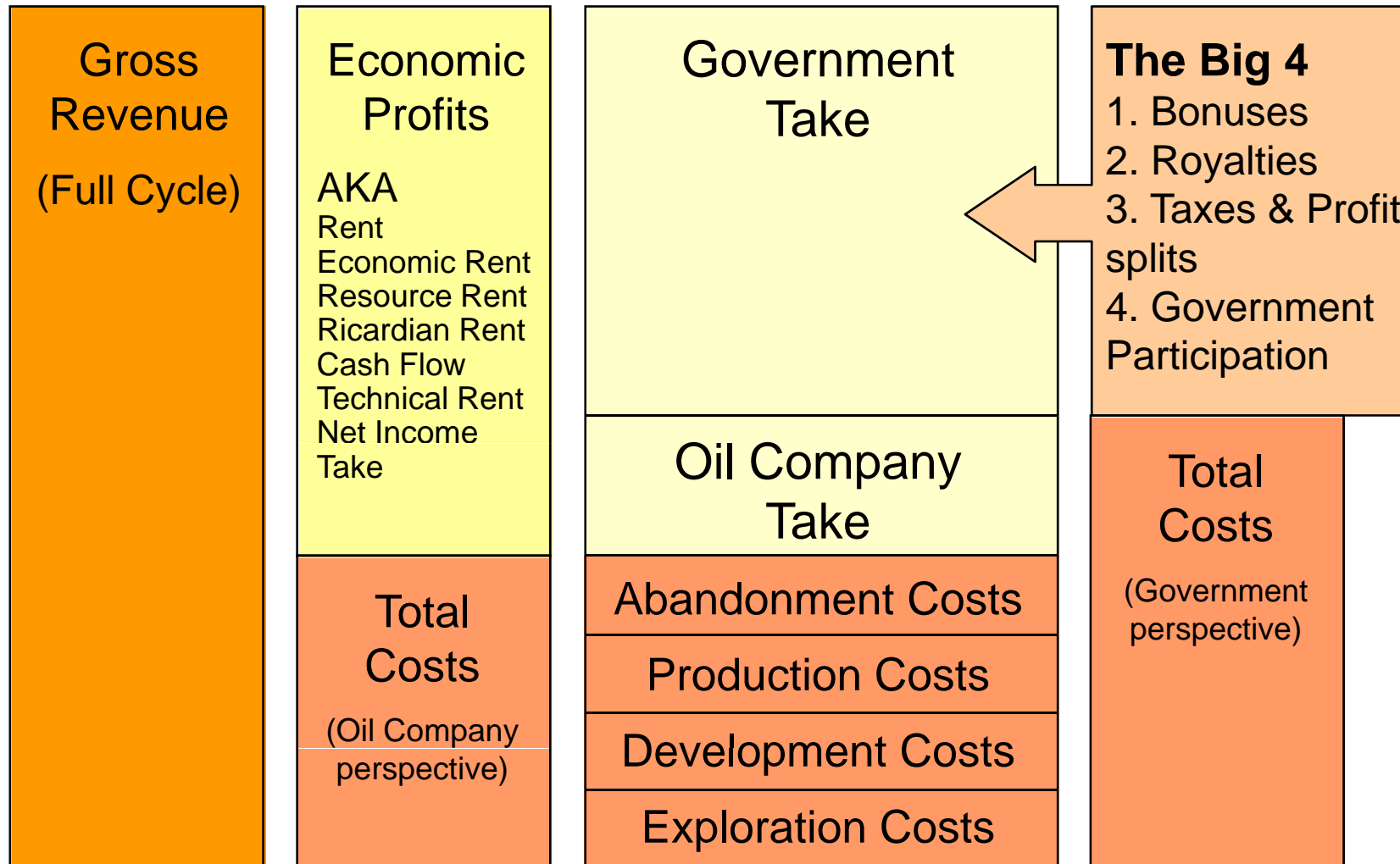
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The fiscal system hierarchy is made up of Royalty Tax Systems and Contractual Based Systems.



Governments have four main means by which they “Take.”

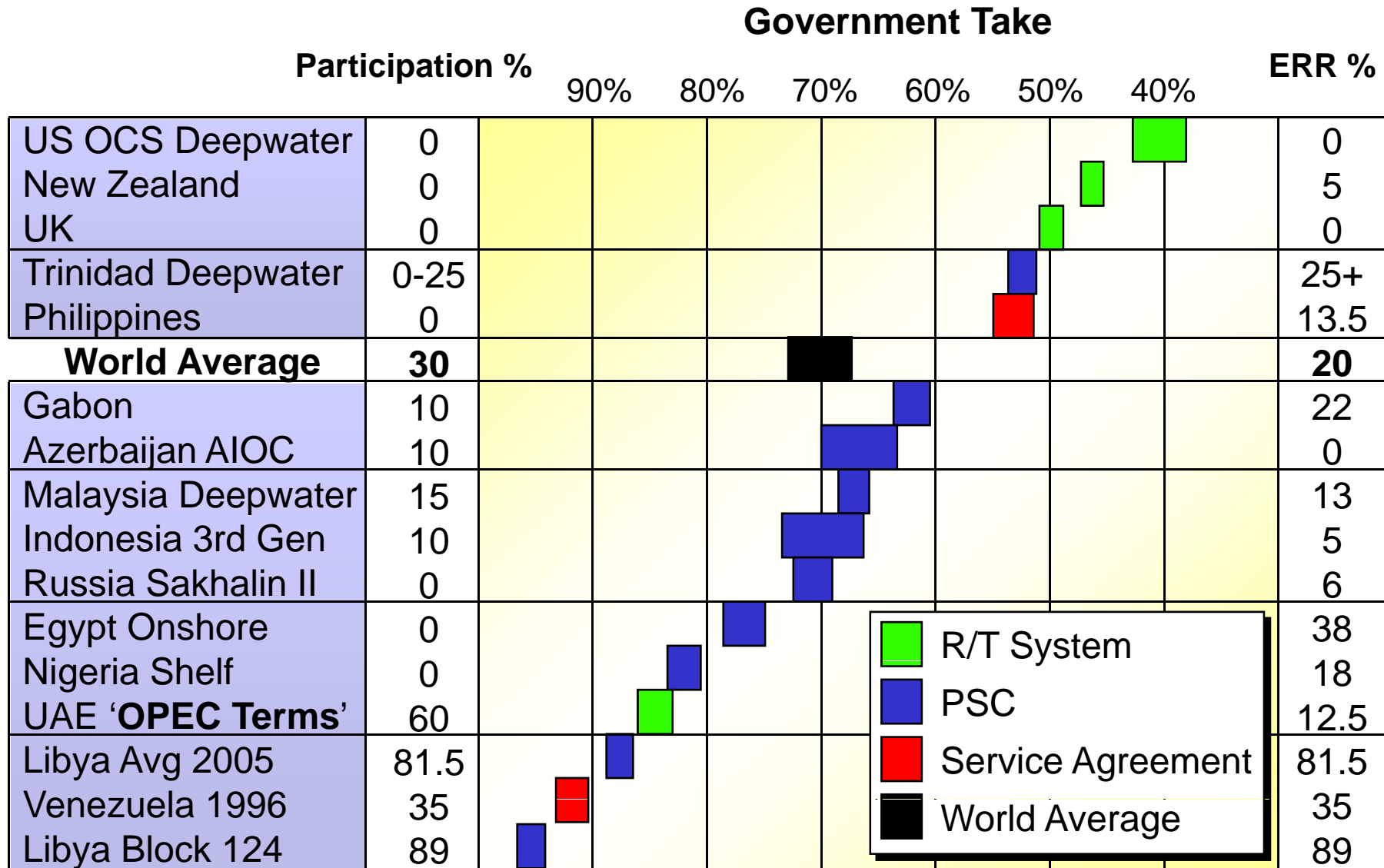


Fiscal system design and analysis must consider a variety of metrics:

Division of Profits Or “Take”	Percent of economic profits the Host Government or contractor gets.
Effective Royalty Rate (ERR)	The minimum percent of gross revenue or production a Host Government can expect in any accounting period.
Savings Index	Do contractors have an incentive to save?
Lifting Entitlement	What barrels are contractors entitled to lift?
Progressiveness	Does/should Government Take increase with more profitable projects?



The world average government Take is roughly 70% - OPEC terms are 85% - for oil.



The trends in fiscal system design we see can be grouped into four main categories .

- Legal
 - Ownership & transfer of hydrocarbons & facilities
- Philosophical
 - Control and ownership
- Economic
 - Division of profits – effective royalty rates . . .
- Technical
 - Cost recovery – fees



A quick look at events that are impacting fiscal system design and analysis.

- **The oil price spike of 2008** – huge impact on fiscal system design economics – move toward progressive systems.
- **The current global recession** – impacts on demand, supply, investment and overall fiscal terms.
- **Production declines** – many governments respond by front end loading their fiscal systems.
- **Recent developments in shale gas.**



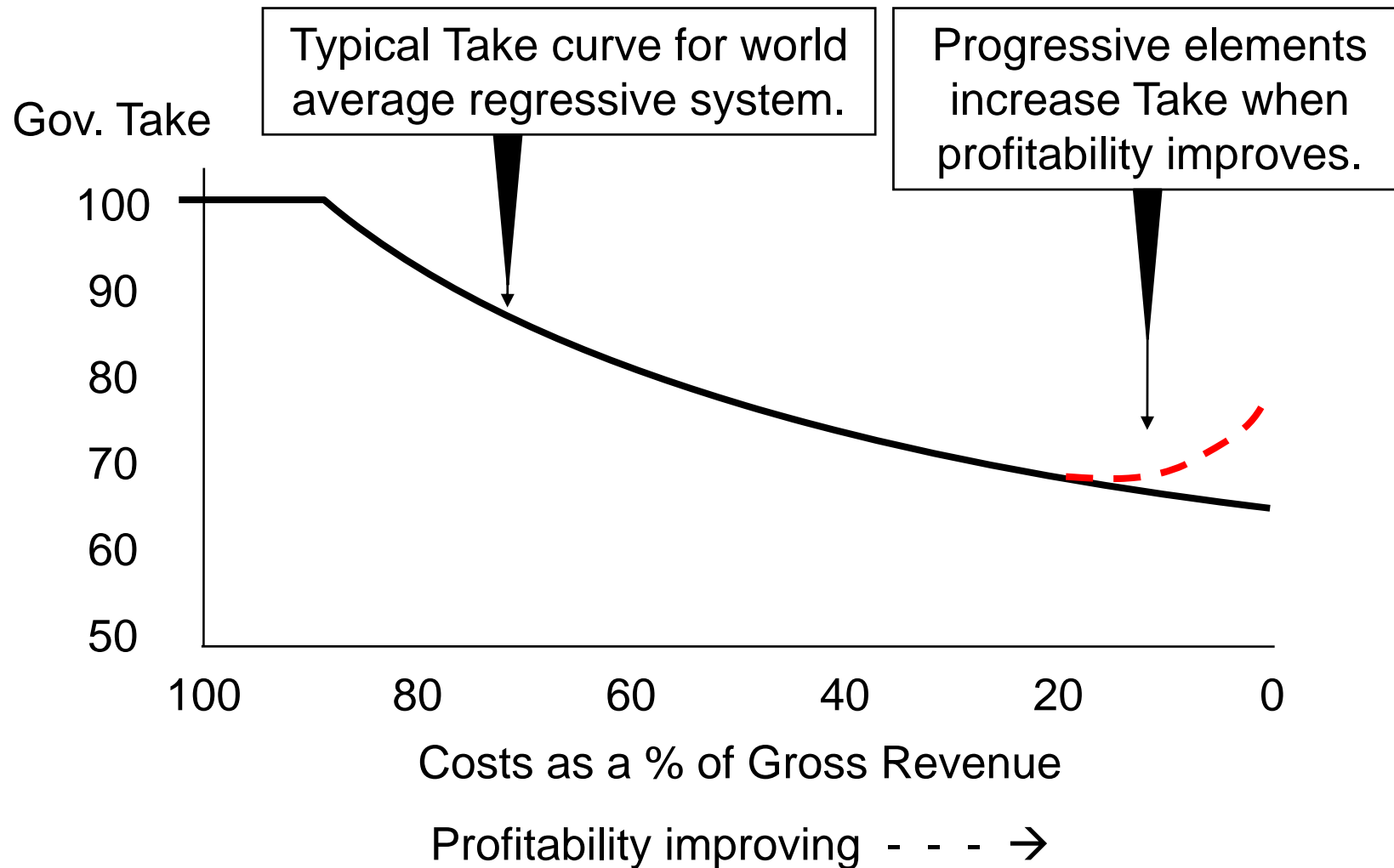
The 2008 oil price spike had a huge impact on fiscal system design.

- Many oil producers lost significant potential revenue because fiscal systems were **regressive**.
 - Governments are employing various fiscal elements¹ to make their fiscal systems **progressive**.
 - Progressive systems are inherently more stable because they are generally considered to be more fair.

¹ sliding scales that manipulate royalties, taxes, etc.



Many fiscal systems are regressive – when profitability improves, government Take declines.



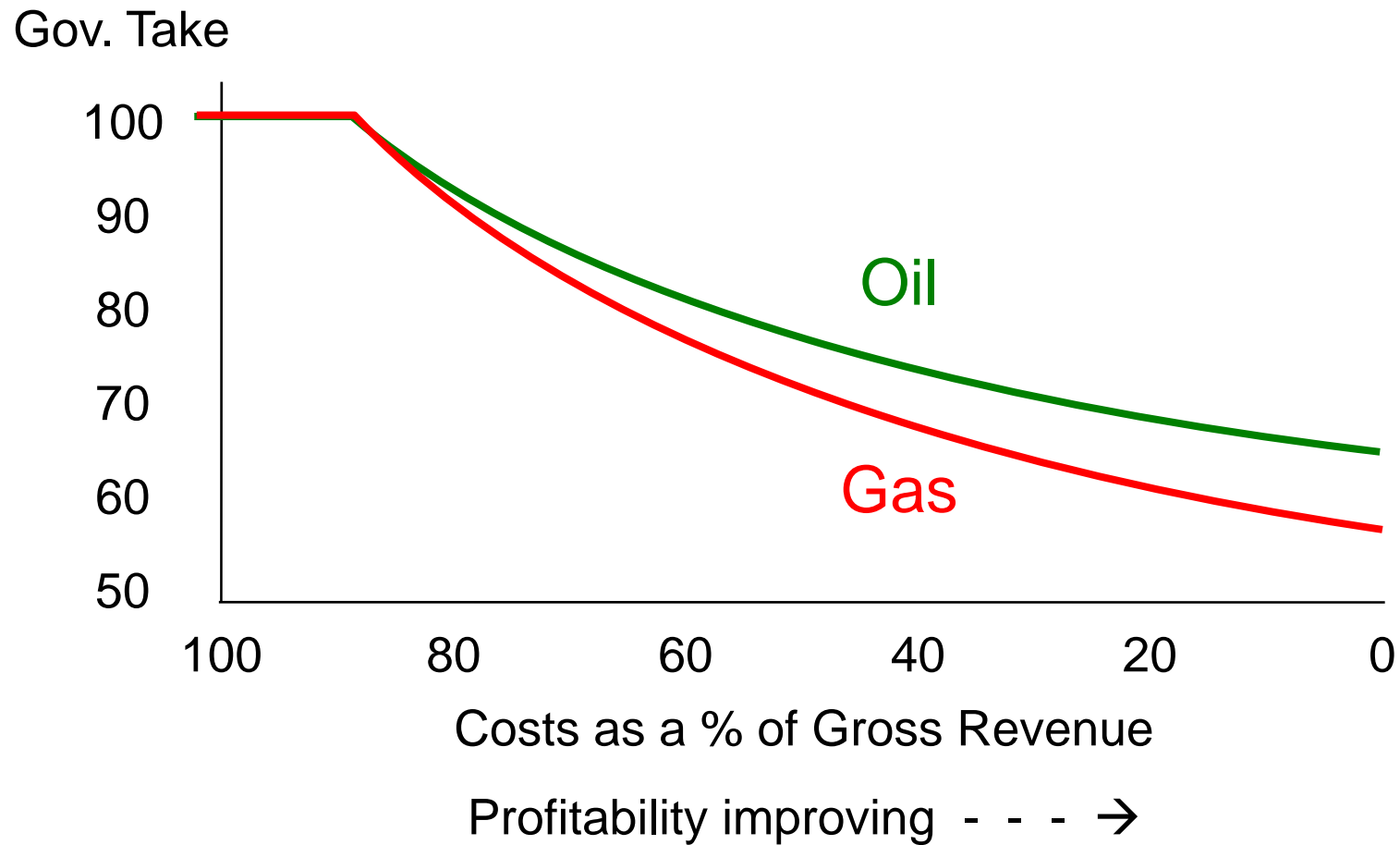
An example of a progressive element – volume and value based royalty.

Volume		Value	
MBOPD	Royalty	\$/BBL	Royalty
0 – 10	5%	< 40	10%
10 – 20	7.5%	40 – 60	15%
20 – 30	10%	60 - 80	20%
> 30	12.5%	> 80	25%

With low production, 5 MBOPD, and \$70/BBL oil, the royalty will be 5% + 20% = 25%.



Gas terms are generally lower than oil terms.



Early contracts targeting oil but often included gas terms as shown below.

MBOPD	Government Share	
	Profit Oil	Profit Gas
0 – 10	40%	30%
10 – 20	50%	40%
20 – 30	60%	50%
> 30	70%	60%

We are expecting to see contracts focusing on gas development only.



The current global recession however is causing some governments to wait-and-see.

- The recession is putting downward pressure on some governments hoping to improve fiscal systems:
 - Add progressive elements.
 - Change government Take
 - Increase Effective Royalty Rates

Changes can be viewed as tougher terms which run the risk of reducing investment.



The price spike followed by the global recession put unique pressure on some governments.

- Some governments took on additional responsibilities when revenue was increasing:
 - They added services
 - Took on small to medium scale infrastructure projects
 - Agreed to provide additional jobs

- . . . then the revenue stream collapsed!



Many governments, dependent on oil & gas revenue are facing production decline.

- So system design attempts to:
 - Avoid disturbing current revenue stream
 - Front end load systems with:
 - Signature bonuses
 - Royalties
 - Limiting cost recovery
 - Attract investment to bolster production



Shale gas development in N. America appears to be a game changer.

- Shale gas is having a huge impact on gas projects world wide.
- It helped push the US past Russia in gas production last year.
- It is having a huge impact on LNG and other exporting plans.

Two other speakers will be talking about shale gas . . .



One size does not fit all in fiscal system design.

- We are seeing a divergence of terms for various plays:
 - Conventional oil vs. heavy oil, oil sands, and oil shale
 - Conventional gas vs. tight gas, shale gas, and coal bed methane.
 - Enhanced oil recovery
 - Old oil and new oil or gas
- Government Take for gas still much less than oil – probably getting worse.



Runaway expectations are a major problem with energy and infrastructure projects.

- Controlling expectations is critical to maintaining smooth operations – that control includes – if possible:
 - Politicians
 - People
 - Investors
 - NGOs and the press





Muchas Gracias

