

# **Saudi Aramco's Downstream Strategies**

“The Changing Role of National Oil Companies  
in International Energy Markets”

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# Saudi Aramco's downstream investments

- ▶ Saudi Aramco plans significant expansions in domestic and overseas downstream capacities.

## Main refining projects

Location	Added capacity	Partner	Status	Start-up
Fujian, China	+160 kb/d	ExxonMobil, Sinopec	Under construction	2008-09
Seosan, ROK	+480 kb/d	S-Oil	BOD approved	2010
Yanbu, KSA	+400 kb/d	ConocoPhillips	MOU signed	2011
Jubail, KSA	+400 kb/d	Total	MOU signed	2011
Port Arthur, US	+325 kb/d	Shell	Planned	2010
Qingdao, China	+200 kb/d	Sinopec, Local gov't	Planned	2012

## Refining / petrochemical integration projects

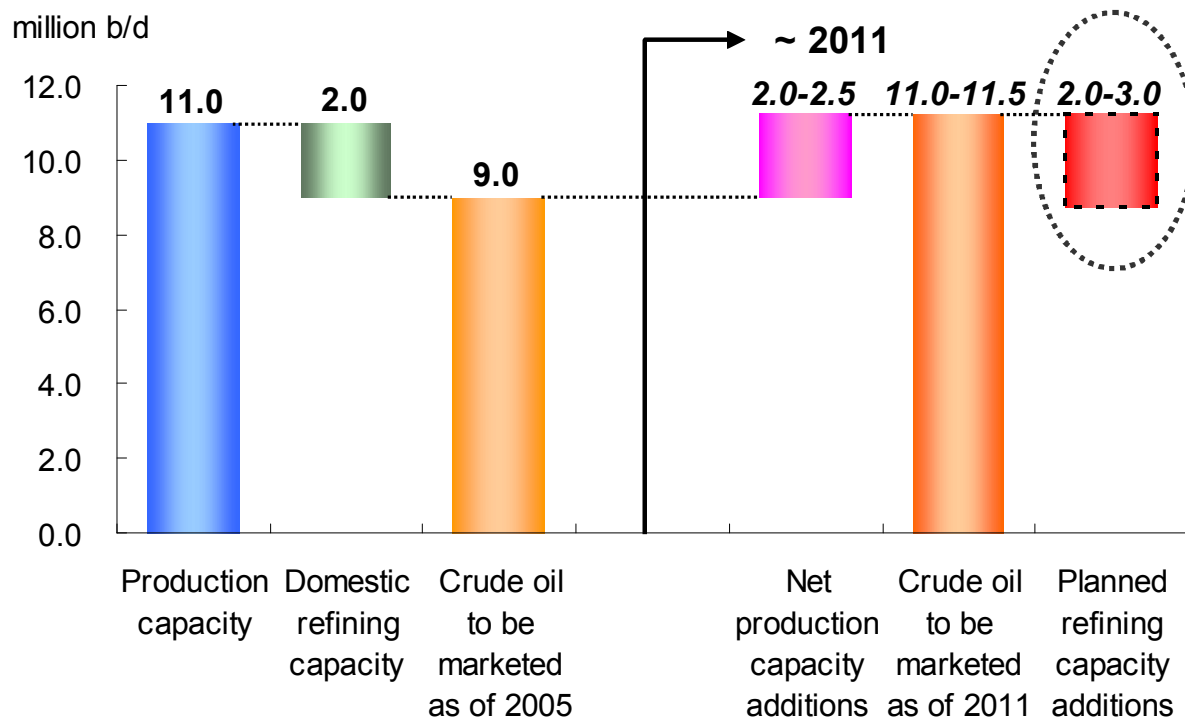
Location	Plants	Partner	Status	Start-up
Rabigh, KSA	Ethane cracker, HOFCC	Sumitomo	Under construction	2008
Ras Tanura, KSA	Ethane cracker, Aromatics	Dow	MOU signed	2012

# Why invest in downstream?: Quantity reason

- ▶ Upstream capacity expansion creates additional marketing needs of crude oil.
  - Saudi Aramco has to find outlets to take the added barrels.
  - Such additional outlets should have a growing markets nearby and/or has to overcome a NIMBY issue.

## Saudi Arabia's crude oil for export (Estimate)

Note: All figures are presenter's estimate based on publicly available information.



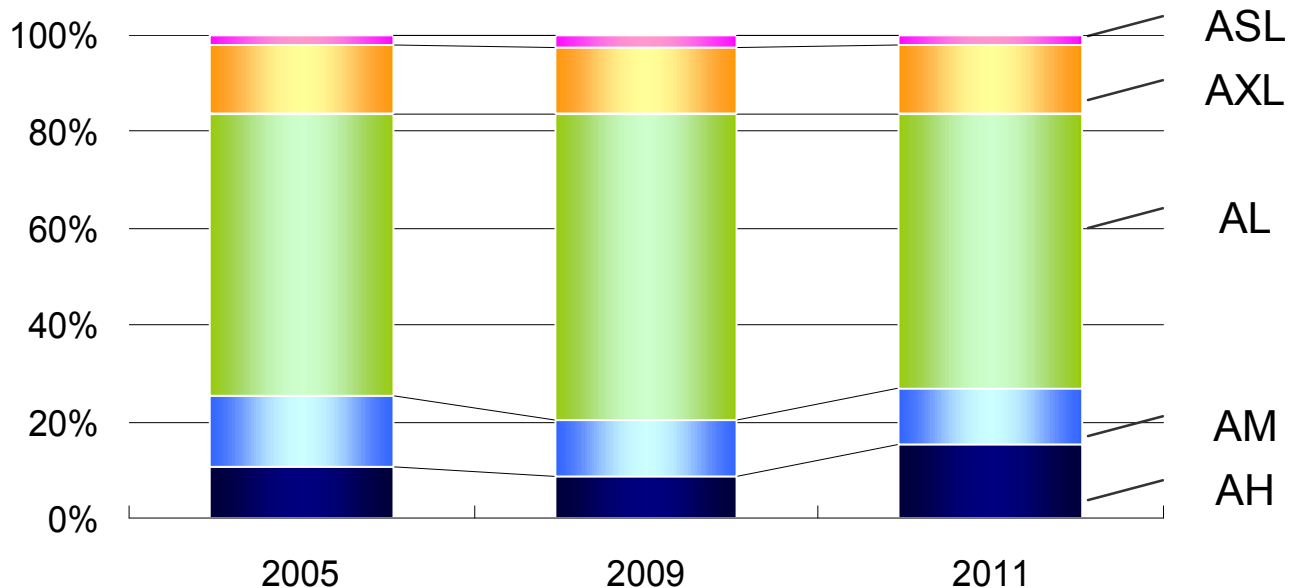
# Why invest in downstream?: Quality reason

- ▶ The average quality of Saudi Arabian oil will become lighter until 2009; but will become heavier afterward.
  - How to sell unpopular heavier and sourer grades is a big challenge for Saudi Aramco.
  - Saudi Aramco needs to secure refining capacities that can process heavier grades in order to avoid deep discounts to such grades.

## Shares of each grade's production capacity (Estimate)

Note: All figures are presenter's estimate based on publicly available information.

(ASL: Arab Super Light, AXL: Arab Extra Light, AL: Arab Light, AM: Arab Medium, AH: Arab Heavy)



# Implications

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- ▶ Saudi Aramco as a “downstream major”
  - Its influence over the world oil market increases as it becomes a significant product supplier beyond a crude oil supplier.
- ▶ Economics of new downstream investments
  - Profitability is subject to cost inflation and light-heavy price spread; but may be enhanced if combined with a petrochemical project.
- ▶ Impacts on the world product market
  - A large portion of products of new refineries in Saudi Arabia will be exported to Europe because of their high middle distillate yield.
  - The targeted market of new Asian refineries is China; but the Korean project may export products to US west coast, too.
- ▶ Solutions to an increase in heavier grade production
  - A packaged solution for heavy oil resources is a potential item for future collaboration with Saudi Aramco.