



# Strategic Plan 2009-2013

January 26, 2009



**PETROBRAS**

# DISCLAIMER

The presentation may contain forecasts about future events. Such forecasts merely reflect the expectations of the Company's management. Such terms as "anticipate", "believe", "expect", "forecast", "intend", "plan", "project", "seek", "should", along with similar or analogous expressions, are used to identify such forecasts. These predictions evidently involve risks and uncertainties, whether foreseen or not by the Company. Therefore, the future results of operations may differ from current expectations, and readers must not base their expectations exclusively on the information presented herein. **The Company is not obliged to update the presentation/such forecasts in light of new information or future developments.** Figures for 2009 on are estimates or targets.

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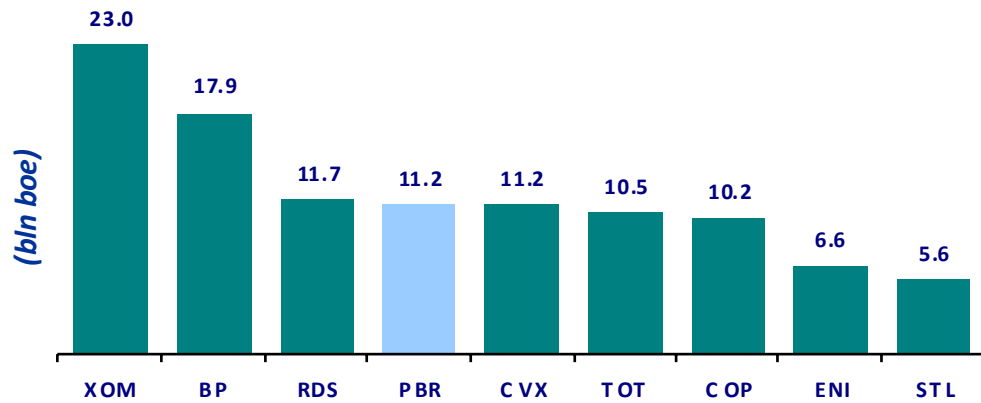
## CAUTIONARY STATEMENT FOR US INVESTORS

The United States Securities and Exchange Commission permits oil and gas companies, in their filings with the SEC, to disclose only proved reserves that a company has demonstrated by actual production or conclusive formation tests to be economically and legally producible under existing economic and operating conditions. **We use certain terms in this presentation, such as oil and gas resources, that the SEC's guidelines strictly prohibit us from including in filings with the SEC.**



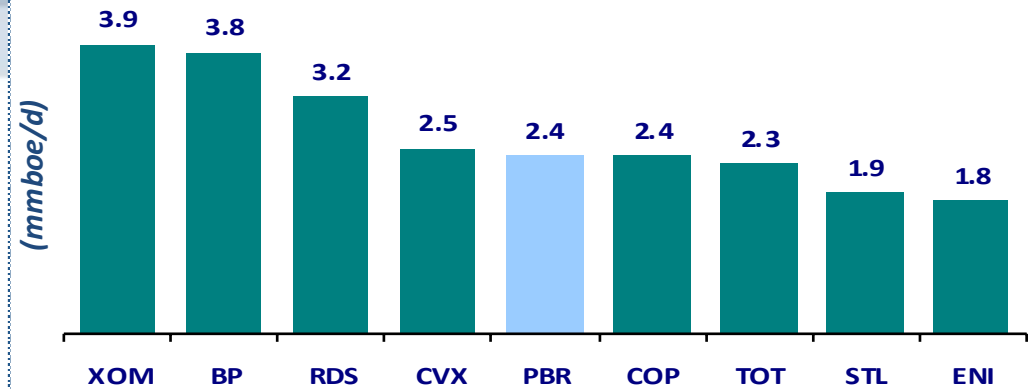
# A WORLD-CLASS, PUBLIC, INTEGRATED ENERGY COMPANY

## 2008 Proven Reserves (SEC)



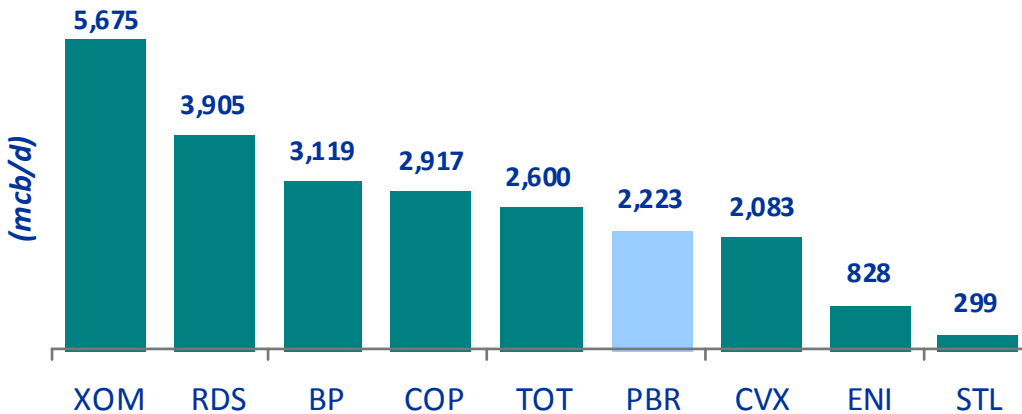
Source: Evaluate Energy and Company reports

## 2008 Oil & Gas Production



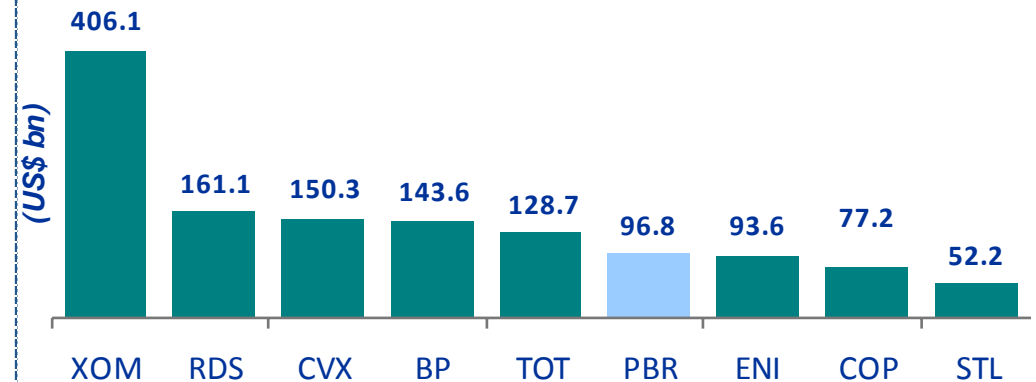
Source: Evaluate Energy and Company reports

## 2008 Refining Capacity



Source: PFC Energy WRMS  
(barrels per calendar day, considering company % shareholding and including JVs)

## Market Value as of December 31, 2008



Source: Bloomberg

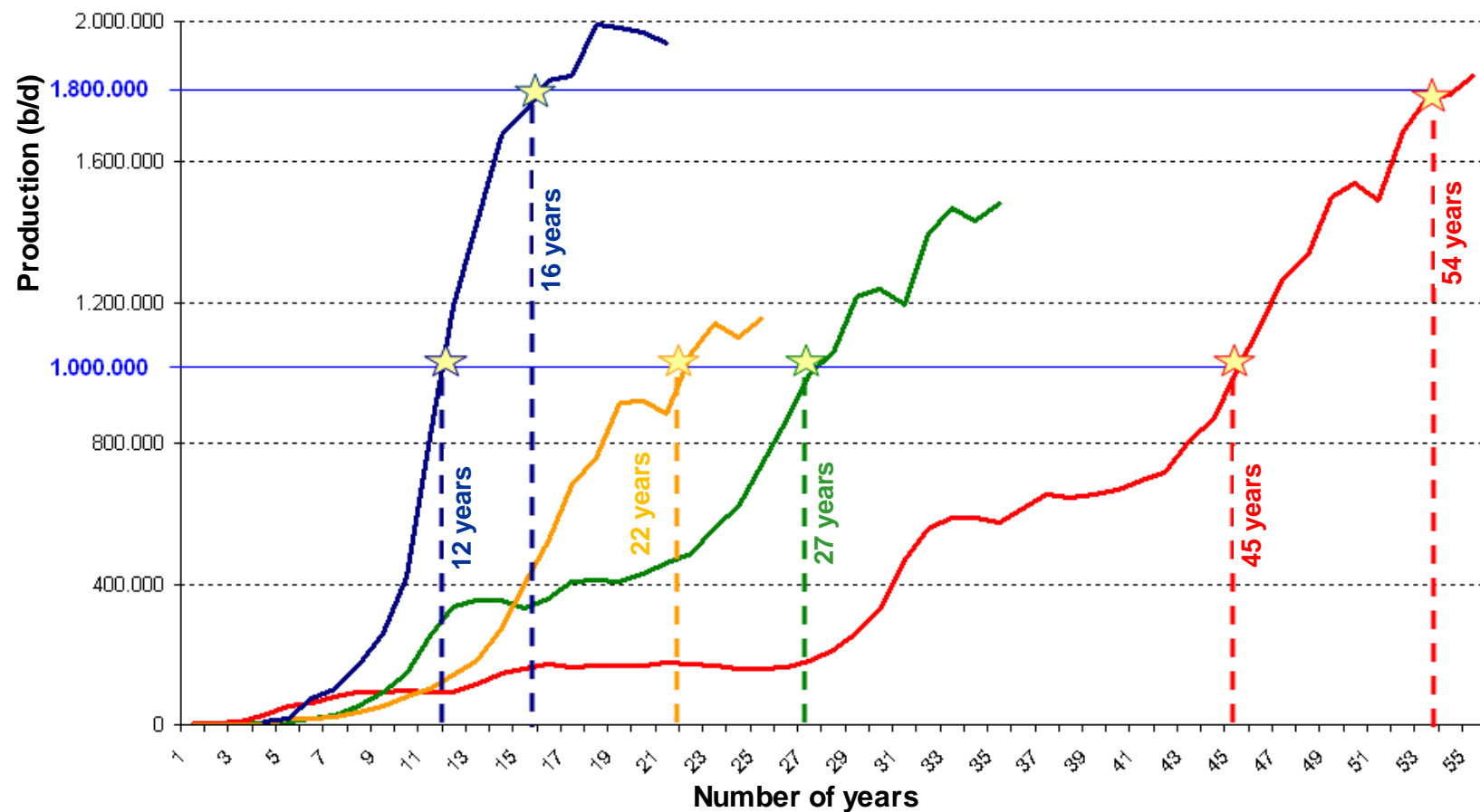


## EXCELLENT PERFORMANCE

Since August 2007 when we released our last strategic plan, we have:

- Announced 10 billion boe in potential recoverable reserves (from Pre-salt blocks of Tupi, Iara, Espírito Santo pre-salt and Golfinho ring-fence)
- Increased production by 7% to 2,436 thousand boe/d
- Increased gas production by 21%
- Added +one million bbls of new production capacity
- Increased net revenues 54%<sup>1</sup>
- Increased net income by 56%<sup>1</sup>

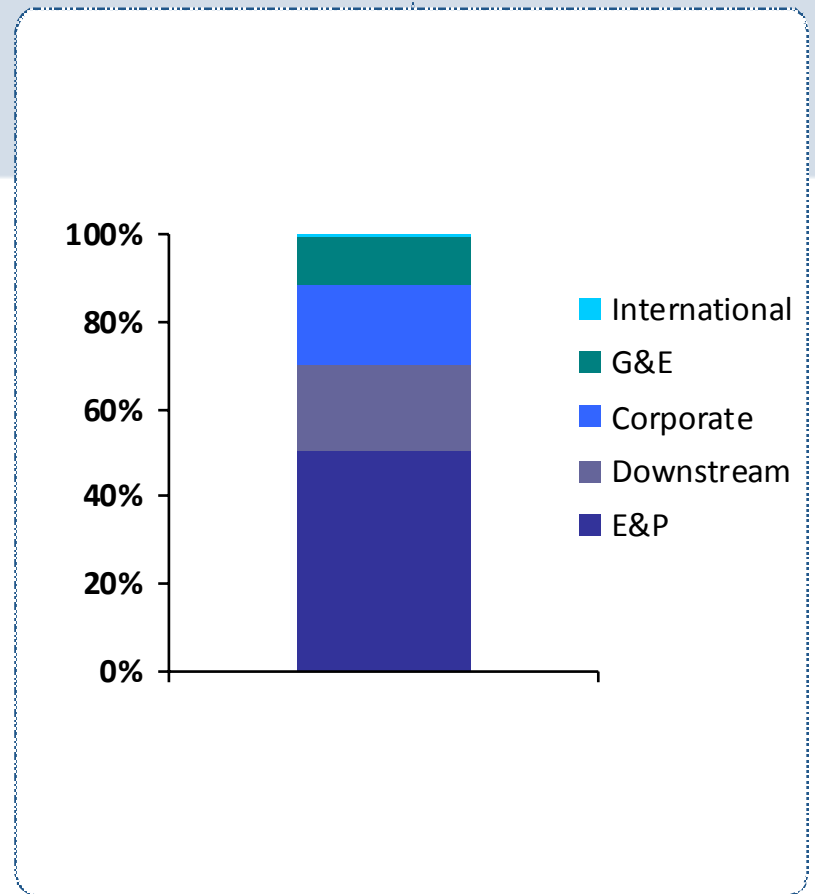
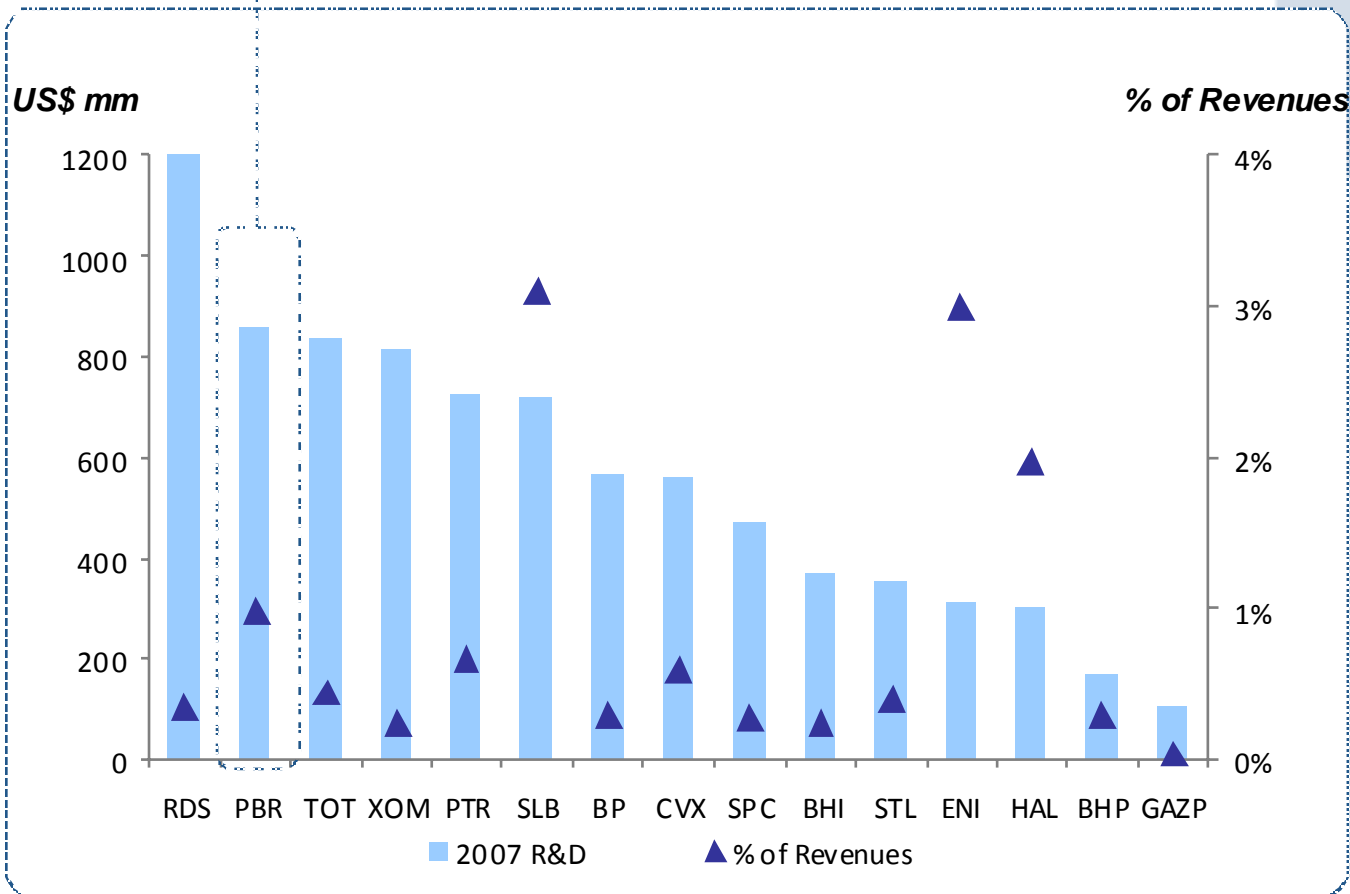
# IMPRESSIVE RECORD OF ACCELERATING DEVELOPMENT



— Production since founding of Petrobras (1954)    
 — Discovery of Garoupa in the Campos Basin (1974)    
 — Discovery of giant fields in Campos Basin inc. Albacora (1984)    
 — Discovery of the Pre-salt, including Parati (2006)

# A CONTINUED COMMITMENT TO R&D...

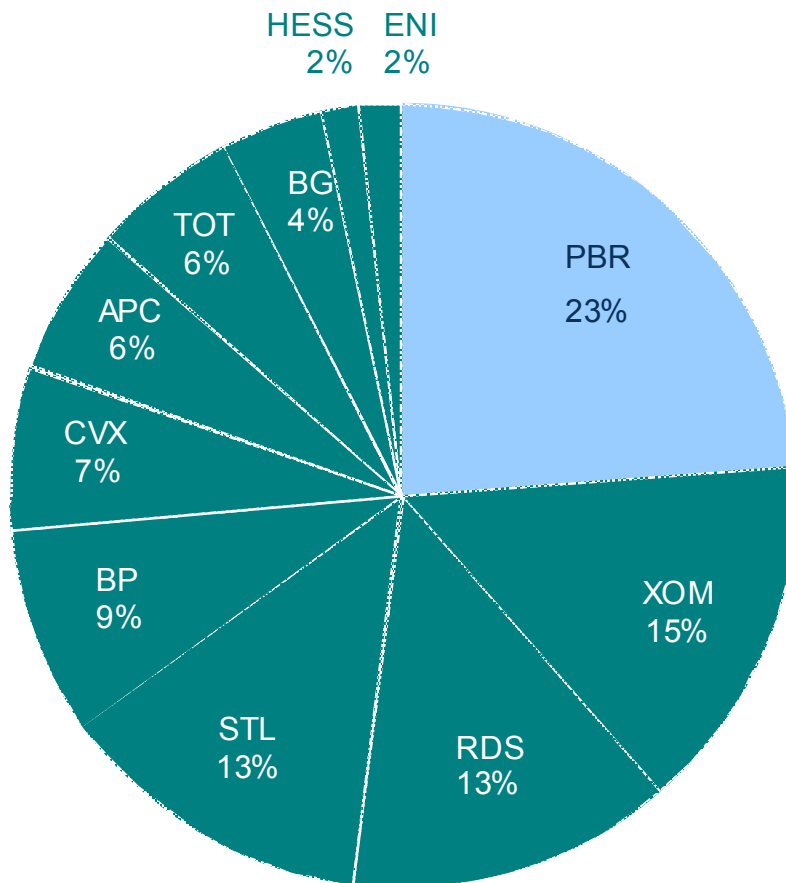
## Top 10 2007 R&D Spenders in the Energy Sector



# GIVES US A COMPETITIVE ADVANTAGE IN THE DEEPWATER

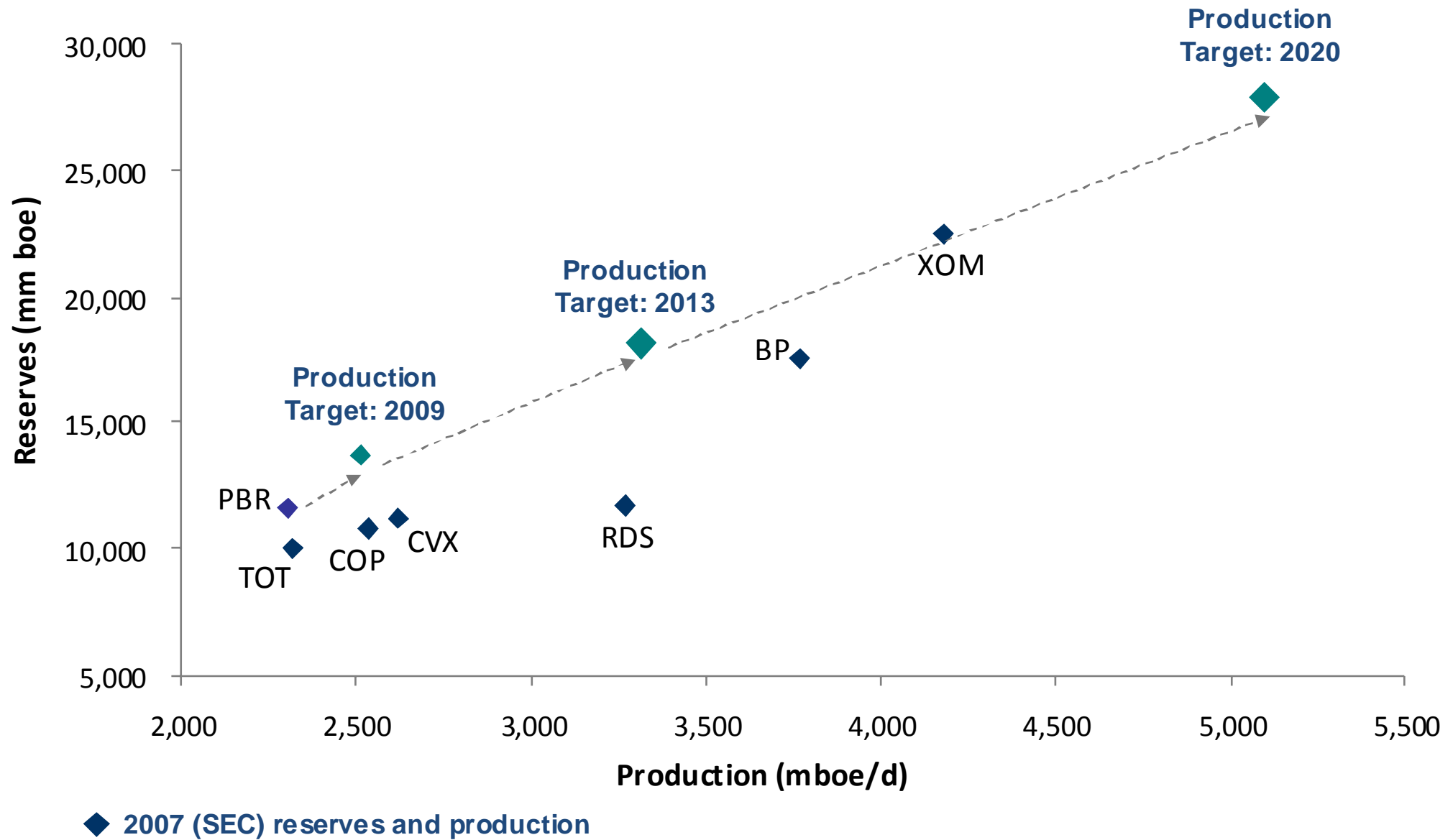
Petrobras operates **23%** of global deepwater production

2007 Gross Global Operated Deepwater Production (mboe/d)



Source: PFC Energy | Note: Estimated volumes above reflect what operators are responsible for producing, not what they keep on a net working interest or entitlement basis. Minimum water depth is 300 meters; eleven operators above account for 94% of global deepwater production in 2007.

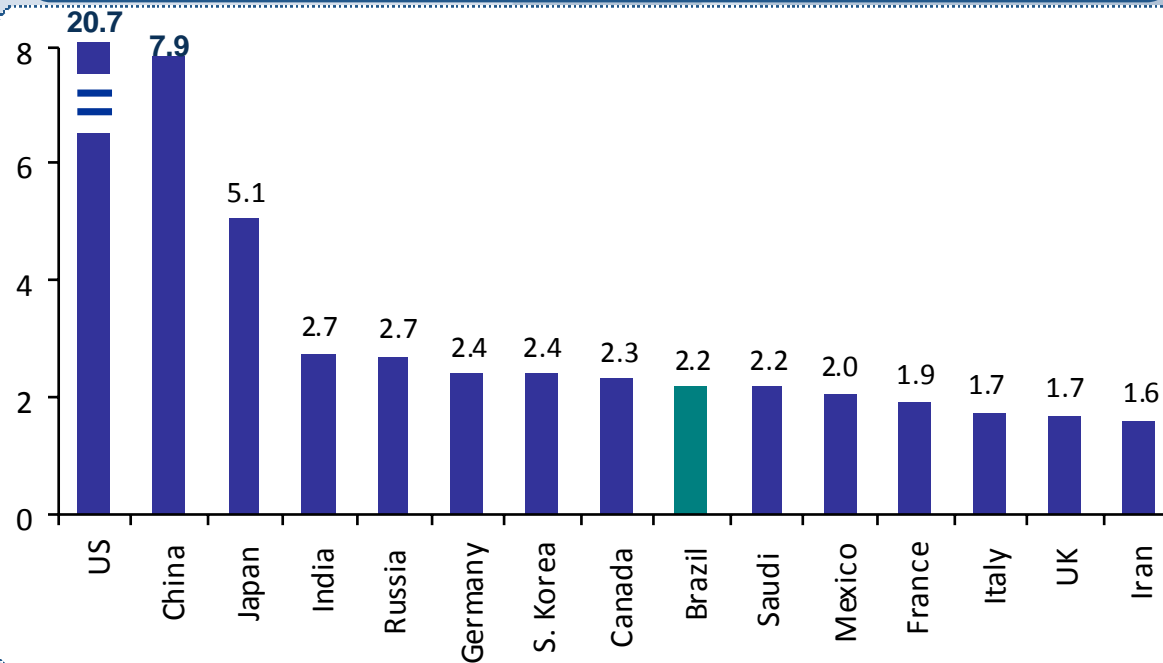
# STRATEGIC VISION: TO BE ONE OF THE WORLD'S FIVE LARGEST PUBLICLY TRADED OIL PRODUCERS





# DOMINANT POSITION IN A LARGE AND GROWING EMERGING MARKET

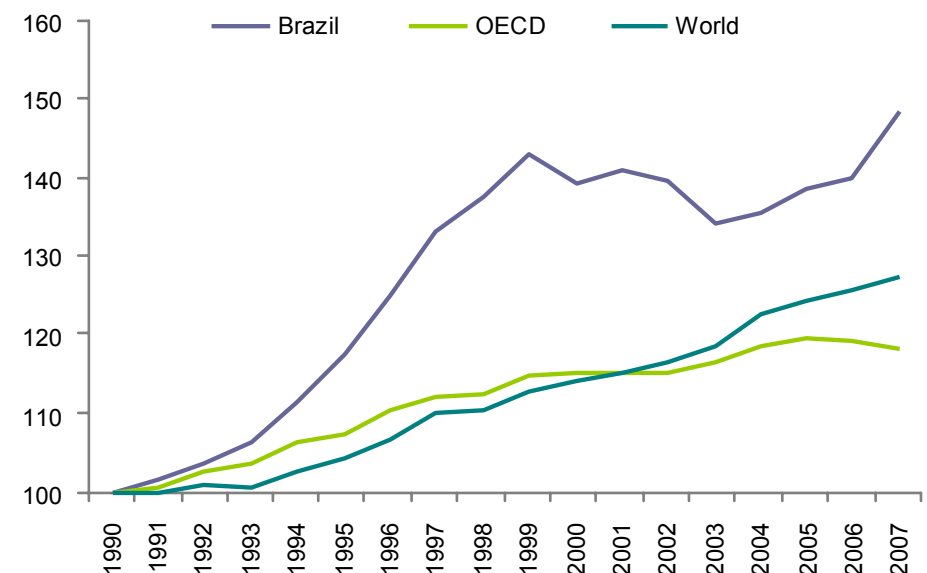
## 2007 Total Oil Consumption by Country (mmbo/d)



■ **Brazil is world's ninth largest oil consumer**

- **Brazil oil consumption growing at 2.4% p.a.**
- **OECD oil consumption growing at 1% p.a.**

## Total Oil Consumption mb/d (index)



# HIGH-POTENTIAL PORTFOLIO IN ONE OF THE WORLD'S MOST EXCITING PROVINCES...



82% of our total crude production currently comes from Campos Basin

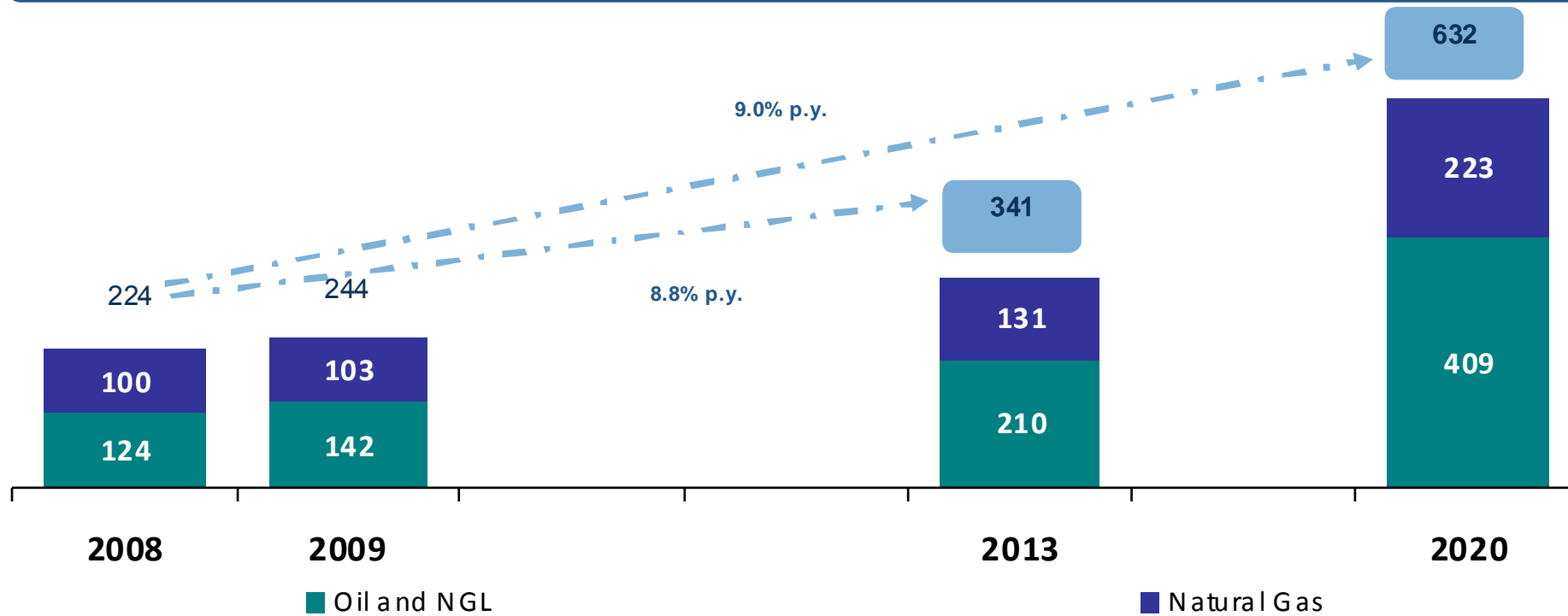
Significant light oil and gas discoveries have been made in the Espirito Santo Basin

Development of the Santos Basin sub-salt play will drive our long-term production growth

○ Circle size indicates estimated reserves

# AND APPLYING UNIQUE EXPERTISE TO SELECTED INTERNATIONAL OPPORTUNITIES

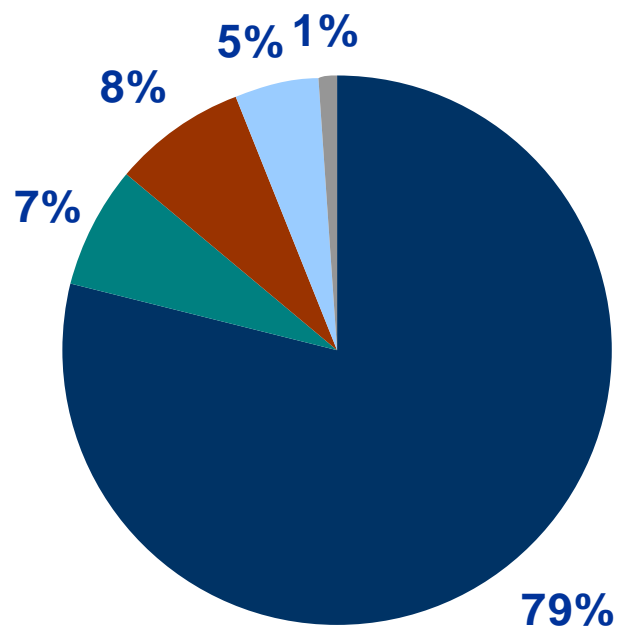
Projected equity production from Petrobras international operations  
(Thousand boed)



# INTERNATIONAL INVESTMENTS

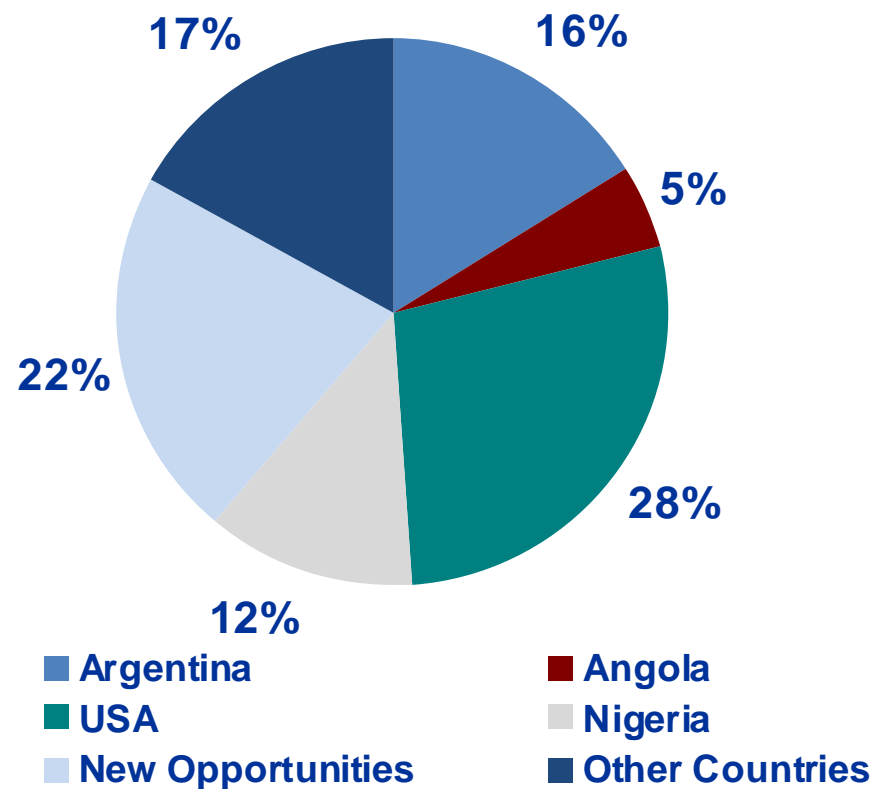
Total Investments  
US\$ 15.9 billion

## BUSINESS AREA



■ E&P  
■ G&E  
■ Corporate  
■ RTCP  
■ Distribution

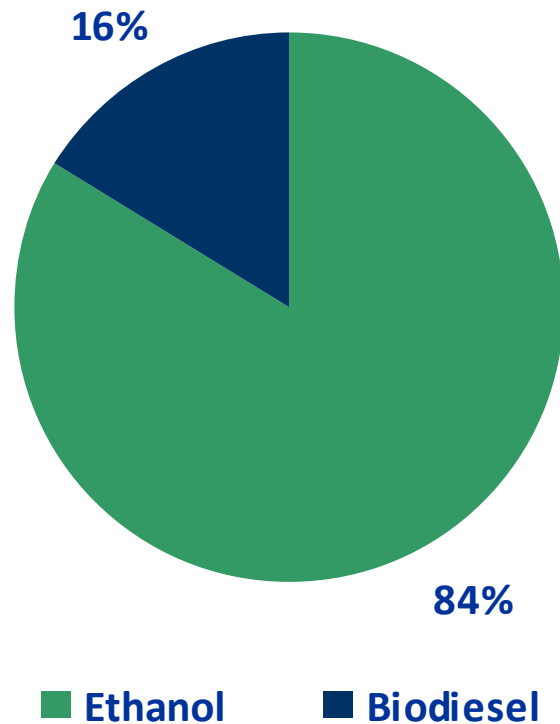
## COUNTRY



■ Argentina  
■ USA  
■ New Opportunities  
■ Angola  
■ Nigeria  
■ Other Countries

# GROWING OPTIONS IN BIOFUELS AND LOW-CARBON TECHNOLOGIES...

Biofuels Investments  
US\$ 2.8 billion

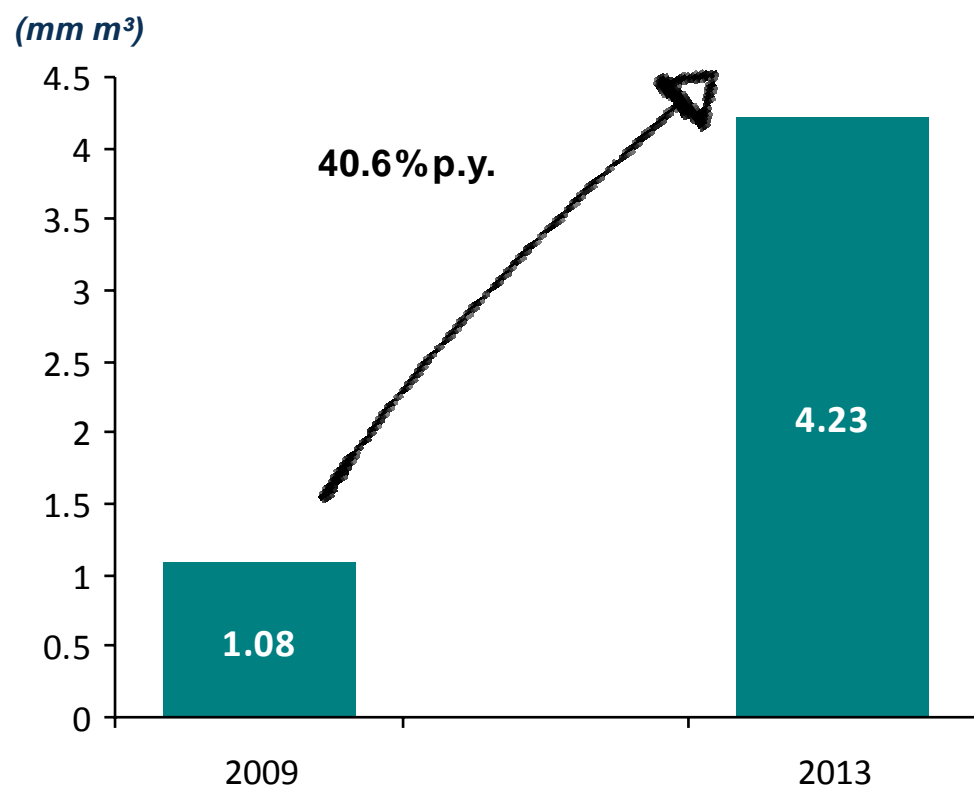


**STRATEGY:** To establish a global presence in the biofuels segment, with a particular focus on biodiesel and ethanol

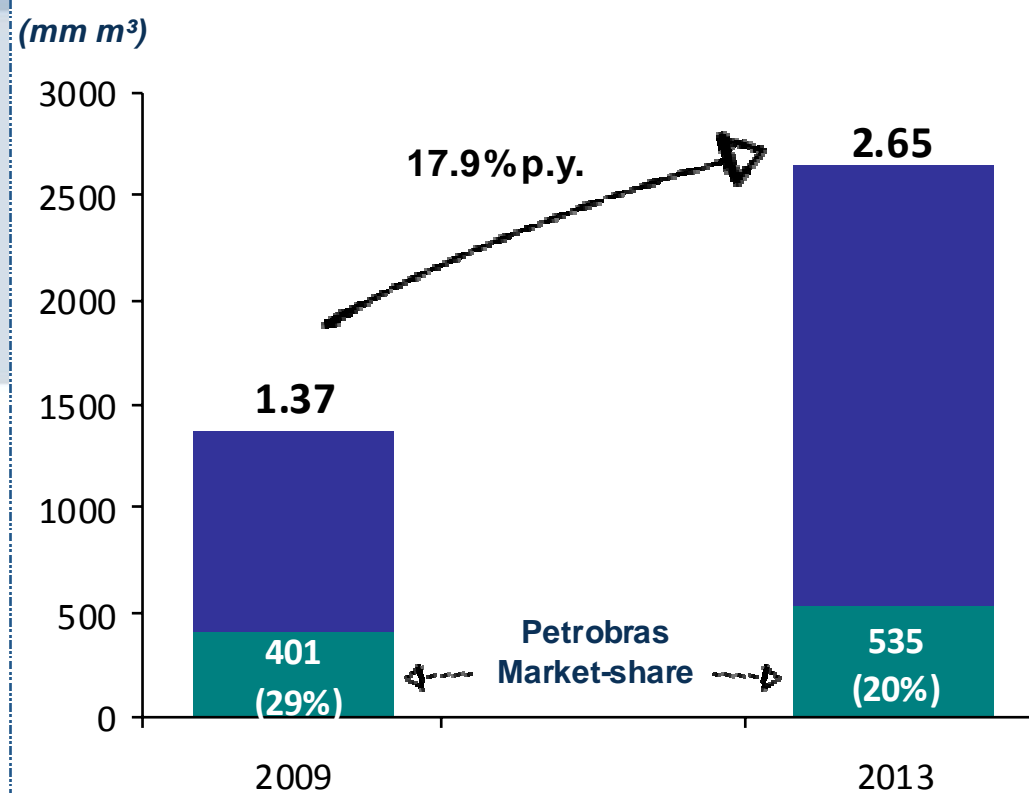
- Participate in Brazilian ethanol chain and develop global markets for Brazilian ethanol
- Participate sustainably in the biodiesel business in Brazil and with selective international investments
- Develop competitive technologies to produce biofuels from residual biomass

# WHICH CONTINUE TO INCREASE IN IMPORTANCE

## Ethanol Exports



## Brazilian Biodiesel Market and Petrobras Production Target\*



# IMPORTANT DECISIONS MUST BE MADE IN A TIME OF UNPRECEDENTED UNCERTAINTY...



TIUO	ULTIMO	OSC	ATIUO
OTS3	57.00	0.0	NETC4
RIS3	7.50	1.9	POH04
EGE3	22.00	0.1	SEBB11
NIVEL	II		SLED4
TIUO	ULTIMO	OSC	STBP11
CB4	9.20	2.2	SULA11
QUI1	28.69	1.4	SZPQ4
LL11	23.20	2.7	TAMM4
SC6	46.80	1.5	TRNA11
PL6	38.10	3.5	UOLL4
TC11	24.35	1.0	ATIUO
L4	20.50	0.2	ALPA4
TI1	35.00	1.4	ARCZ6
T3	19.18	0.4	



## GEOPOLITICS

- Global economic crisis
- Conflicts and wars
- Political tensions
- Environmental implications
- Elections
- Rising tides of nationalism



## VITAL RESOURCES

- Goods & services
- Human resources
  - Aging workforce
  - Difficulties in attracting new workers
  - Shortage of specialized candidates

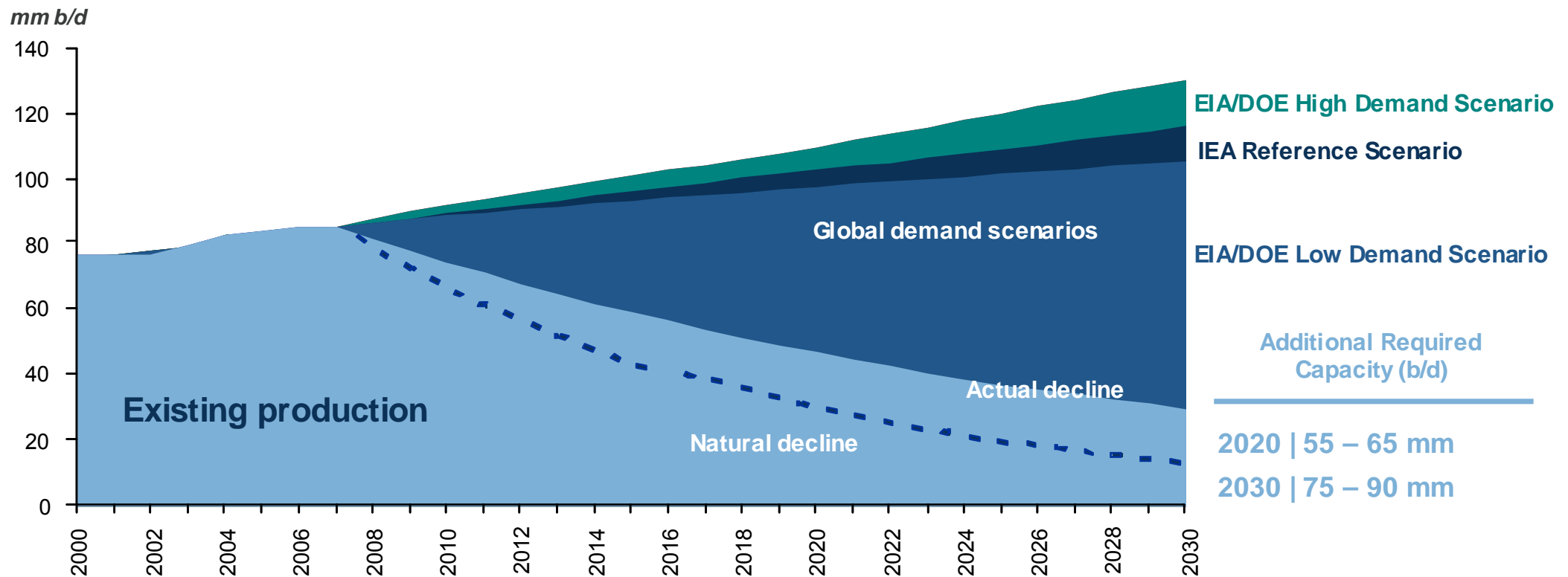


## LOOMING UNCERTAINTIES

- Oil prices
- Costs
- Future demand
- Future supply
- Competitiveness of biofuels
- Development of game-changing technologies

# HOWEVER, THE MEDIUM/LONG-TERM OIL MARKET OUTLOOK REMAINS VERY STRONG

## GLOBAL OIL DEMAND SCENARIOS

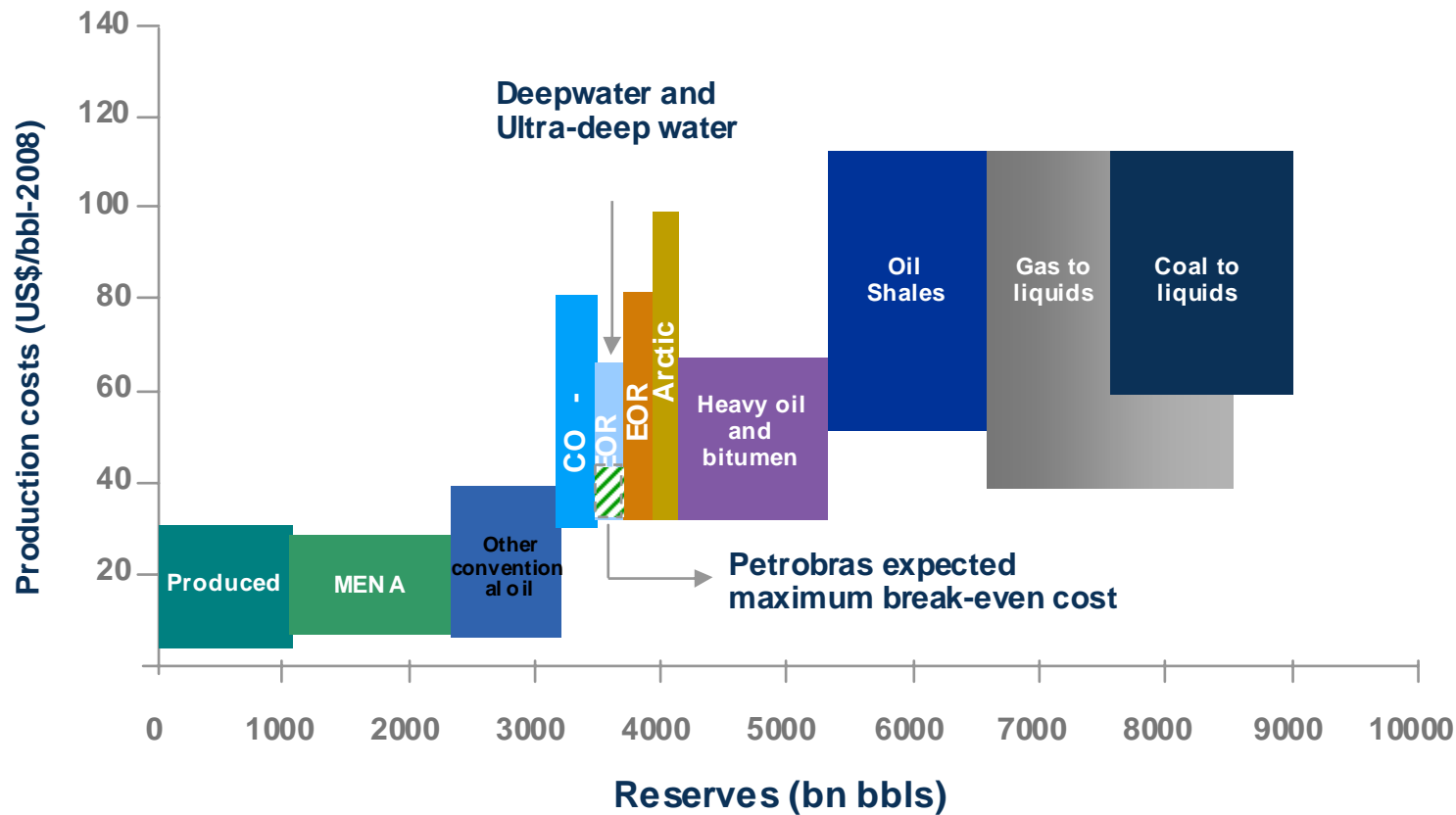


- Production in most non-OPEC countries is at a plateau or in decline;
- Global oil production capacity will be challenged to meet projected demand growth;
- Lower demand and capital spending during current down-cycle will postpone the crunch, but not eliminate it.



# AND PRE-SALT CAN BE DEVELOPED AT A RELATIVELY LOW COST

## Expected Costs of Production



# A VISION FOR INTEGRATED GROWTH TO 2020...

## Commitment to Sustainable Development

Integrated Growth

Profitability

Social & Environmental Responsibility

Expand operations in target markets for oil, oil products, petrochemicals, gas and energy, biofuels and distribution and to be recognized as a model integrated energy company

Grow oil and gas production in a sustainable manner, and become one of the five largest oil producers in the world

Capture value added through expansion of integrated operations in refining, commercialization, logistics & distribution with a focus on the Atlantic Basin and Far East

Consolidate leadership in the Brazilian natural gas market while establishing an international presence and increase domestic electricity generation business

Expand integrated petrochemicals operations while capturing synergies within Petrobras

To have a global presence in the biofuels business with participation in the biodiesel and ethanol businesses

Operational, management, human resources and technological excellence

E&P

Downstream  
(RTC)

Distribution

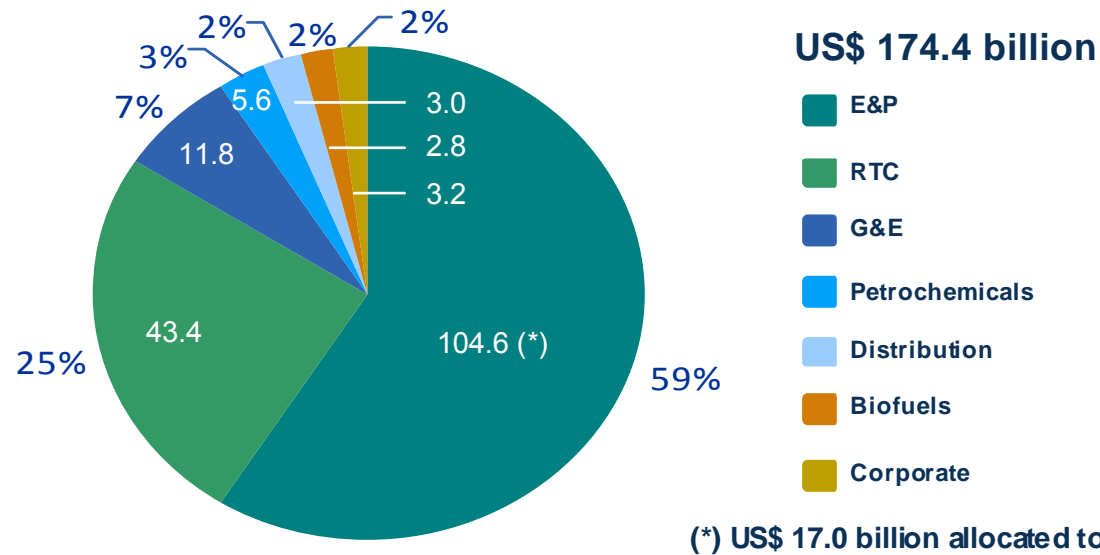
Gas & Energy

Petrochemicals

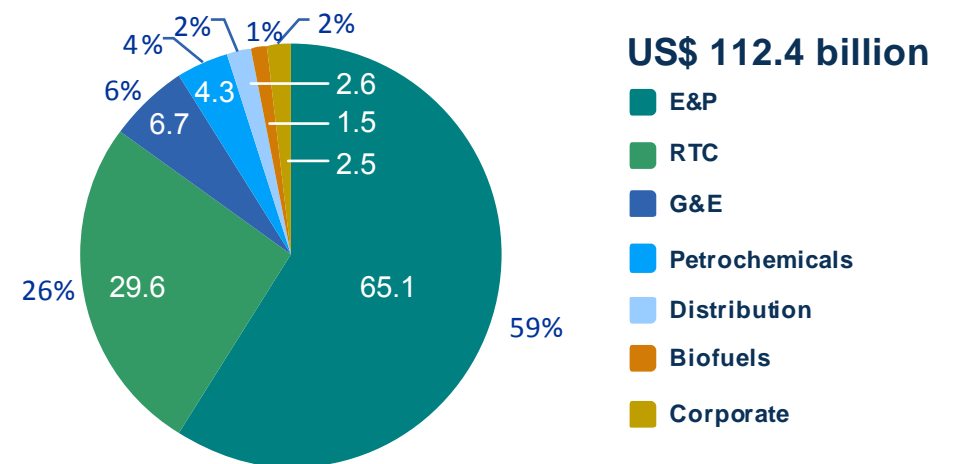
Biofuels

# AND A CAREFULLY CRAFTED SPENDING PROGRAM TO SUPPORT THAT VISION

## Business Plan 2009-2013

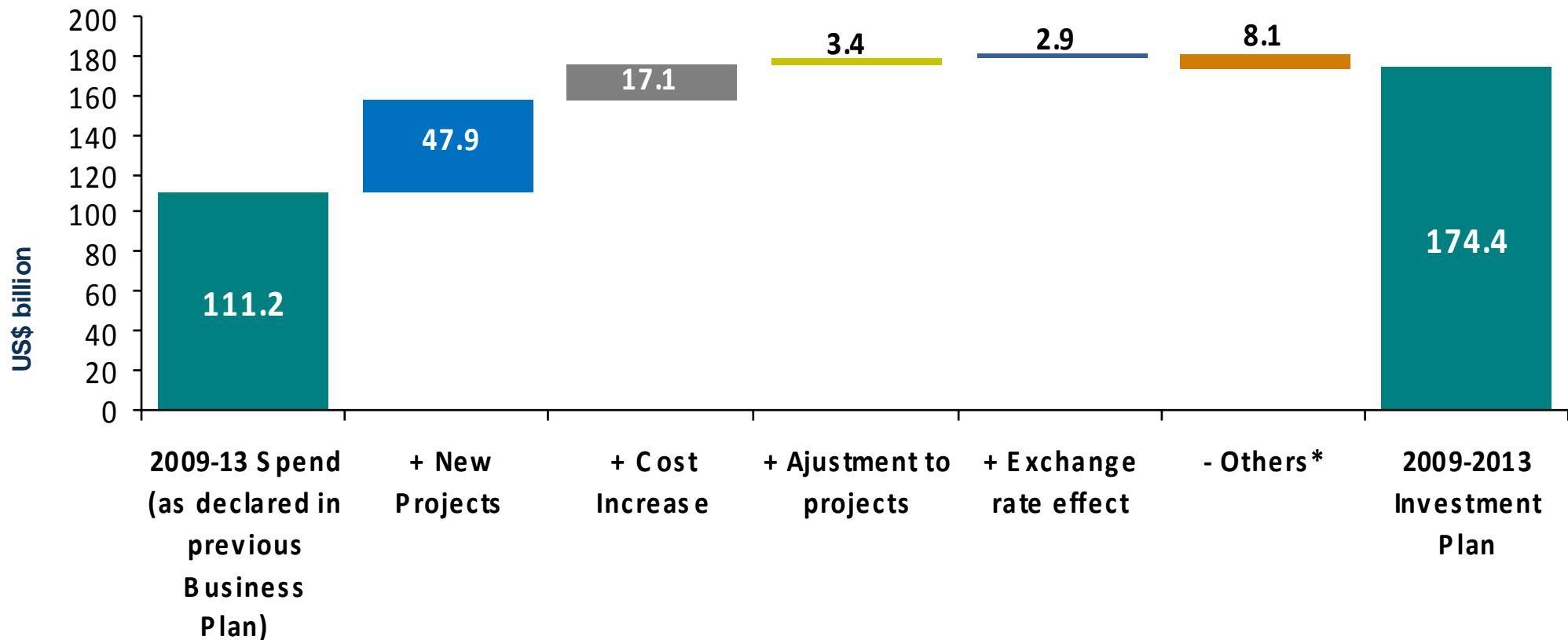


## Business Plan 2008-12



# WITH MOST OF THE INCREASES RELATED TO NEW PROJECTS

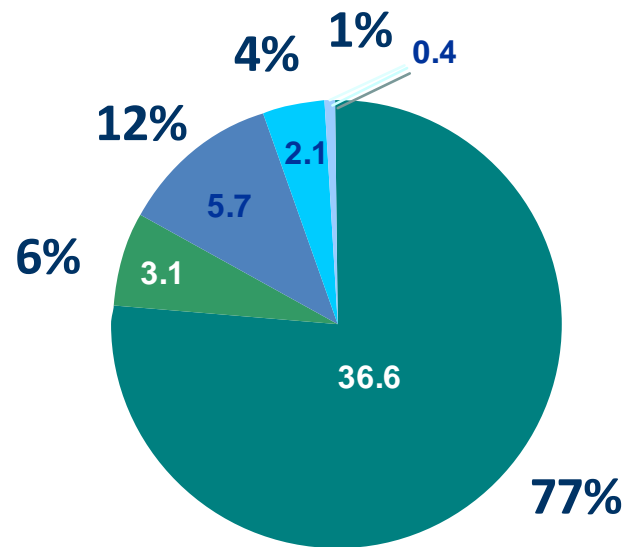
Evolution of Capex: Plan 2009-2013 vs. Plan 2008-2012



(\*) Change in Business Model, excluded projects, change in aschedule | Note: Investment levels do not reflect expected declines in future costs

# PRIORITIZING E&P PROJECTS

US\$ 47.9 Billion



■ E&P

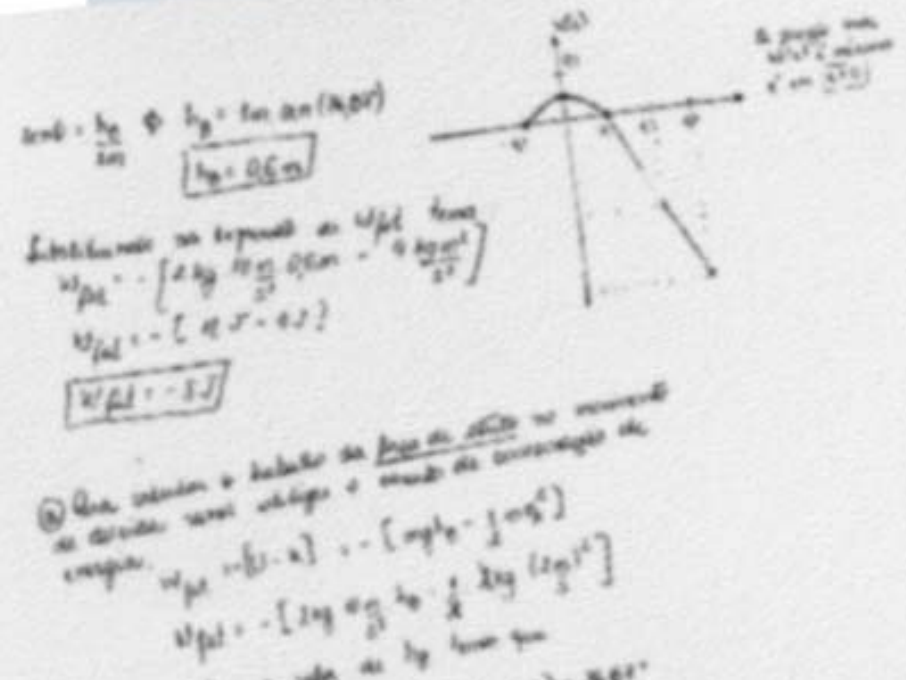
■ RTC

■ G&E

■ Biofuels

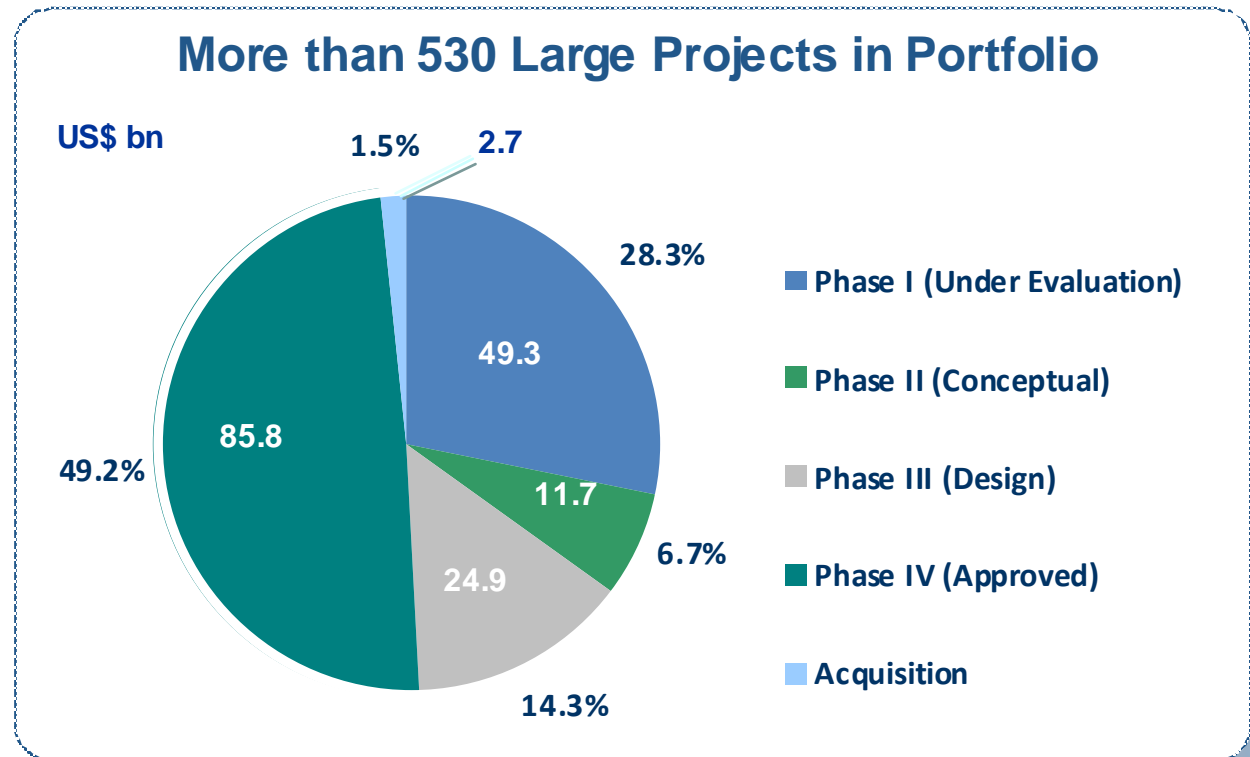
■ (PQF, Dist., Corp)

- Petrobras strategy gives first priority to meeting production targets
- E&P accounts for 76% of new project spending (US\$ 28 bn for pre-salt)



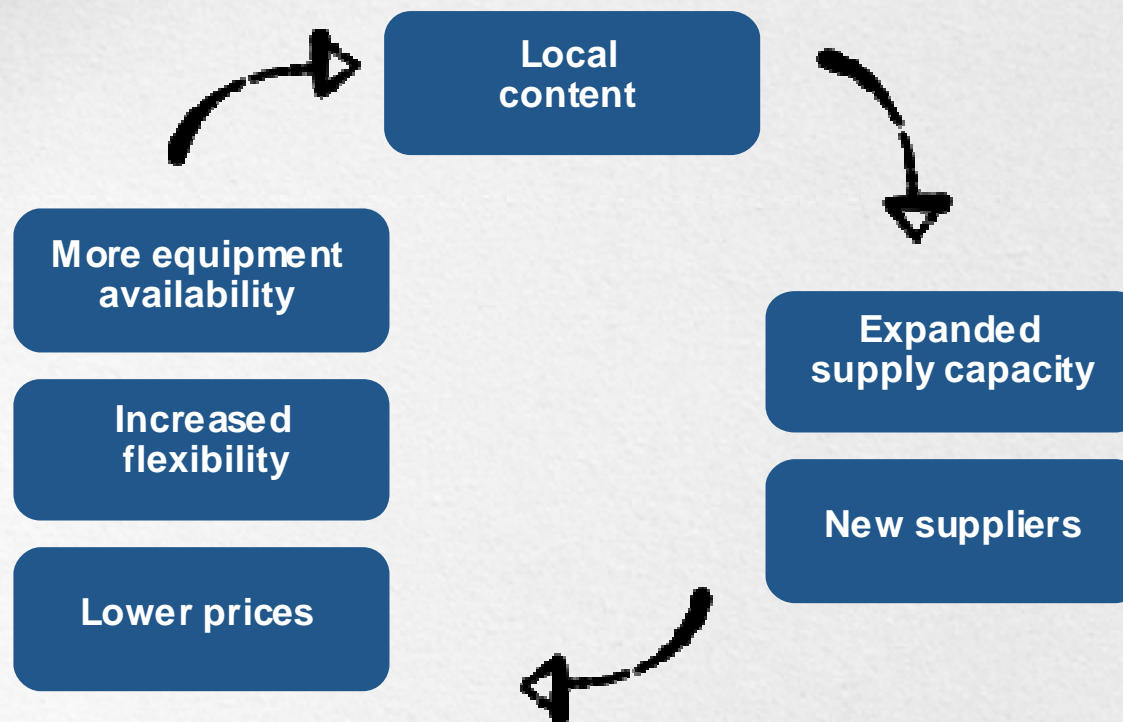
# FLEXIBLE PIPELINE OF PROJECTS 2009-13: BY PHASE

- A substantial portion of our investment plan has yet to be approved and contracted
- Only projects with a positive NPV at cost of capital will be approved

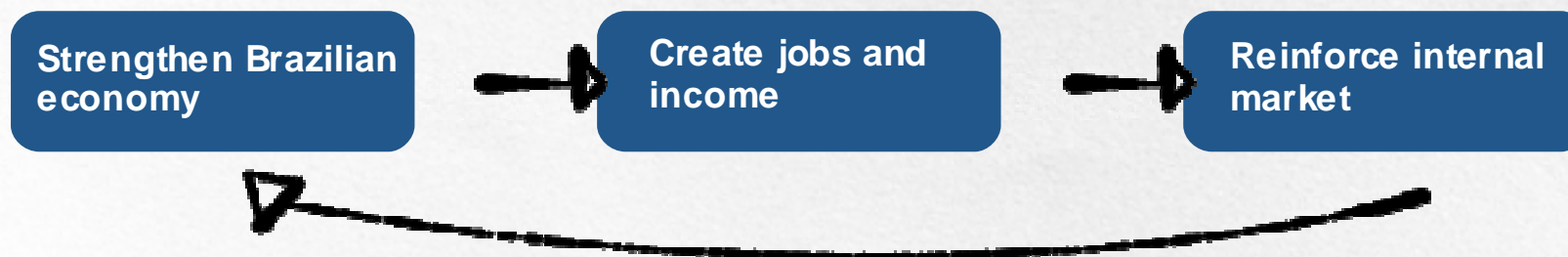


# INCREASING LOCAL CONTENT STRENGTHENS PETROBRAS BUSINESS IN THE LONG RUN

## From a business perspective...



## From a Sustainability stand point...



# OPTIMIZING COSTS

## Planning

- More **details** → less risk
- Simplification
- **Standardization** (i.e. 8 identical Pre-salt FPSOs)
- Carefully considering industry-standards

## Oversight

- Equipment purchases → **Smaller quantities** allows participation of mid-sized companies
- Closer **oversight**

## Culture

- **Reducing redundancies**

Optimizing Costs

Planning

Oversight

Culture



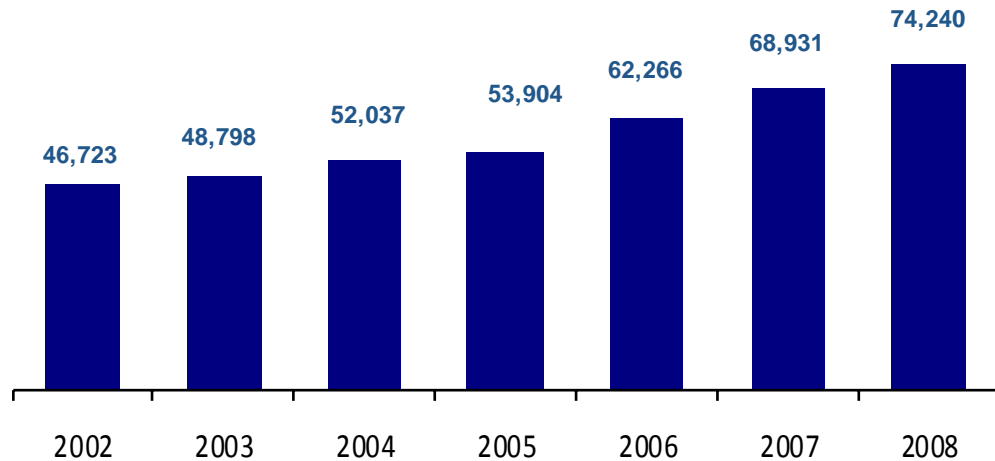


# A COMMITMENT TO OUR WORLD-CLASS WORKFORCE

## Number of Employees

PhD: 232  
Master: 1,098

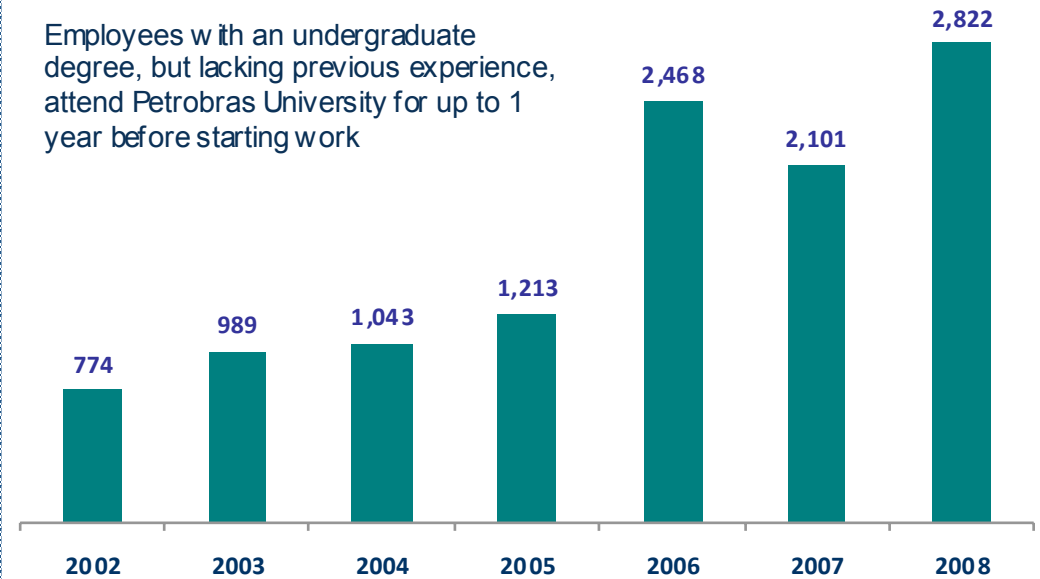
Post-grad: 845  
University: 23,084



27,000 new employees since 2002

## Participants in Training Programs

Employees with an undergraduate degree, but lacking previous experience, attend Petrobras University for up to 1 year before starting work



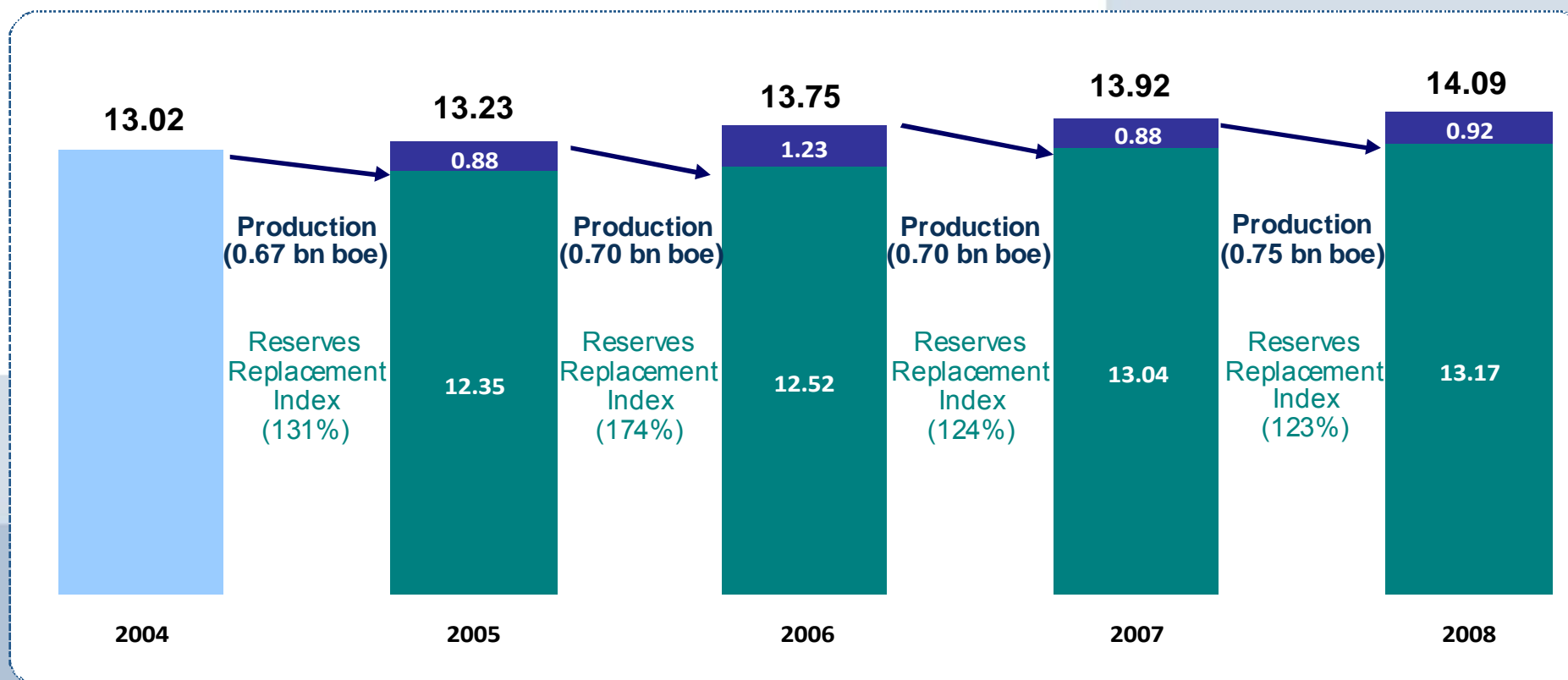
## Forecasted demand for workers in the Petrobras supply chain: 112,625 employees

The Brazilian government, with Petrobras support, has a specific program to meet this demand



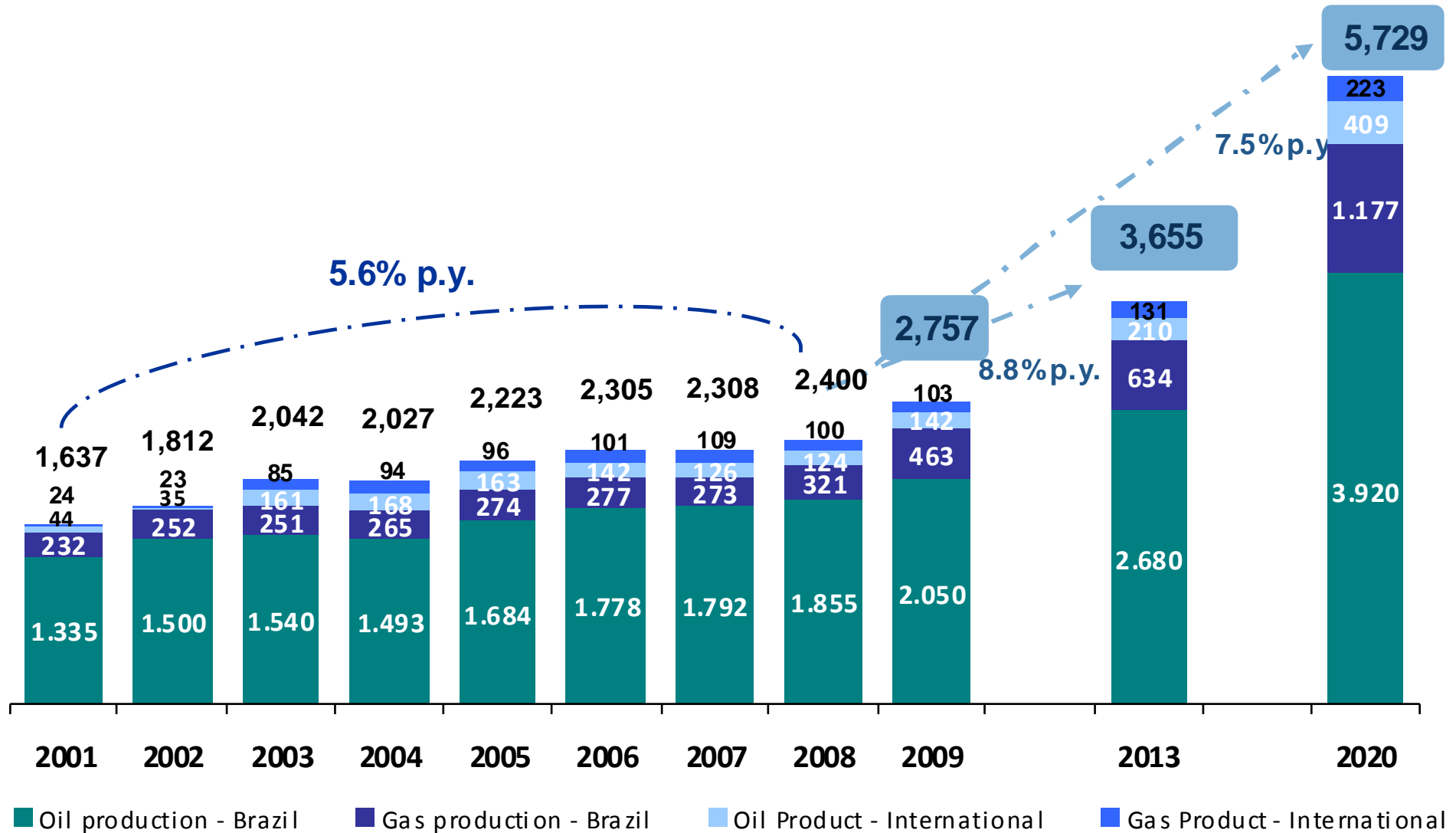
# CONSISTENTLY DELIVERING RESERVES GROWTH...

- 123% reserve replacement rate in 2008. Over the past decade, reserve replacement has principally been driven by internal additions in Brazil
- Aiming for a reserves to production life of 15 years
- More than 50% as undeveloped reserves



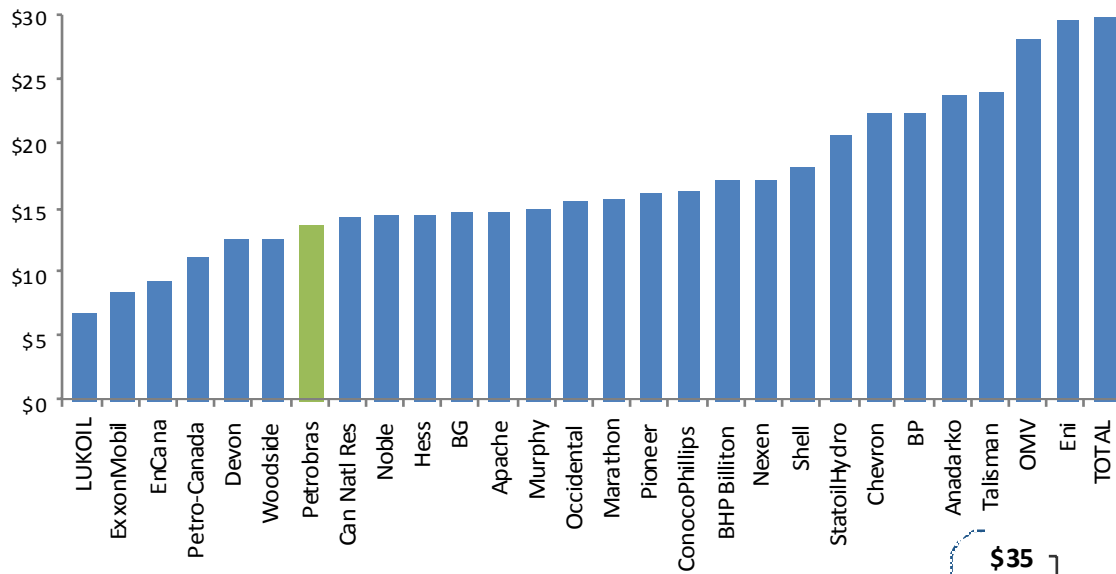
# AND PURSUING NEW PROJECTS WHILE MAXIMIZING PRODUCTION FROM EXISTING ASSETS

Petrobras Total Production (000 b/d)

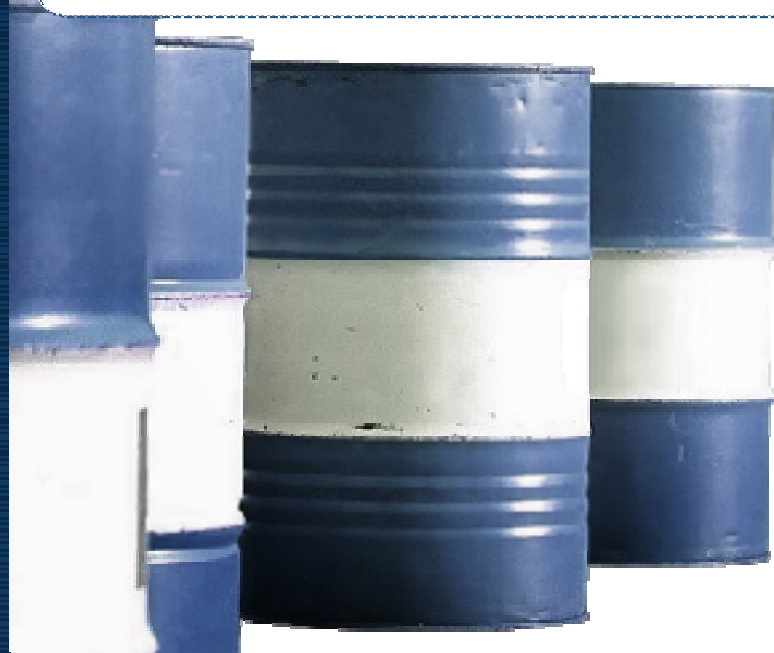
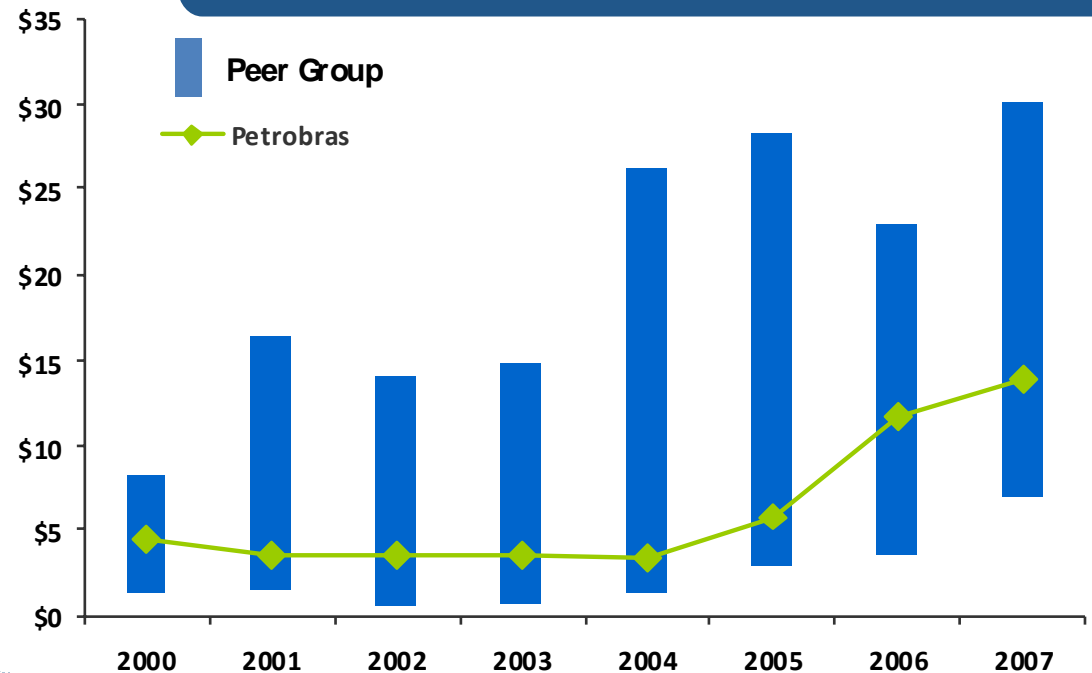


# AT A VERY COMPETITIVE COST.

Total 2007 F&D costs per barrel (3-year roll)



Total F&D costs per barrel (3-year roll)



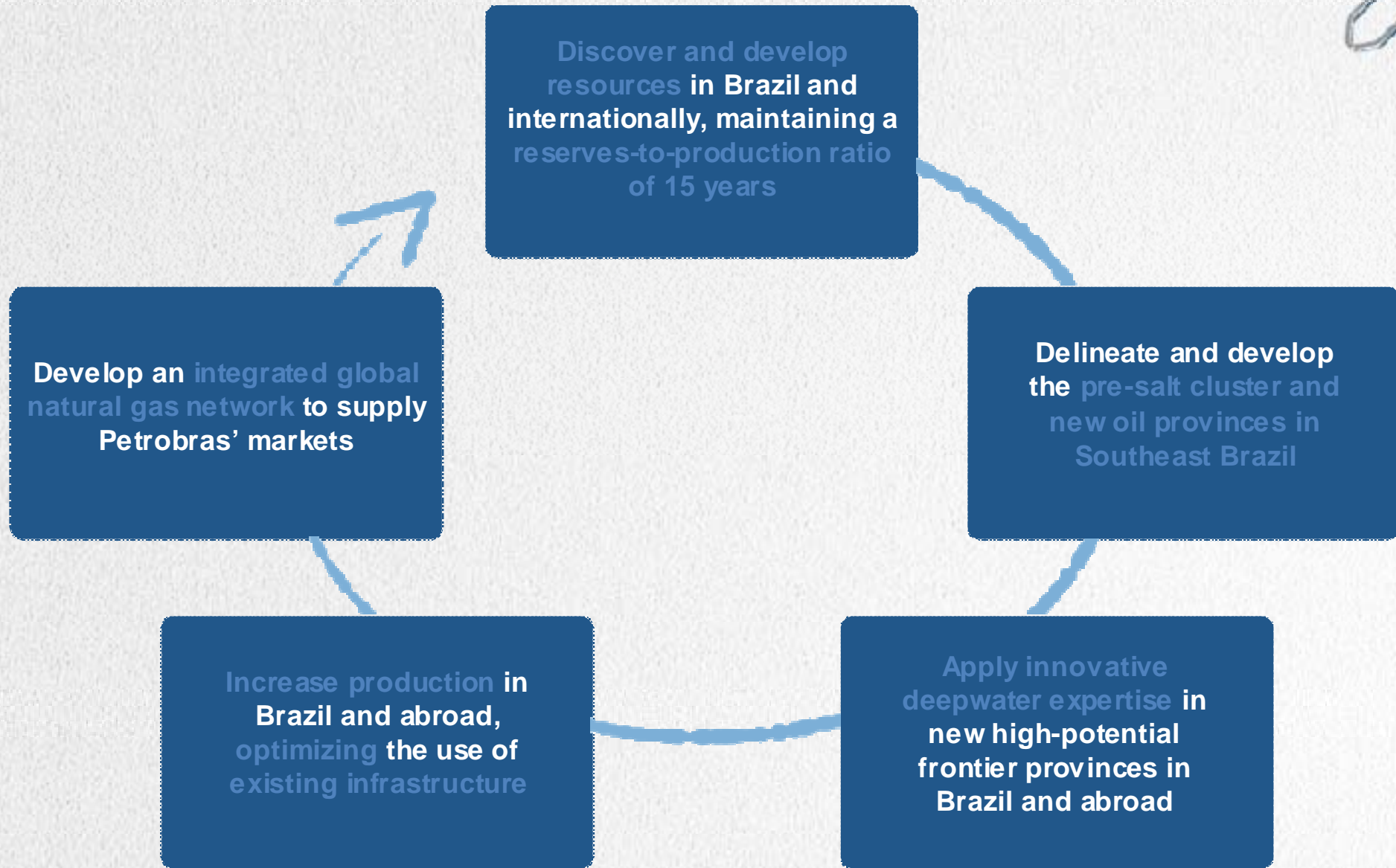


**EXPLORATION &  
PRODUCTION**



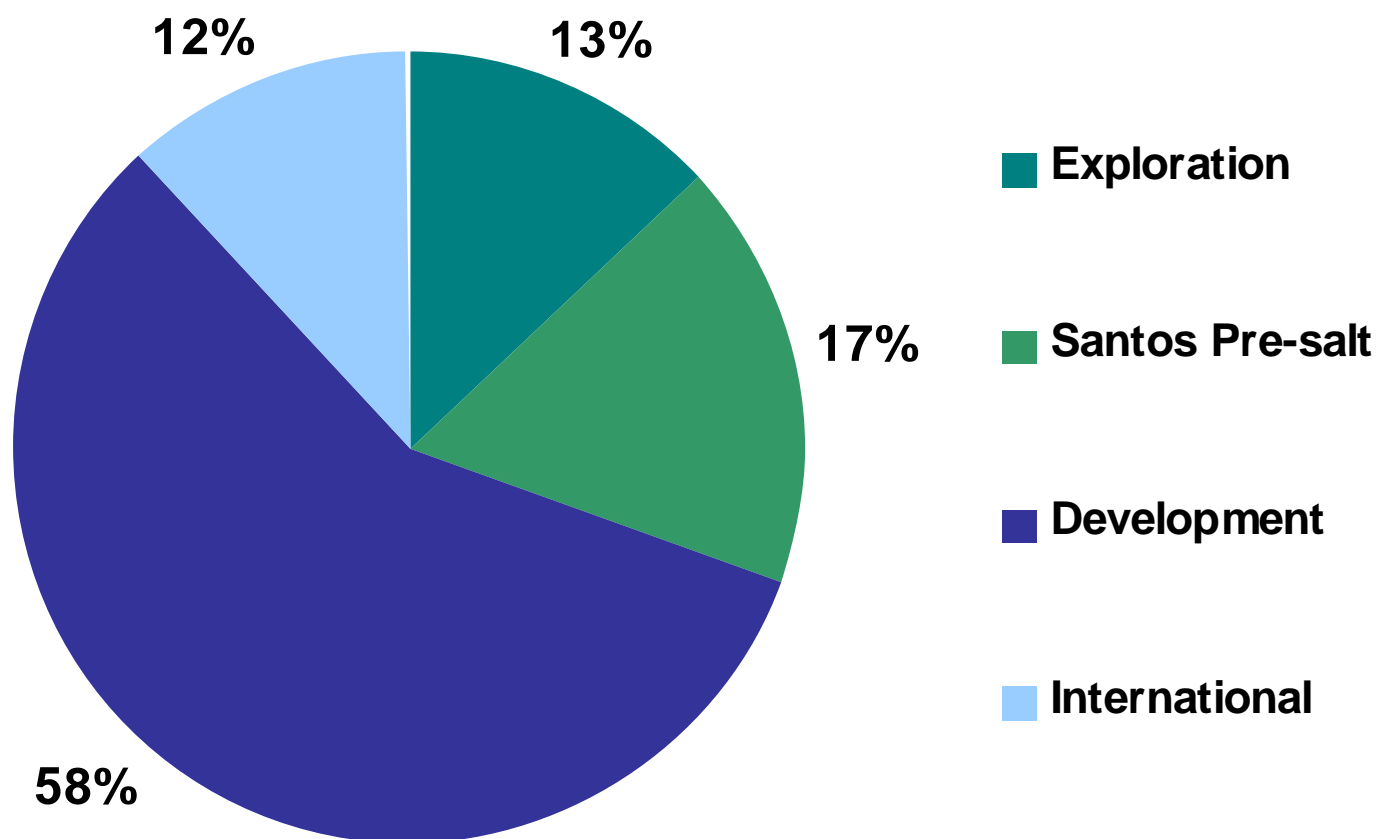
***PETROBRAS***

# EFFECTIVE STRATEGY 2009-2013



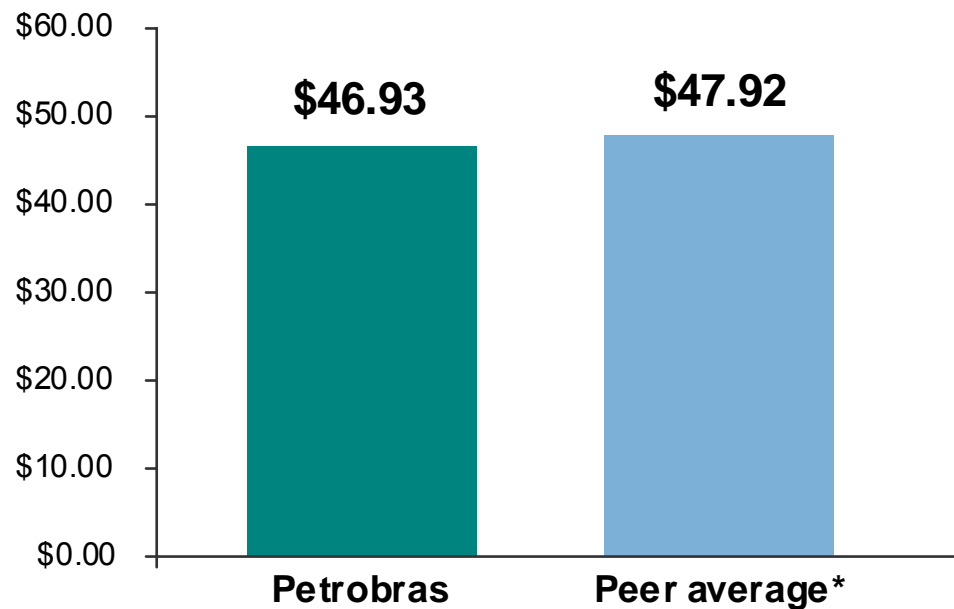
# FOCUSED & DISCIPLINED INVESTMENT

Total Investments of US\$ 104.6 billion in E&P through 2013,  
of which US\$ 92 will be spent in Brazil

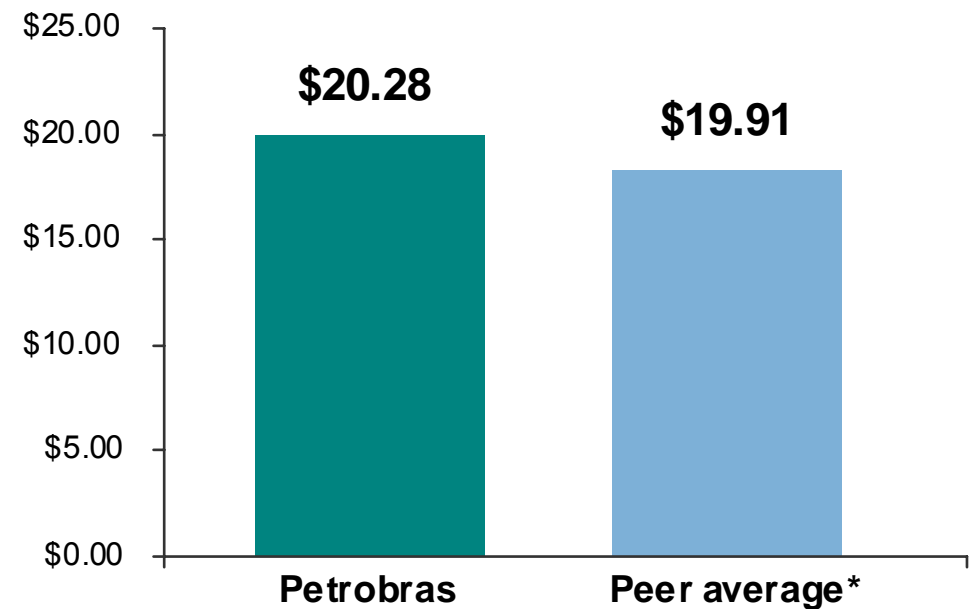


# TO DELIVER RETURNS ON PAR WITH THE MAJORS

## E&P REVENUES: US\$ / BOE (2007)

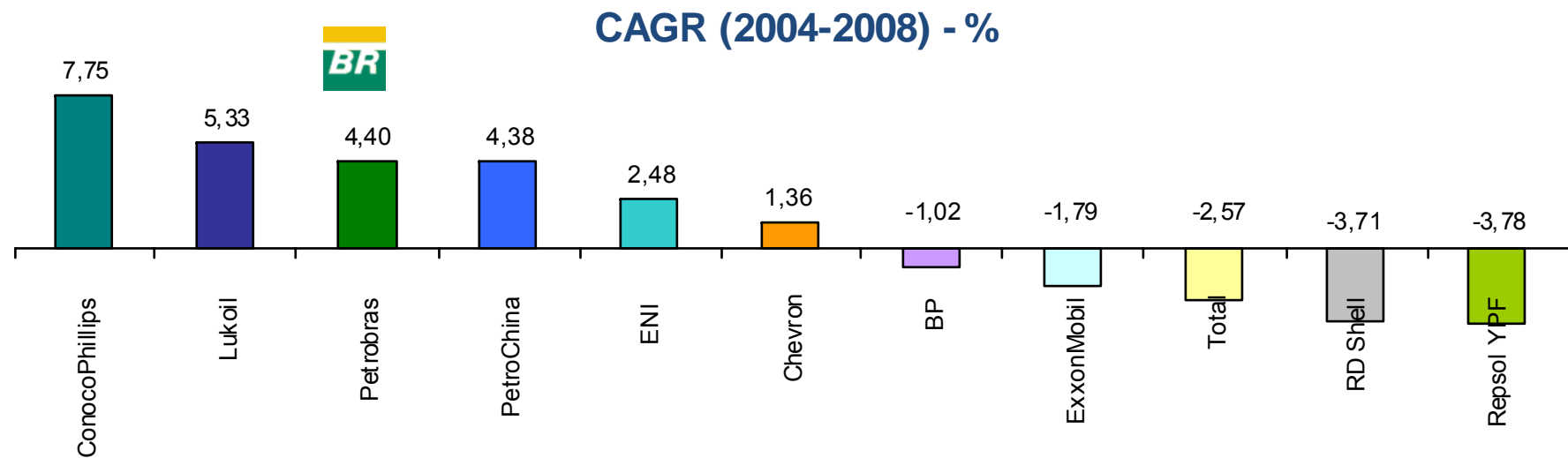


## E&P CASH FLOW: US\$ / BOE (2007)

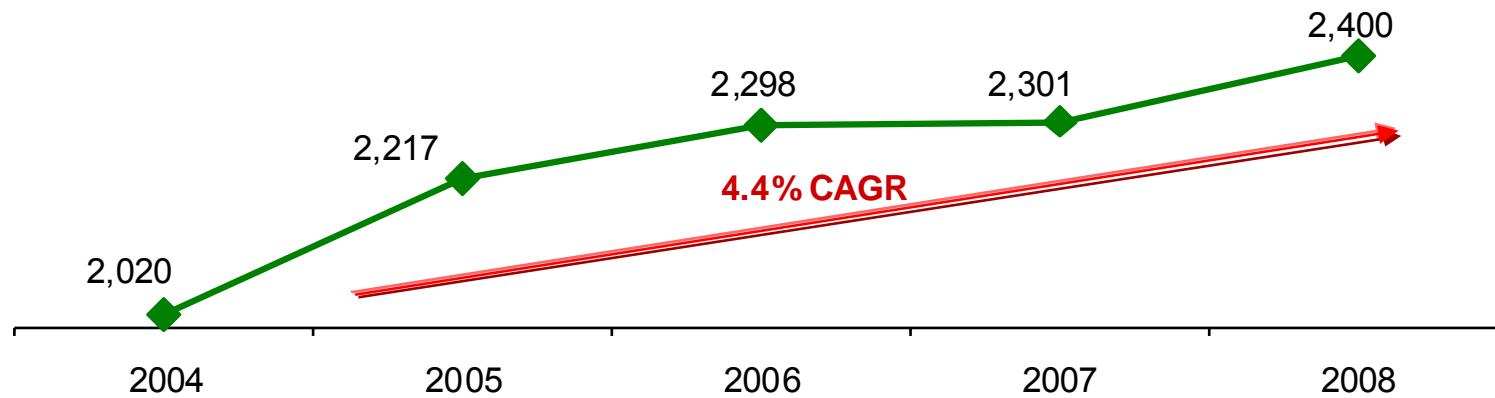




# INDUSTRY-LEADING PRODUCTION GROWTH

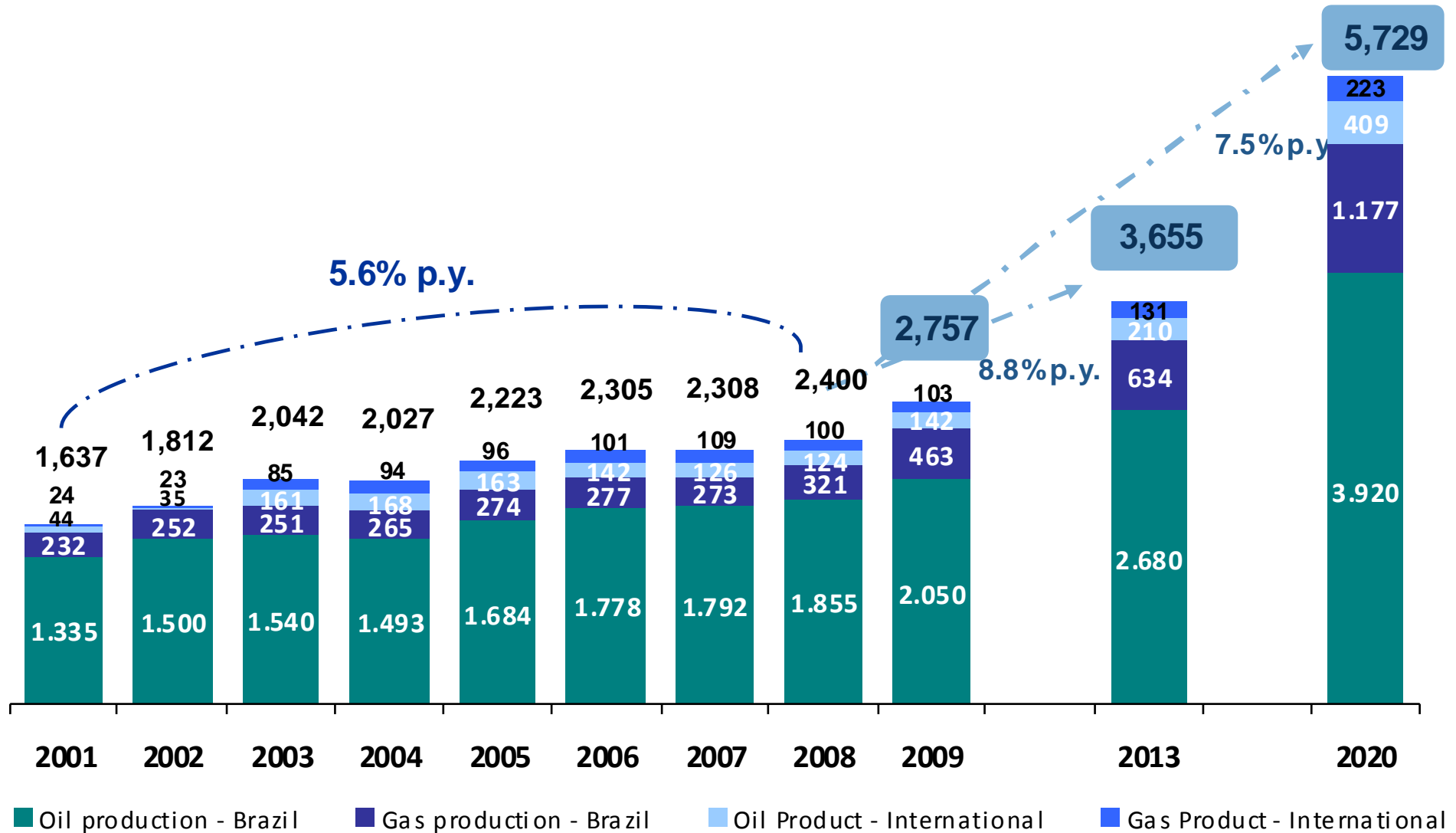


## Petrobras Oil and Gas Production (000 boe/d)



# AND PURSUING NEW PROJECTS WHILE MAXIMIZING PRODUCTION FROM EXISTING ASSETS

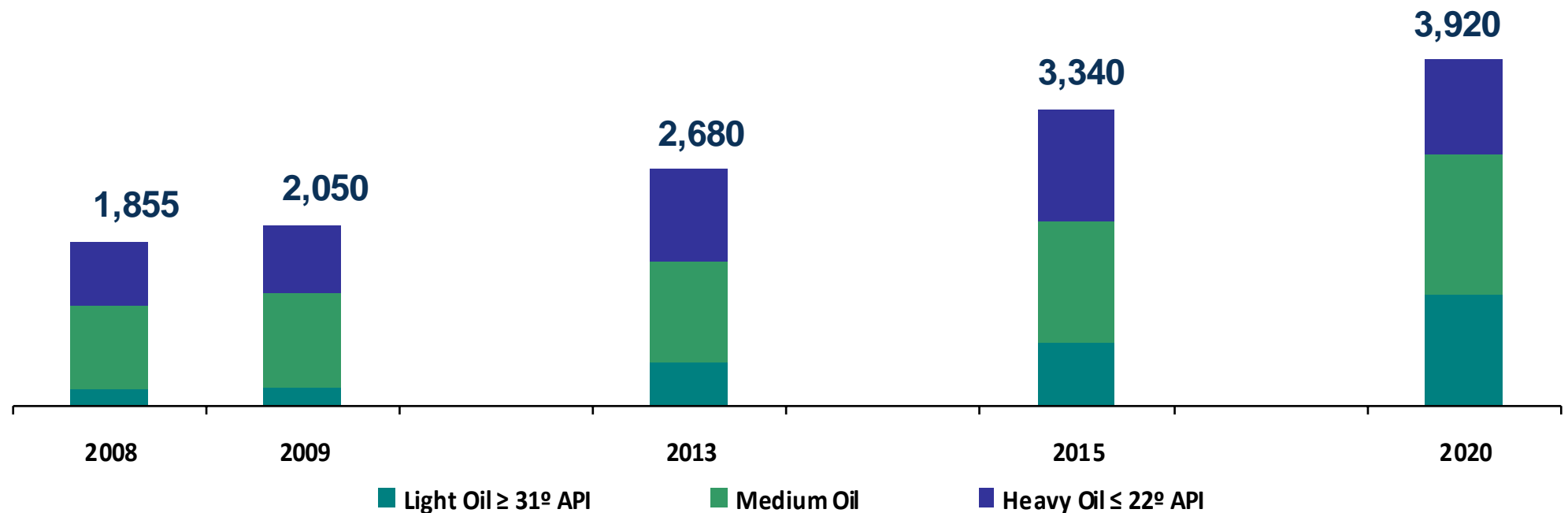
Petrobras Total Production (000 b/d)



# ESTIMATED OIL PRODUCTION IN BRAZIL

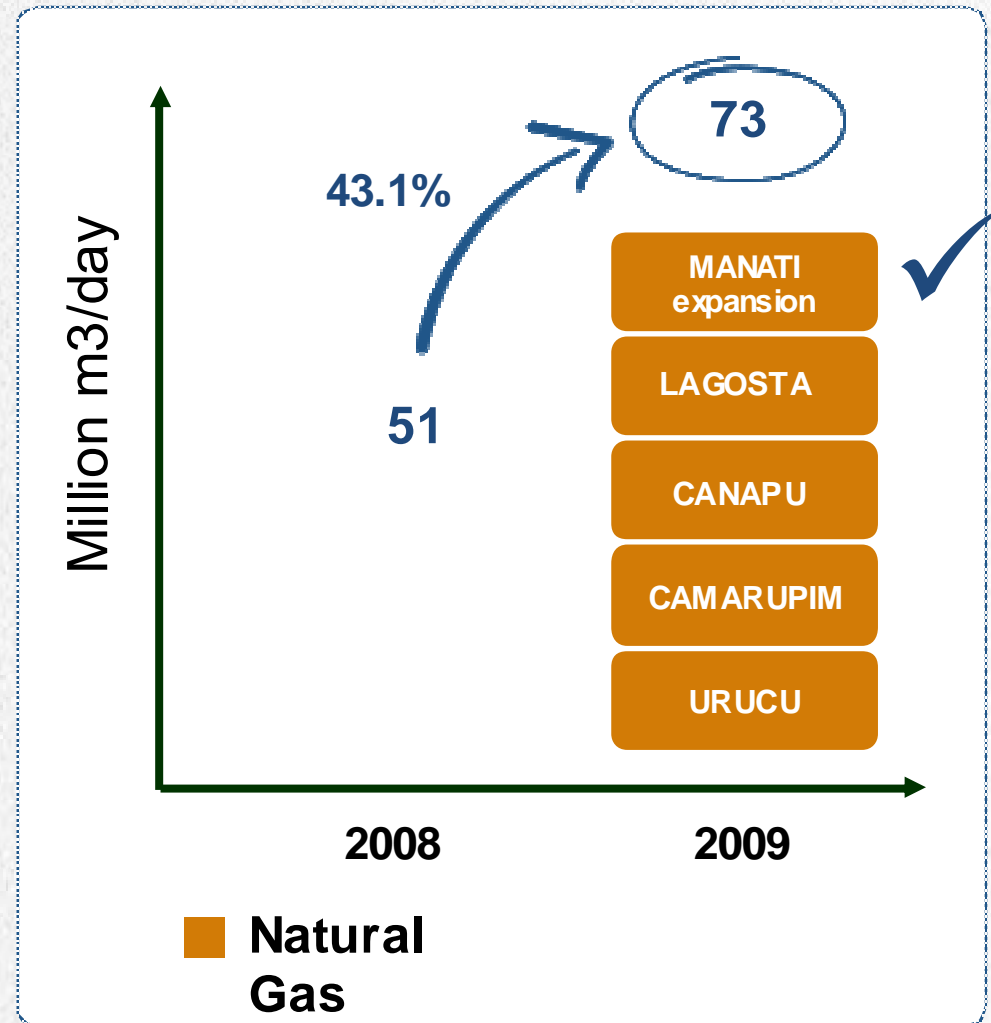
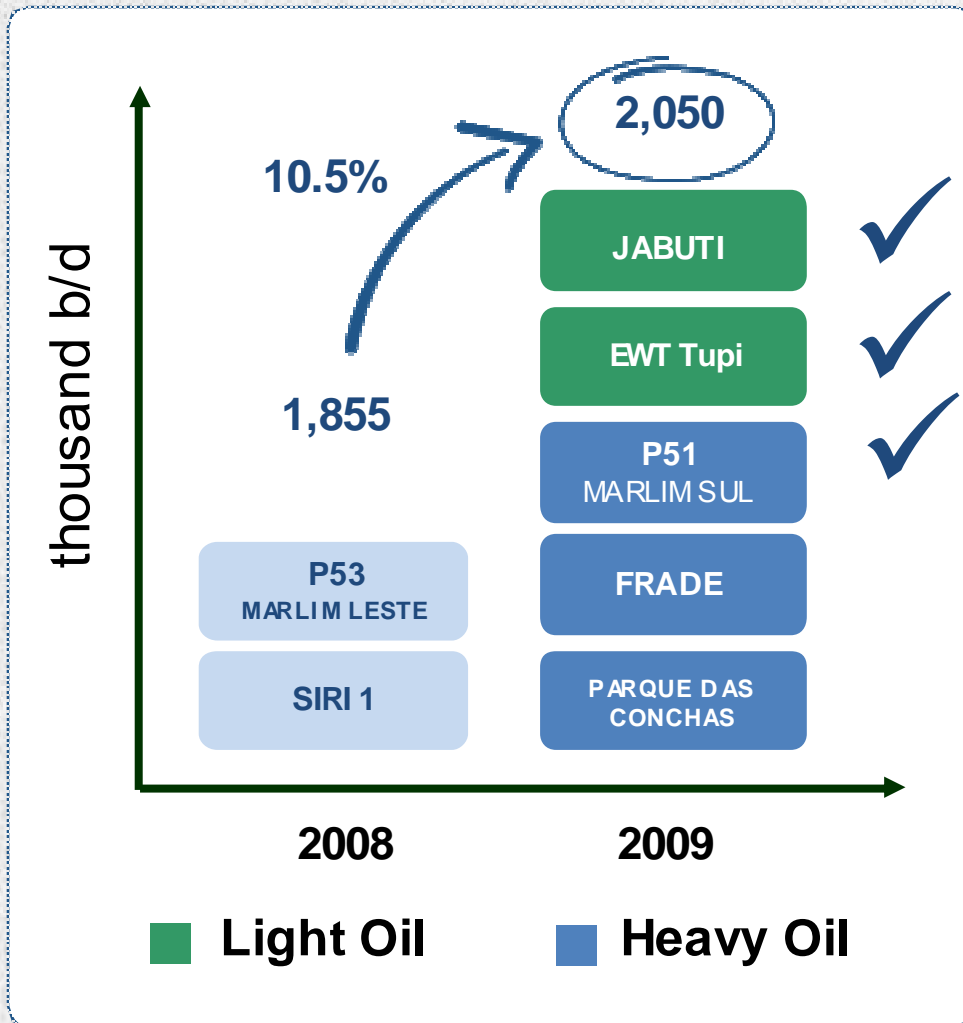
- Out of the 824 kb/d in domestic production growth through 2013, 566 kb/d will come from fields where we have already declared commerciality
- The biggest contribution in the domestic production growth of 1,240 kb/d between 2013 and 2020 will come from pre salt production
- The PN 2008-2012 Brazil oil target for 2015 was 2,812 kb/d. The new target represents an increase of 19% (+528 kb/d)

Petrobras Total Production in Brazil (000 b/d)

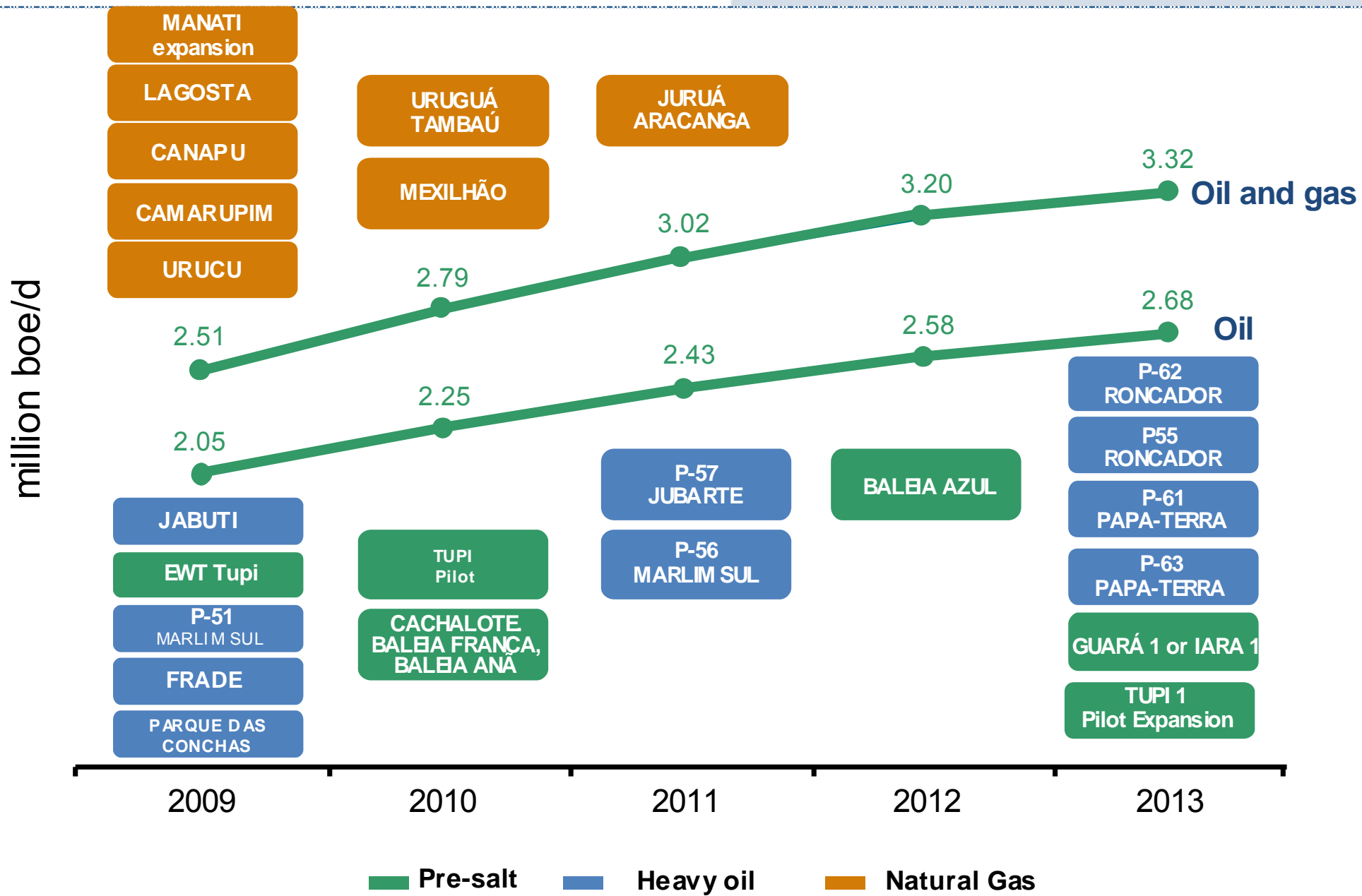


# ROBUST PROJECT PIPELINE - 2009

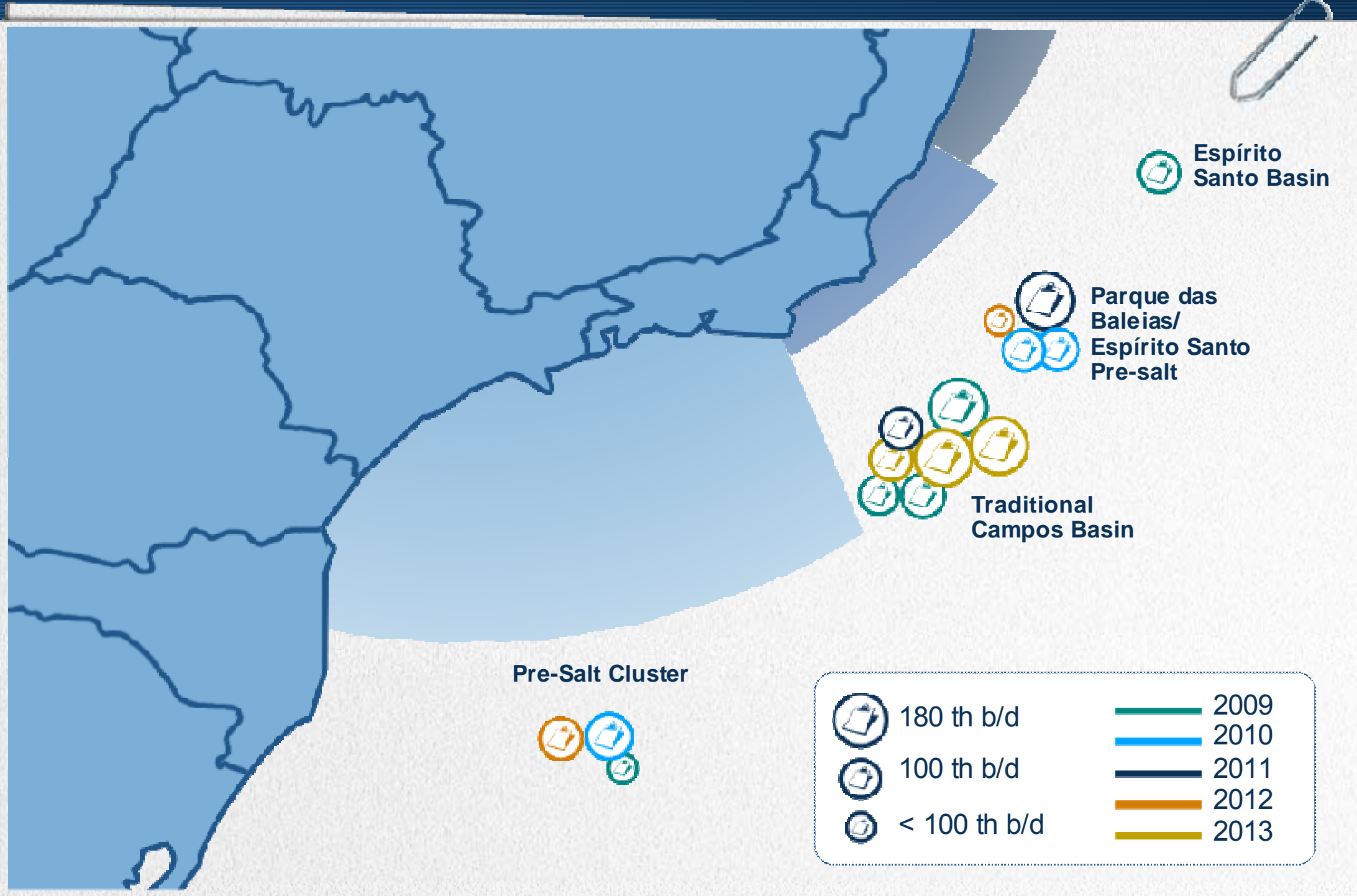
In addition to the five new projects starting-up in 2009, P-52 and P-54, which will reach peak production this year, and P-53, which started operation in December 2008, will contribute to production increases



# AND 2010-2013



# MAJOR PROJECT OVERVIEW 2009-2013

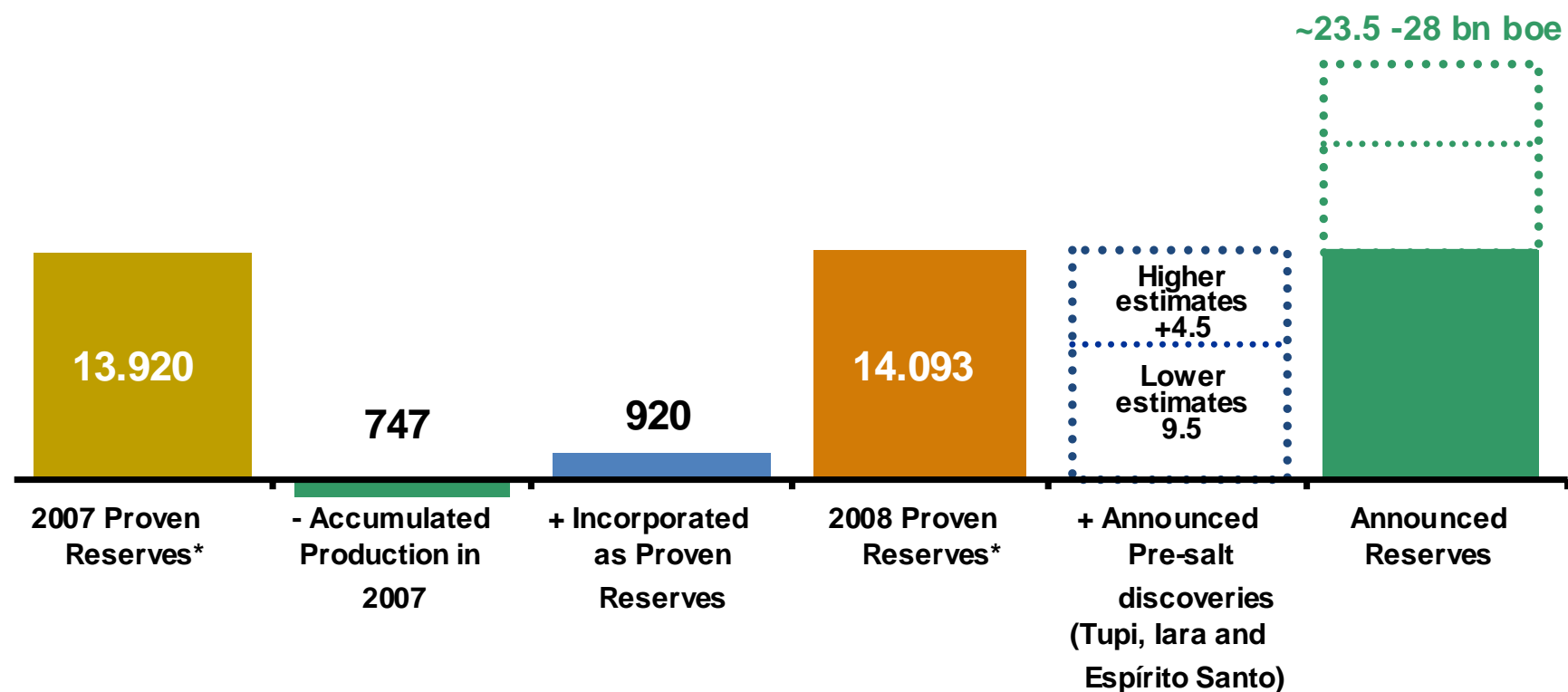


	180 th b/d		2009
	100 th b/d		2010
	< 100 th b/d		2011
			2012
			2013

# SIGNIFICANT RESOURCE BASE YET TO BE DEVELOPED

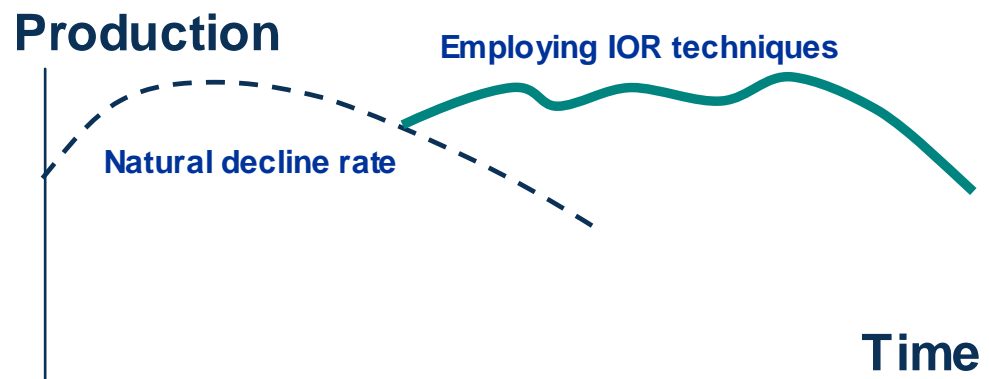
Announced recoverable volumes in the pre-salt can double our reserves...

bn boe



## IMPLEMENT INTEGRATED PROGRAMS TO IMPROVE OIL RECOVERY, THAT:

- Reduce the natural decline rate of oil producing fields
- Increase reserves through the improvement of recovery factors
- Optimize costs, increasing reserves and production



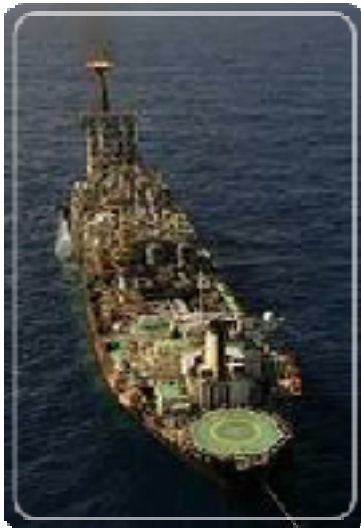
- Projects to increase reserves
- Projects to reduce decline rate



# ALBACORA



P-25



P-31

**Albacora field:** a model where innovative technologies are used to revitalize production.

RECAGE identified complex technical limitations on platforms P-25 and P-31 (Albacora). It was not possible to inject enough water in the production units.



Raw Water Injection (RWI)

## **Solution to recover production:**

CENPES developed RWI (Raw Water Injection), technology that reinject seawater into a reservoir through an injection well, thereby increasing production capacity.

The system uses electrical submersible pumps and filters on the sea-bed, without disturbing surface installations.

# CARMÓPOLIS



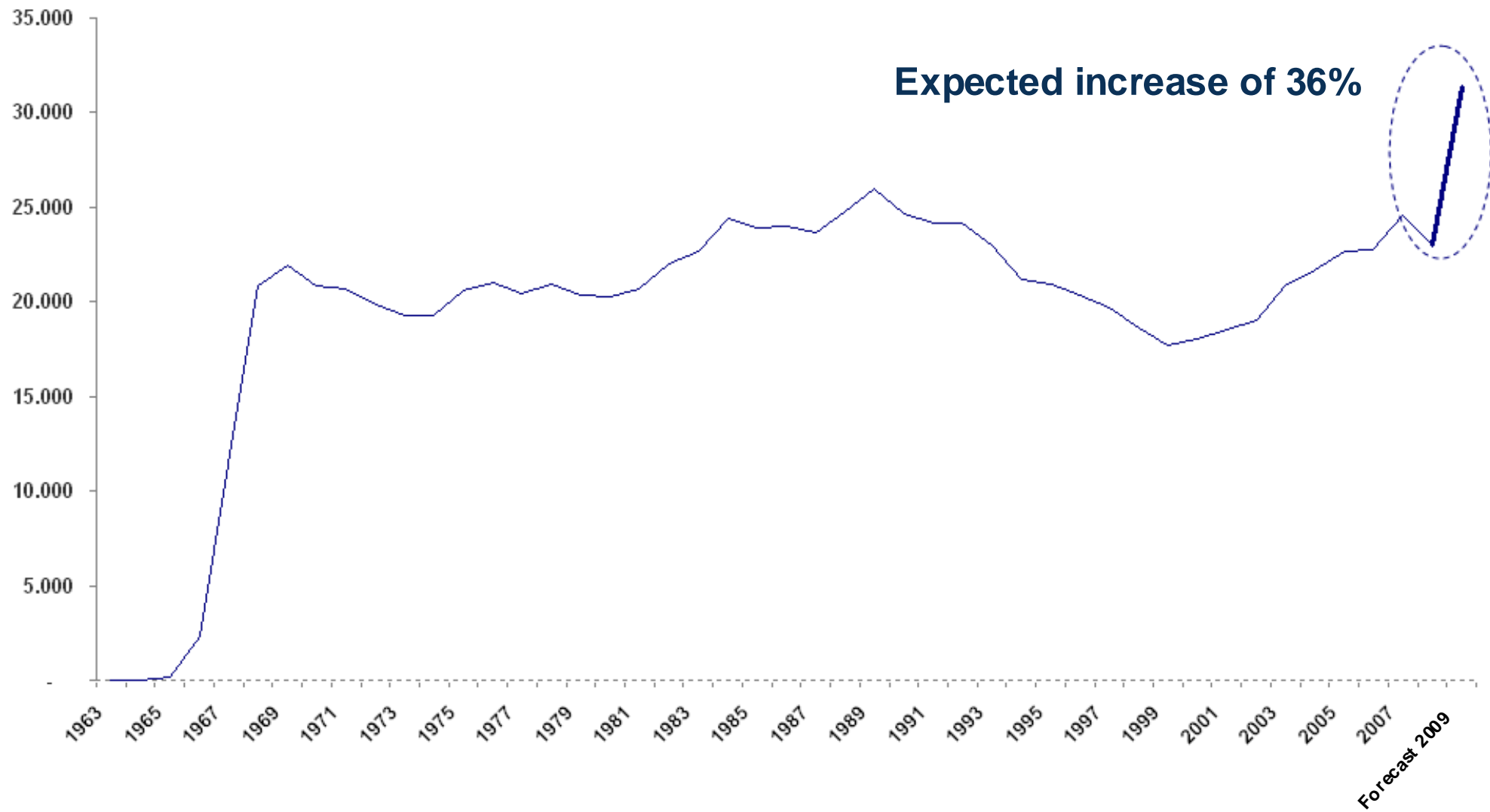
**Carmópolis field:** started-up production in 1963 and today is one of two examples of the most successful implementation of an solution to enhance productivity.

It was in this field that “rigless” technology was introduced: replacing rigs, to fracture a well utilizing hydraulic power.

## Direct Effects:

- Increased production;
- Reduced well costs;
- Improved the recovery factor: from 27% to 30% (in 2009);
- New expected peak production: 25.4 mmb/d (in 1990) to 31.6 mmb/d (in 2009);
- Extended the useful life of the field an additional 18 years: from 2007 to 2025.

## Carmópolis Production (b/d)



## DIVERSIFIED AND FLEXIBLE PORTFOLIO



### OPTIMIZING EXISTING SYSTEMS IN THE GOLFINHO FIELD:

- Moving FPSO Capixaba (100 Mb/d) from Golfinho to Parque das Baleias in anticipation of the development of the Espírito Santo pre-salt ;
- Developing new discoveries in the Ring Fence of Golfinho (150 million boe) using FPSO Cidade de Vitória;
- Relocating a well from FPSO Capixaba to FPSO Cidade de Vitória

# USING CONTRACTS AND LEASES TO SECURE NEEDED DRILLING ASSETS

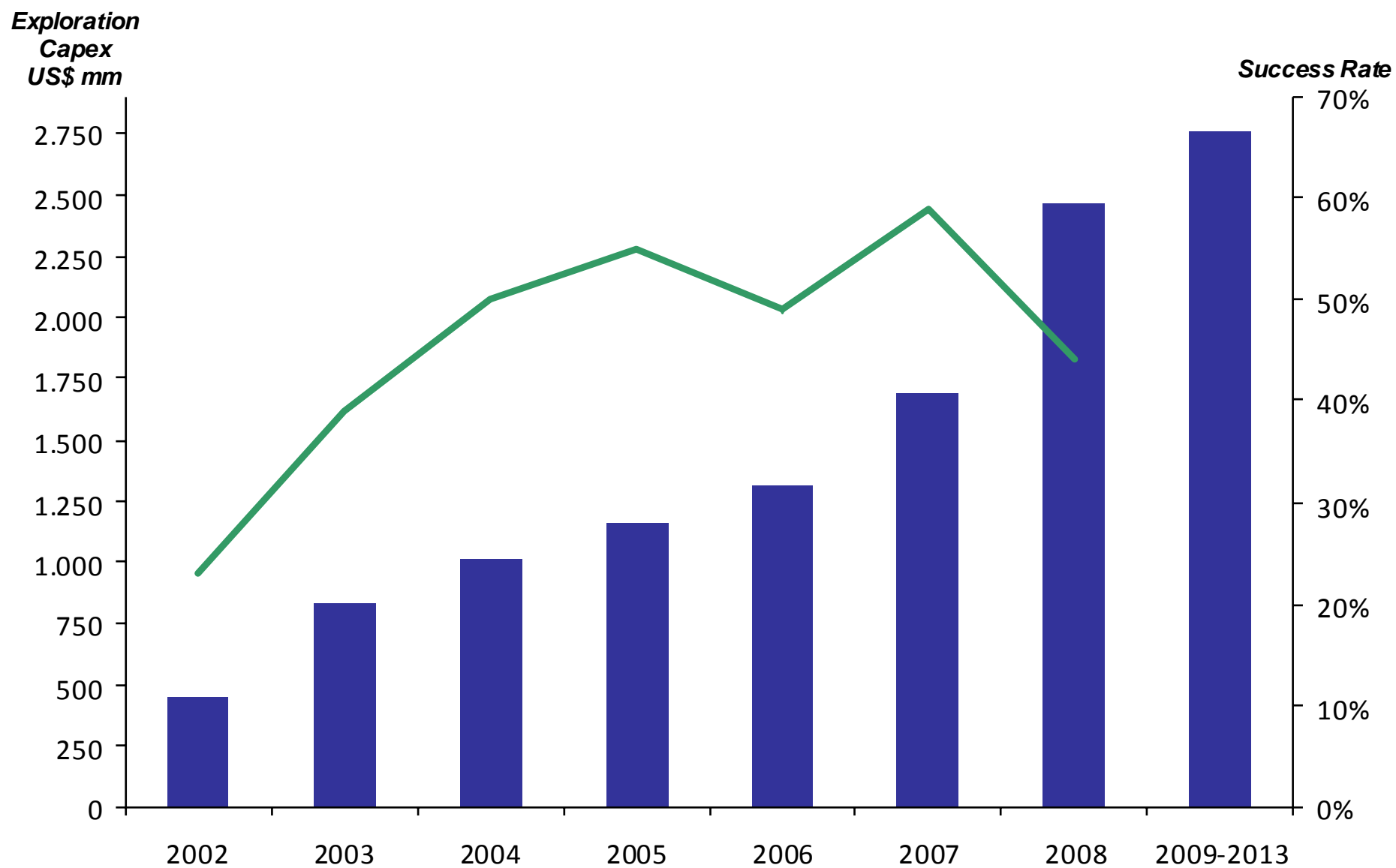
Water Depth	2008	2009	2010	2011	2012	2013-2017
0-999m	<ul style="list-style-type: none"> <li>▪ Petrobras XVI</li> <li>▪ Petrobras XVII</li> <li>▪ Alaskan Star</li> <li>▪ Atlantic Star</li> <li>▪ Ocean Wittington</li> <li>▪ P. South Atlantic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ocean Yorktown</li> <li>▪ Pride Mexico</li> <li>▪ Borgny Dolphin</li> <li>▪ Ocean Concord</li> <li>▪ Falcon-100</li> </ul>			<ul style="list-style-type: none"> <li>▪ Petrobras XIV</li> </ul>	
1000-1999m	<ul style="list-style-type: none"> <li>▪ Petrobras X</li> <li>▪ Petrobras XXIII</li> <li>▪ P. South America</li> <li>▪ P. Portland</li> <li>▪ P. Rio de Janeiro</li> <li>▪ P. Brazil</li> <li>▪ P. Carlos Walter</li> <li>▪ Ocean Yatzi</li> <li>▪ Ocean Alliance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ocean Winner</li> <li>▪ T. Driller</li> <li>▪ Sedco 710</li> <li>▪ N. Therald Martin</li> <li>▪ N. Leo Segerius</li> <li>▪ N. Muravlenko</li> <li>▪ Louisiana</li> <li>▪ S.C. Lancer</li> <li>▪ Peregrine I</li> </ul>	<ul style="list-style-type: none"> <li>Olinda Star</li> <li>Ocean Worker</li> </ul>			
≥ 2000m	<ul style="list-style-type: none"> <li>▪ Sedco 707</li> <li>▪ Dw. Navigator</li> <li>▪ N. Roger Eason</li> <li>▪ O. Clipper</li> <li>▪ N. Paul Wolf</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noble Dave Beard</li> <li>▪ Sevan Driller</li> <li>▪ West Taurus</li> <li>▪ West Eminence</li> <li>▪ SSV Victoria</li> </ul>	<ul style="list-style-type: none"> <li>▪ Gold Star</li> <li>▪ Pantanal</li> <li>▪ Norbe VI</li> <li>▪ Delba III</li> <li>▪ West Orion</li> <li>▪ Petrorig II</li> <li>▪ Lone Start</li> <li>▪ Amazonia</li> </ul>	<ul style="list-style-type: none"> <li>▪ Delba IV</li> <li>▪ Schain TBN1</li> <li>▪ Sevan Brasil</li> <li>▪ DS Carolina</li> </ul>	<ul style="list-style-type: none"> <li>▪ Delba V</li> <li>▪ Delba VI</li> <li>▪ Scorpion</li> <li>▪ Delba VII</li> <li>▪ Delba VIII</li> <li>▪ Norbe IX</li> <li>▪ Schahin TBN2</li> <li>▪ Norbe VIII</li> <li>▪ Etesco 8</li> </ul>	+ 28 new units to be leased
Total per year	34	7	8	5	9	28
Cumulative		41	49	54	63	91

29 RIGS CONTRACTED PLUS 28 TO BE LEASED UP TO 2017, MAKING A TOTAL OF 57 NEW DRILLING RIGS

# ESTABLISHED EXPLORATION PORTFOLIO AT DIFFERENT STAGES OF DEVELOPMENT



# EXPLORING TO LEVERAGE EXCITING FRONTIER PLAYS IN OUR OWN BACKYARD



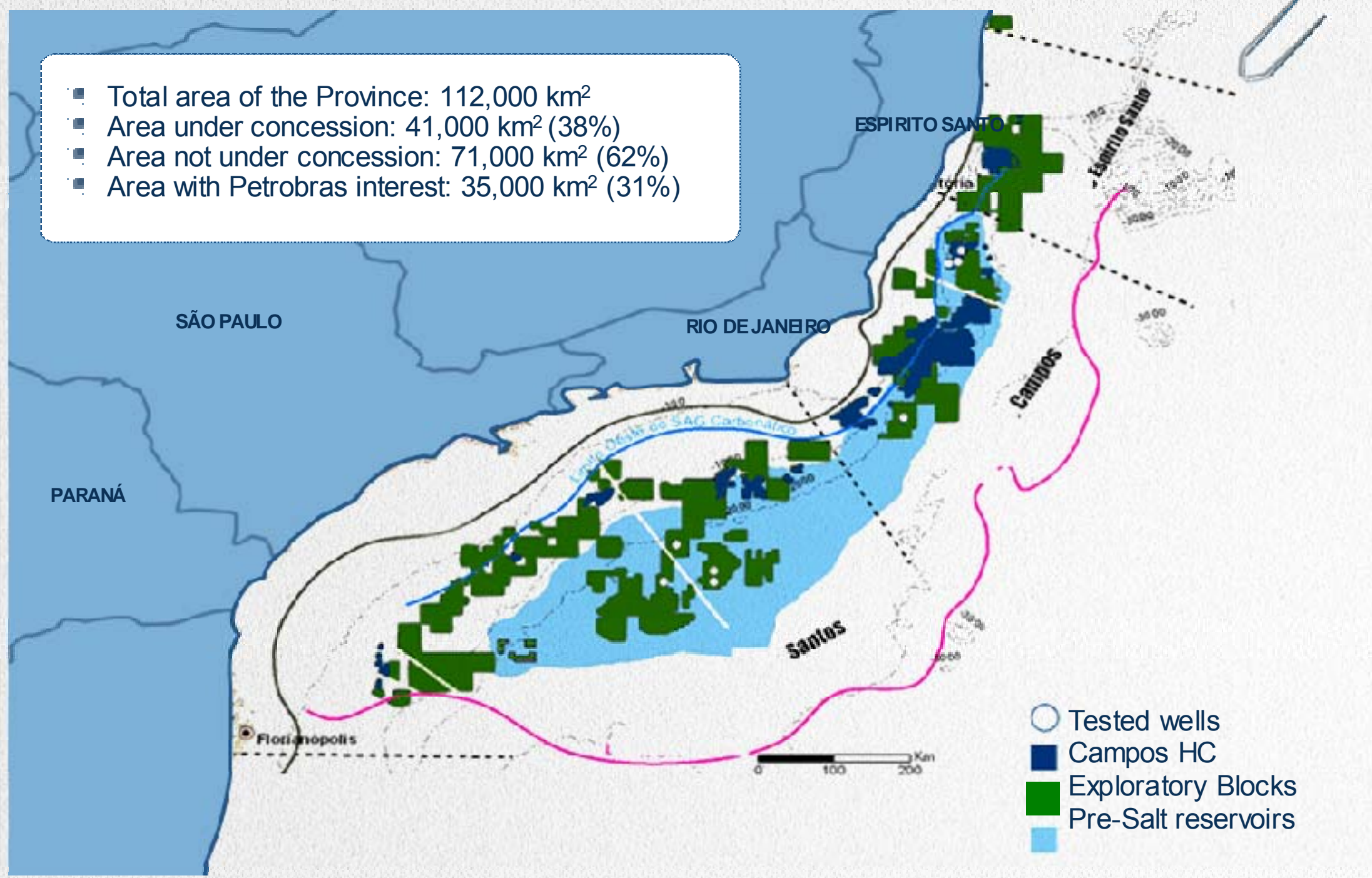
# ...AND APPLYING UNIQUE EXPERTISE TO SELECTED INTERNATIONAL OPPORTUNITIES





# PRE-SALT PROVINCE

- Total area of the Province: 112,000 km<sup>2</sup>
- Area under concession: 41,000 km<sup>2</sup> (38%)
- Area not under concession: 71,000 km<sup>2</sup> (62%)
- Area with Petrobras interest: 35,000 km<sup>2</sup> (31%)

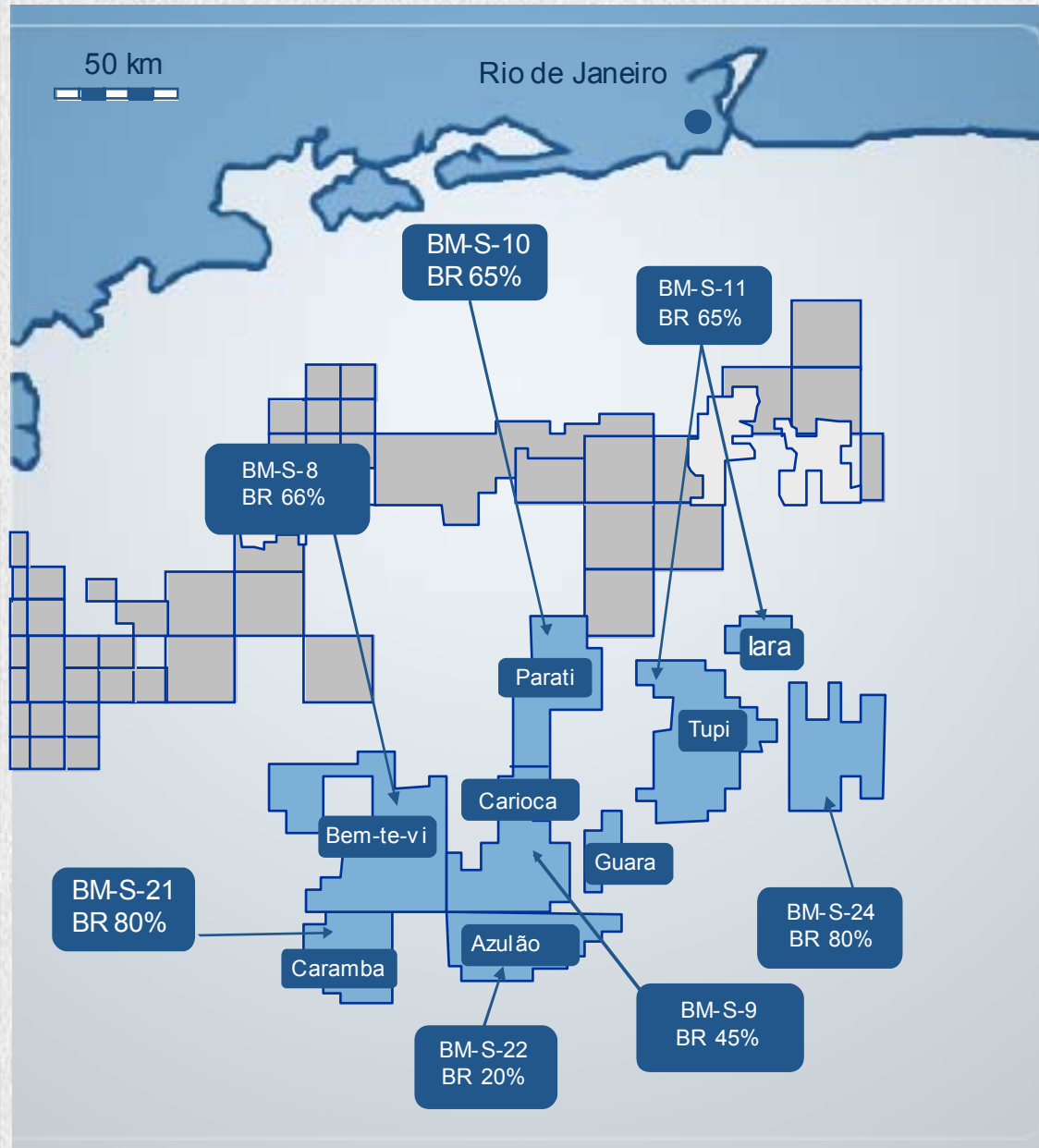


## PRE-SALT OVERVIEW

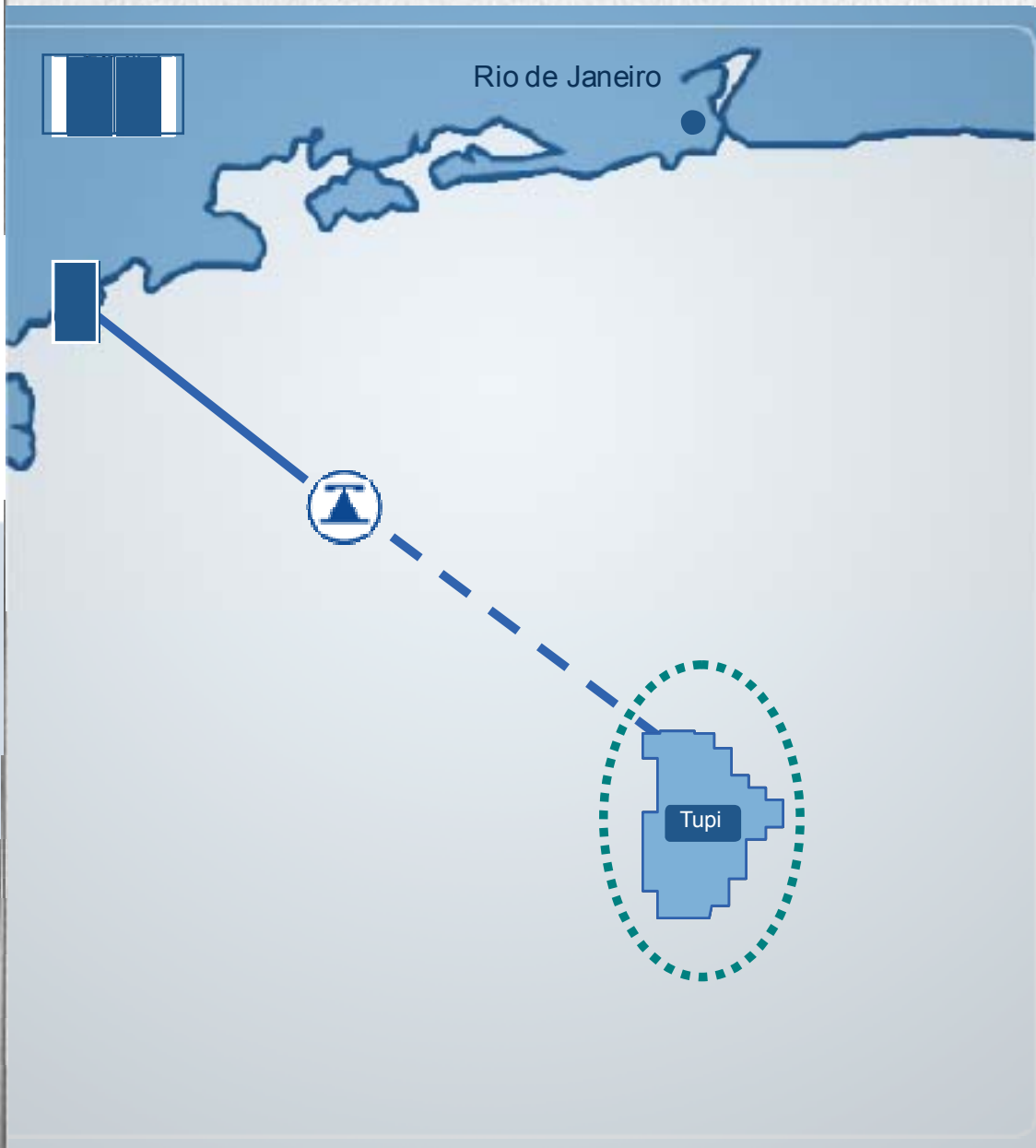
- US\$ 28.9 bn in capex through 2013 related to pre-salt development
- Initial oil production via FPSOs
- Initial natural gas production brought onshore via pipeline
- Six production units in Campos and Espírito Santo pre-salt starting-up by 2014, excluding extended well tests
- Estimated oil production of 219 kb/d in 2013

- ~7 mm m<sup>3</sup>/d of natural gas available to the market by 2013
- Many production systems programmed through 2020
- Oil production in 2015: 582 kb/d
- Oil production 2020: 1,815 kb/d; natural gas available to the market: 40 mm m<sup>3</sup>/d

# SANTOS BASIN PRE-SALT CLUSTER



- Major discoveries include: Tupi, lara, Carioca, Guara, Jupiter, Parati, Bem-te-vi and Caramba
- Multi-billion barrel reserves potential
- Good oil quality: medium-light
- Seismic activity and appraisal wells underway
- Recoverable resources announced: 5-8 bn boe in Tupi and 3-4 bn boe in lara
- Three production systems by 2014: Tupi, lara and Guara



## Extended well test (EWT)

- Tupi-Sul re-entry underway
- Vessel conversion completed
- First production Q2 2009
- Up to 14,000 b/d

## Initial development sanctioned (pilot)

- Major contracts awarded
- Oil 100,000 b/d
- Gas pipeline 216 km to Mexilhão
- Production late-2010

## Full field development

- Development optimization studies
- Resources 5-8 bn boe
- Expansion in the Pilot in 2013

# DEVELOPMENT STRATEGY (example: TUPI)



Phases	Information Acquisition	Definitive Development	
	Phase 0	Phase 1A	Phase 1B

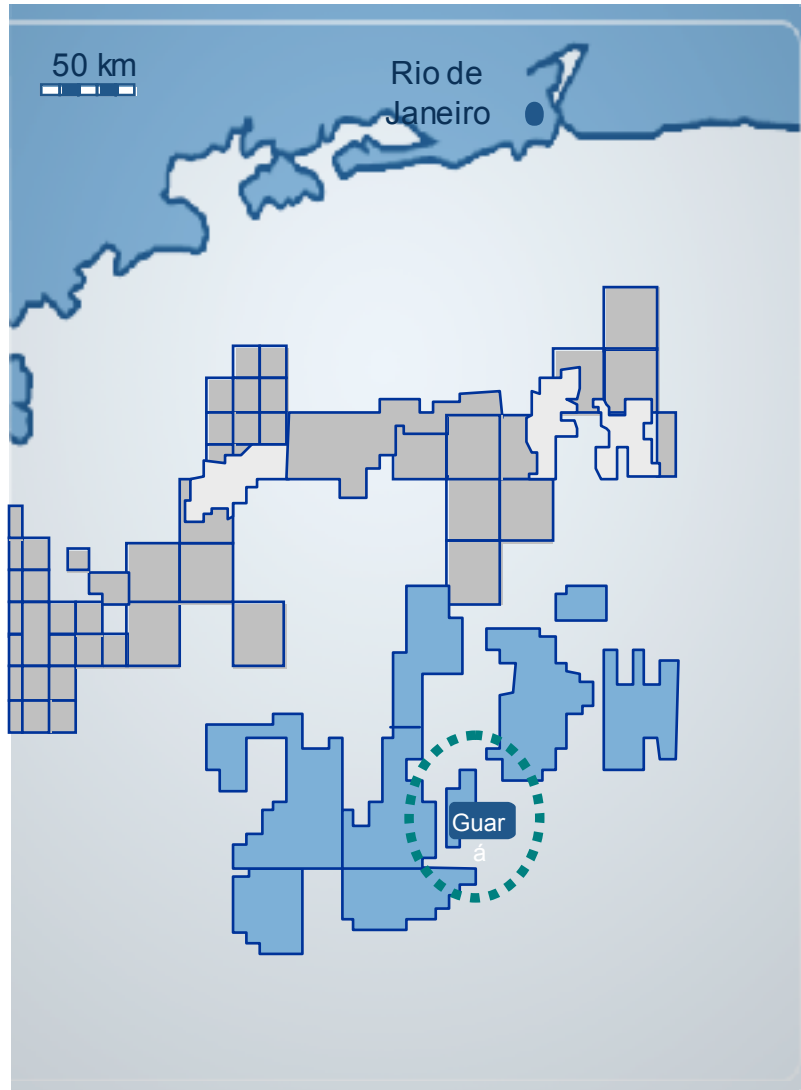
<b>Focus</b>	EWT (Mar/2009), Tupi Pilot and appraisal wells	Implementation of “X” production units (Replicant FPSOs)	Implementation of “Y” production units
--------------	--	--	--

Objective	Information Acquisition	Definitive Development
	<ul style="list-style-type: none"> <li>Area Delimitation</li> <li>Analyze reservoir flow</li> <li>Fractured well performance</li> <li>Complete sampled core</li> <li>Material analysis vs. CO<sub>2</sub></li> </ul>	<ul style="list-style-type: none"> <li>Analyze water and gas/CO<sub>2</sub> injection behavior</li> <li>Test adjustments on FPU related to CO<sub>2</sub></li> <li>Test improvements in well projects</li> <li>Apply previous dominated concepts and technologies with necessary adjustments to reach significant production by 2017</li> <li>Aggregate innovative technical solutions to optimize project performance</li> </ul>



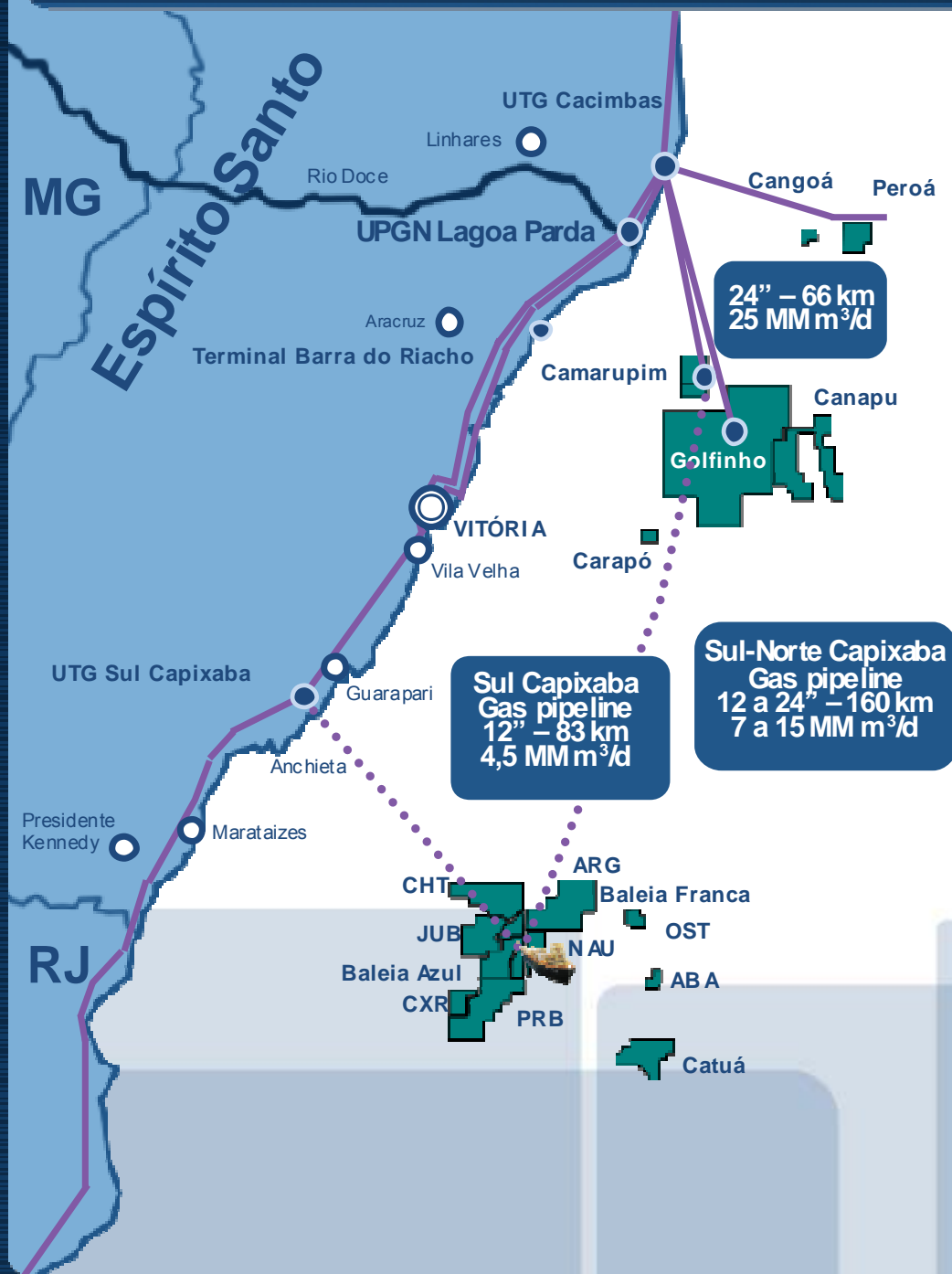
- **3-4 bn boe of resource**
- **Thick reservoir section**
- **Outline forward plans**

- Re-entry/test of Iara-1 in **Q1/2 2009**
- Full field development studies
- Appraisal wells **2010/11**
- EWT with production in **2010/11**
- Production FPSO **by 2014**



- **High quality reservoir**
- **Outline of forward plans:**
  - Re-entry/test of Guara-1, **Q1/2 2009**
  - Full field development studies
  - Appraisal wells **2010/11**
  - Possible EWT in **2010/11**
  - Production FPSO **by 2014**

# ESPÍRITO SANTO PRE-SALT

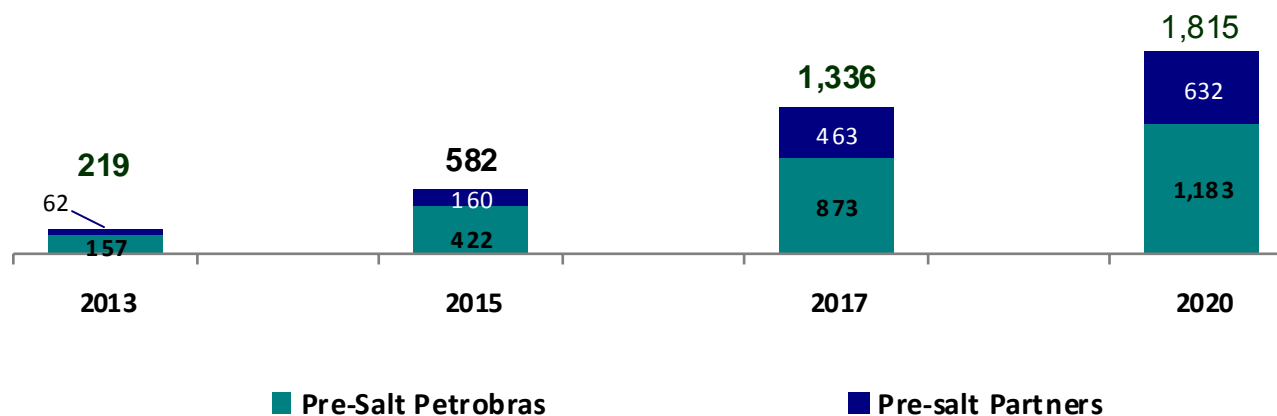


- Infrastructure in-place
- P-34 at Jubarte field, first pre-salt production: excellent results, prod. up to 18 k b/d
- FPSO Seillean started in dec/08 as pilot system of Cachalote (CHT) field
- FPSO Capixaba will move from Golfinho field to Cachalote/Baleia Franca (BFR) in 1H10
- FPSO Pipa II will start in 2H10 as Baleia Azul (BAZ) pilot system
- Baleia Azul first definitive production unit by 4Q12
- Natural gas production transported via pipeline



# PRE-SALT OIL PRODUCTION

Petrobras Pre-salt Oil Production (000 b/d)



Petrobras Pre-salt Capex Through 2020

	2009-2013	2009 -2020
Petrobras Total Pre-salt Capex (Production Development)	28.9	111.4
Santos Basin Pre-salt	18.6	98.8
Espírito Santo Pre-salt (includes post-salt fields)	10.3	12.6



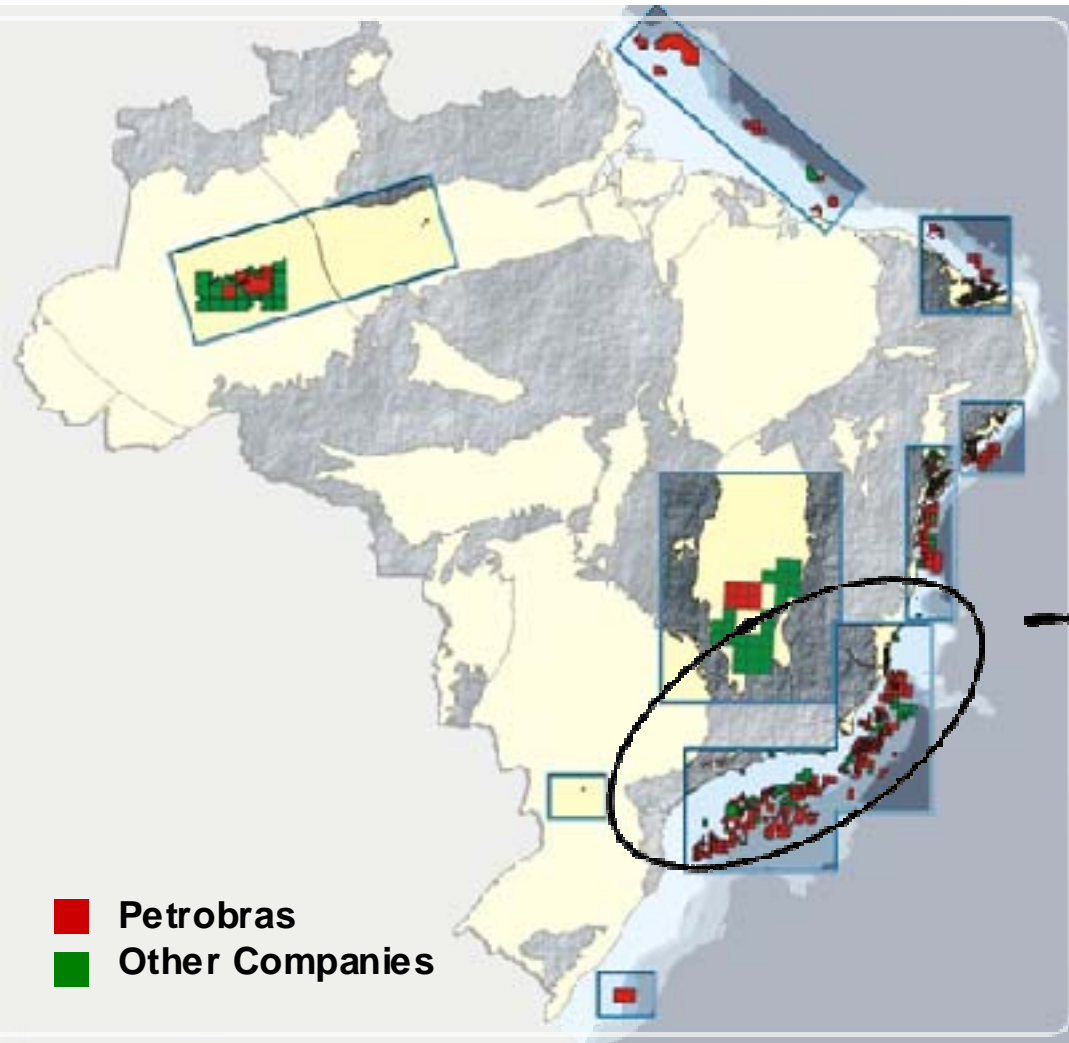
**DOWNSTREAM**



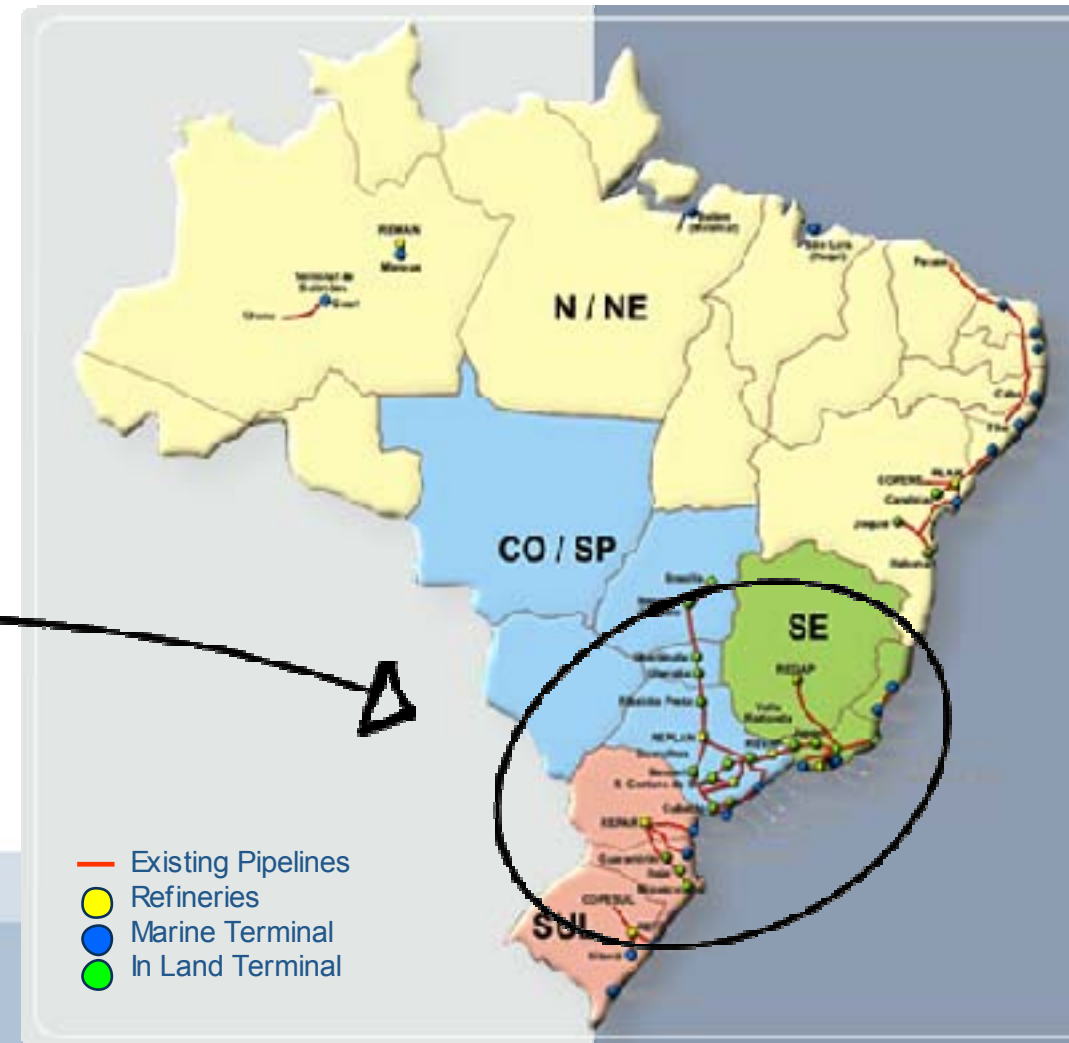
**PETROBRAS**

# VERTICALLY INTEGRATED SYSTEM TO CAPTURE SYNERGIES WITHIN THE VALUE CHAIN

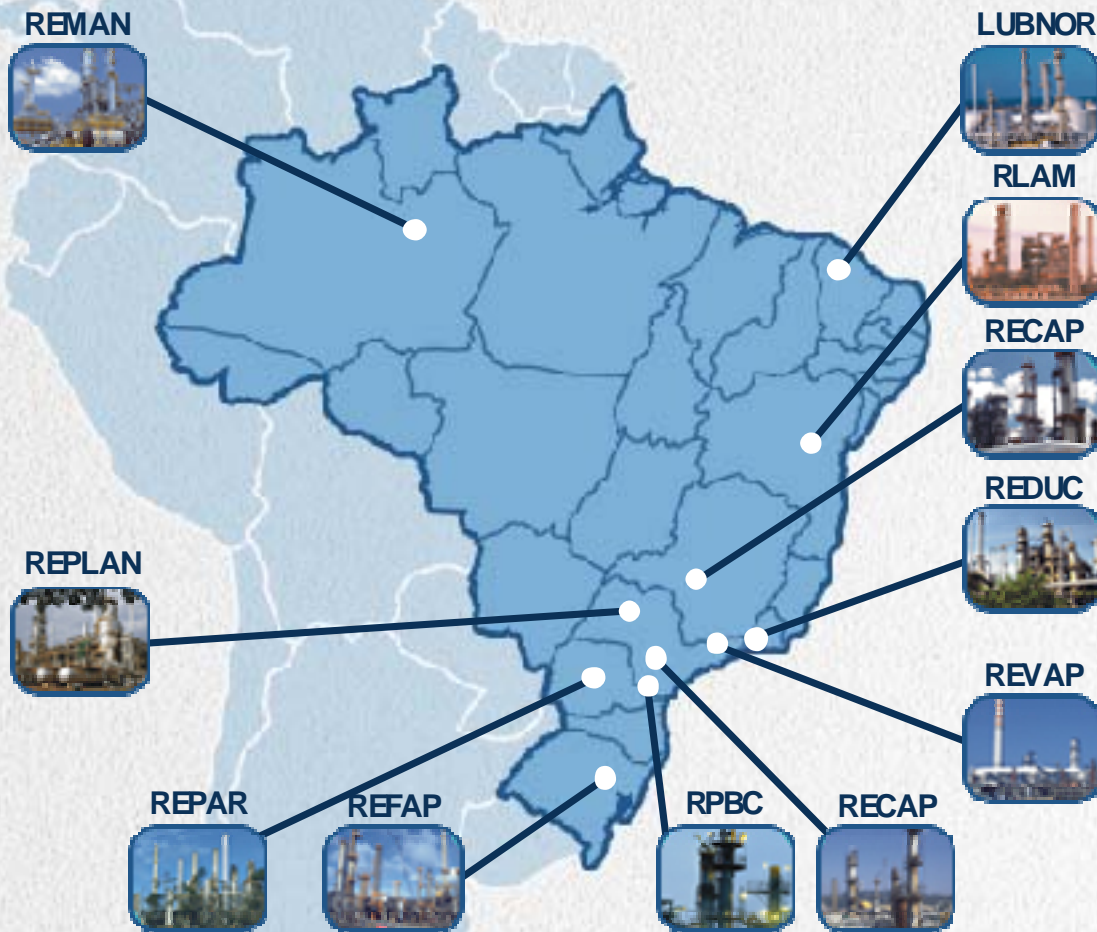
## Upstream Operations



## Downstream Operations



# INVESTING IN REFINING INFRASTRUCTURE



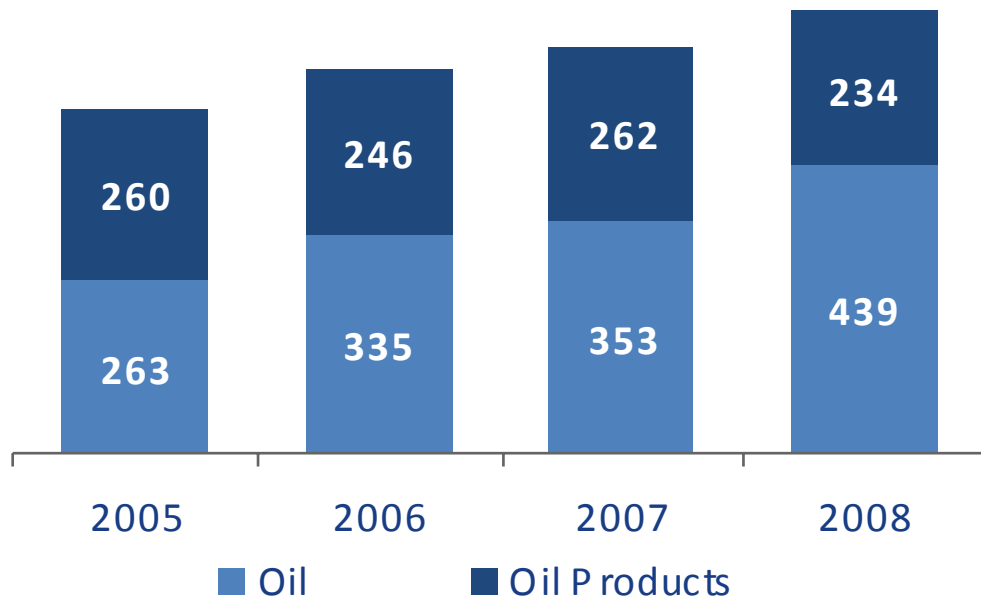
Refineries	Capacity (000 b/d)	Troughput (000 b/d)
Paulinia - Replan (SP)	365	348
Landulpho Alves - Rlam (BA)	323	261
Duque de Caxias - Reduc (RJ)	242	243
Henrique Lage - Revap (SP)	251	236
Alberto Pasqualini - Refap (RS)	189	148
Pres. Getúlio Vargas - Repar (PR)	189	169
Pres. Bernardes - RPBC (SP)	170	153
Gabriel Passos - Regap (MG)	151	132
Manaus - Reman (AM)	46	41
Capuava - Recap (SP)	53	42
Fortaleza - Lubnor (CE)	7	6
<b>TOTAL BRAZIL</b>	<b>1,986</b>	<b>1,779</b>

As Petrobras continues to grow its upstream business, the need for a compatible refining infrastructure becomes more critical

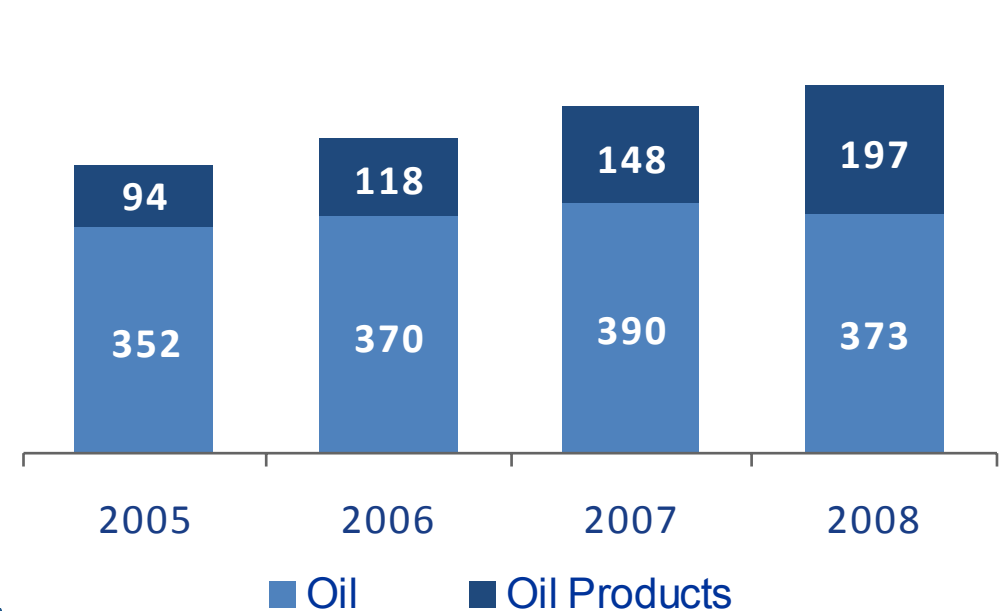
With limited investment over the last 20 years, Petrobras will increase capacity to meet the needs of a growing domestic market

# IMPROVING THE TRADE BALANCE

Exports (000 barrels/day)

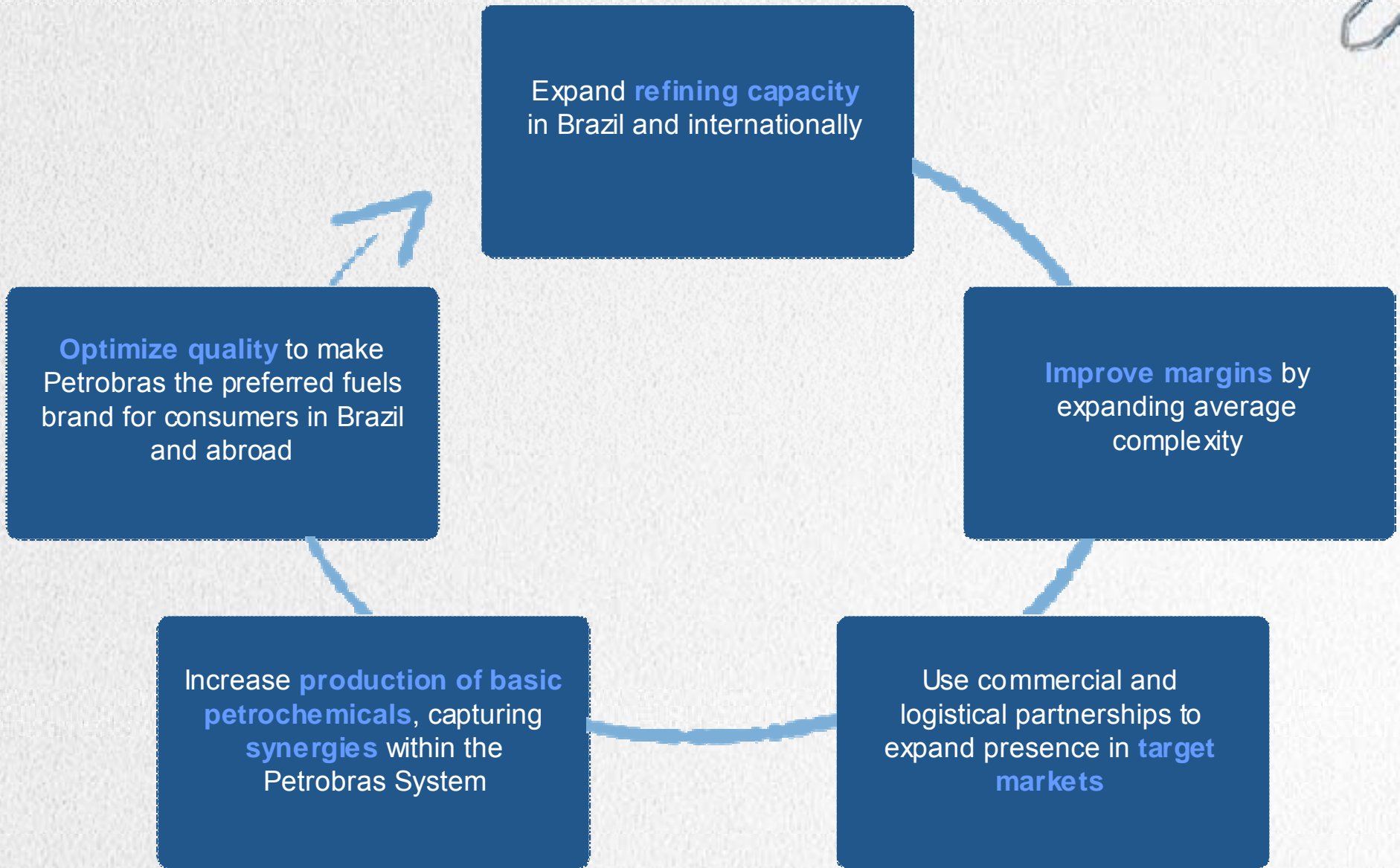


Imports (000 barrels/day)



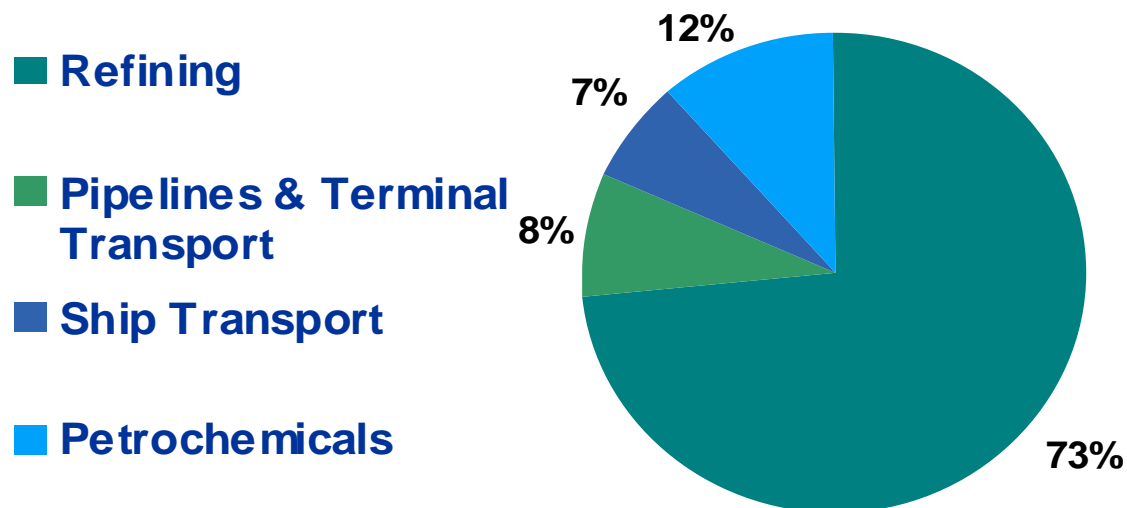
- Despite a current **surplus in volumes**, Petrobras continues to run a **trade deficit**
- Targeted investments aim to **reduce the need for oil imports** and **increase oil products exports**

# FOCUSED STRATEGY TO ADD VALUE TO DOMESTIC CRUDE



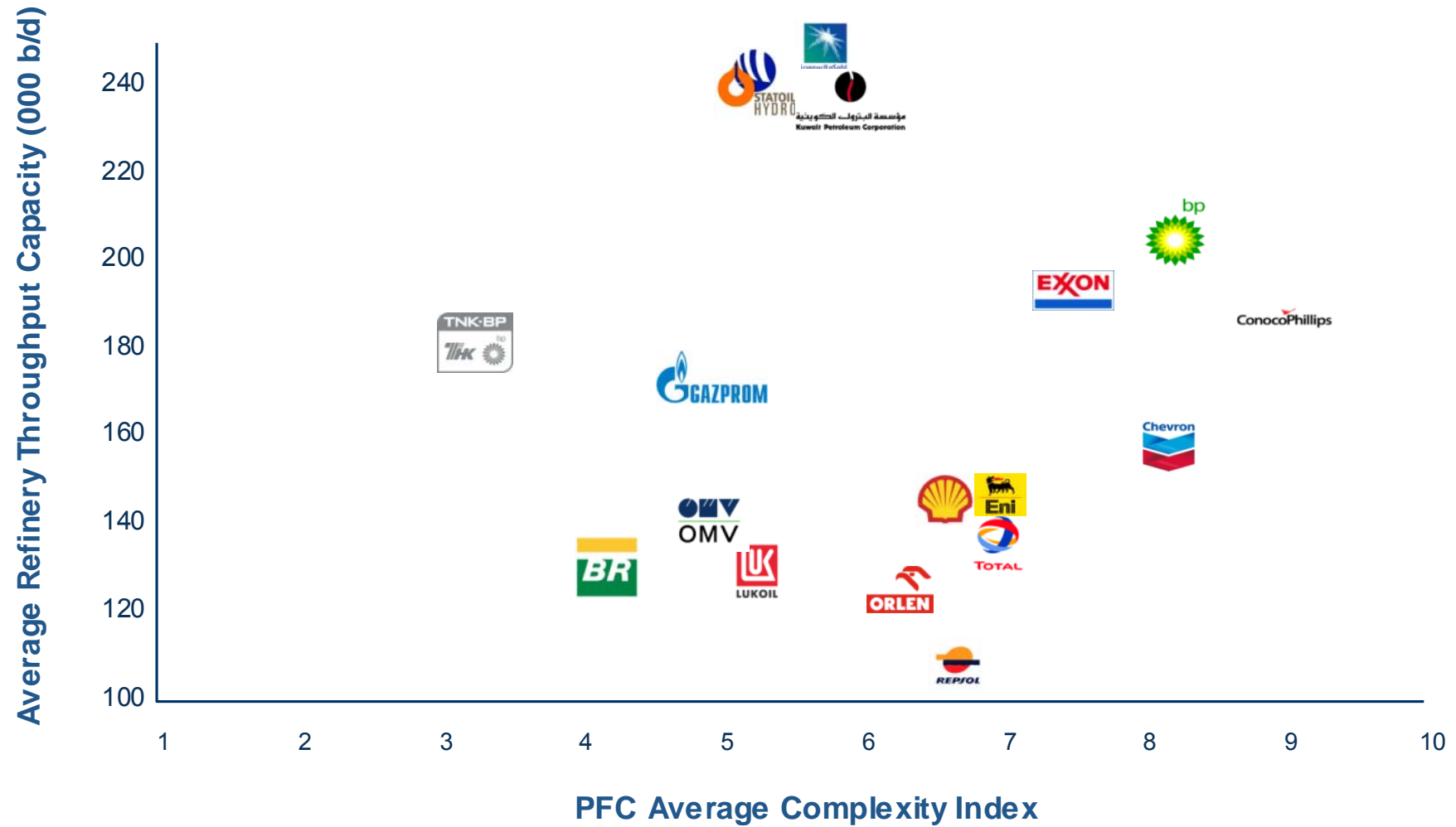
## INVESTING TO REALIZE THESE GOALS

### Downstream Investments US\$ 47.8 billion



- Adding values to domestic crude and producing diesel and gasoline in-line with international standards
- Investment targets Fuel Quality, Conversion and Expansion

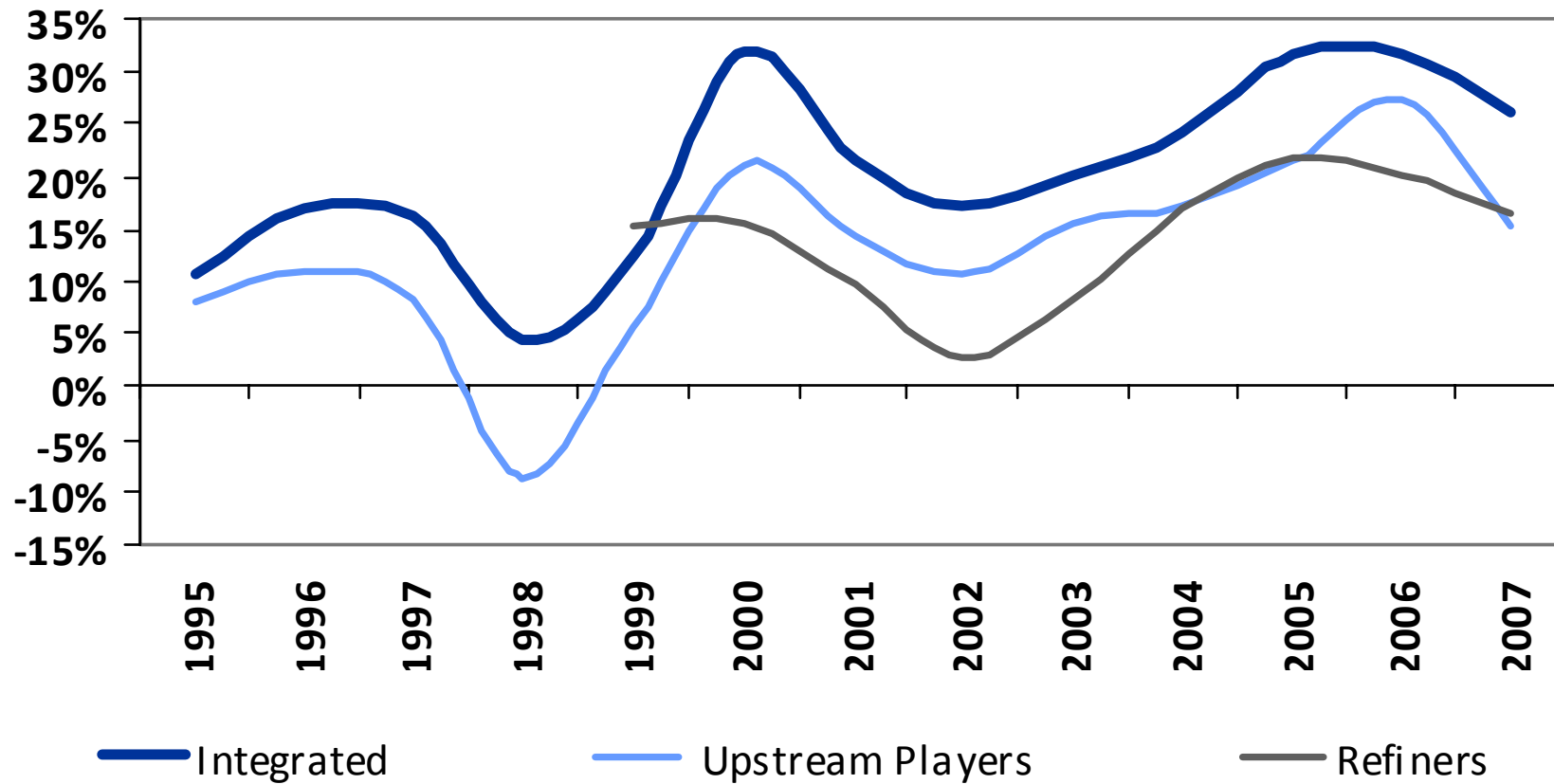
# ADDRESSING THE NEED TO INCREASE THROUGHPUT CAPACITY AND COMPLEXITY...





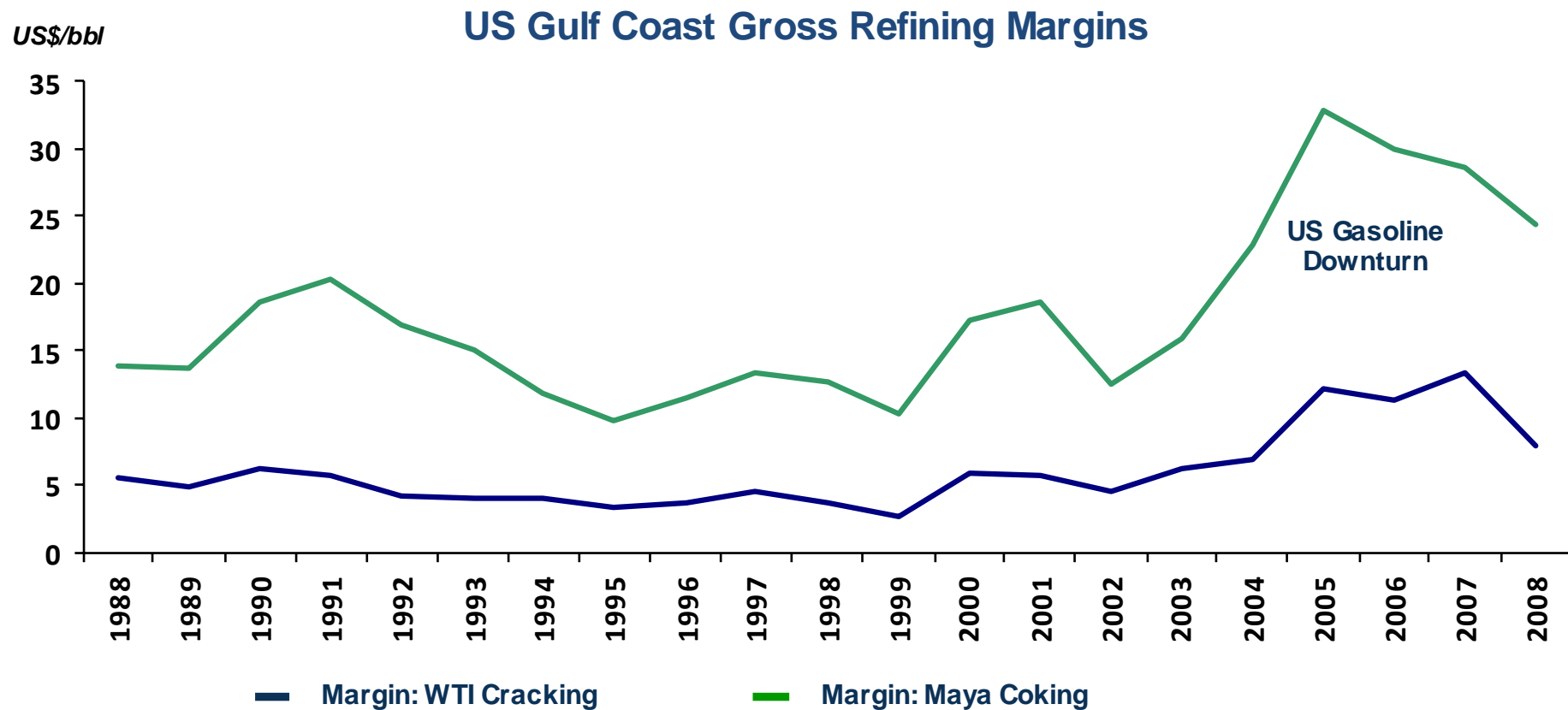
# THE BENEFITS OF INTEGRATION

## ROCE



- Integrated Companies: BP, Shell, Exxon, Conoco, Chevron, Total, ENI, Luke Oil and Repsol
- Upstream Players: Apache, Anadarko, Devon, EnCana, Nexen and Talisman
- Refiners: Valero, Reliance Industries, PKN Orlen, Sunoco and Tesoro

# INCREASING GROSS REFINING MARGINS...

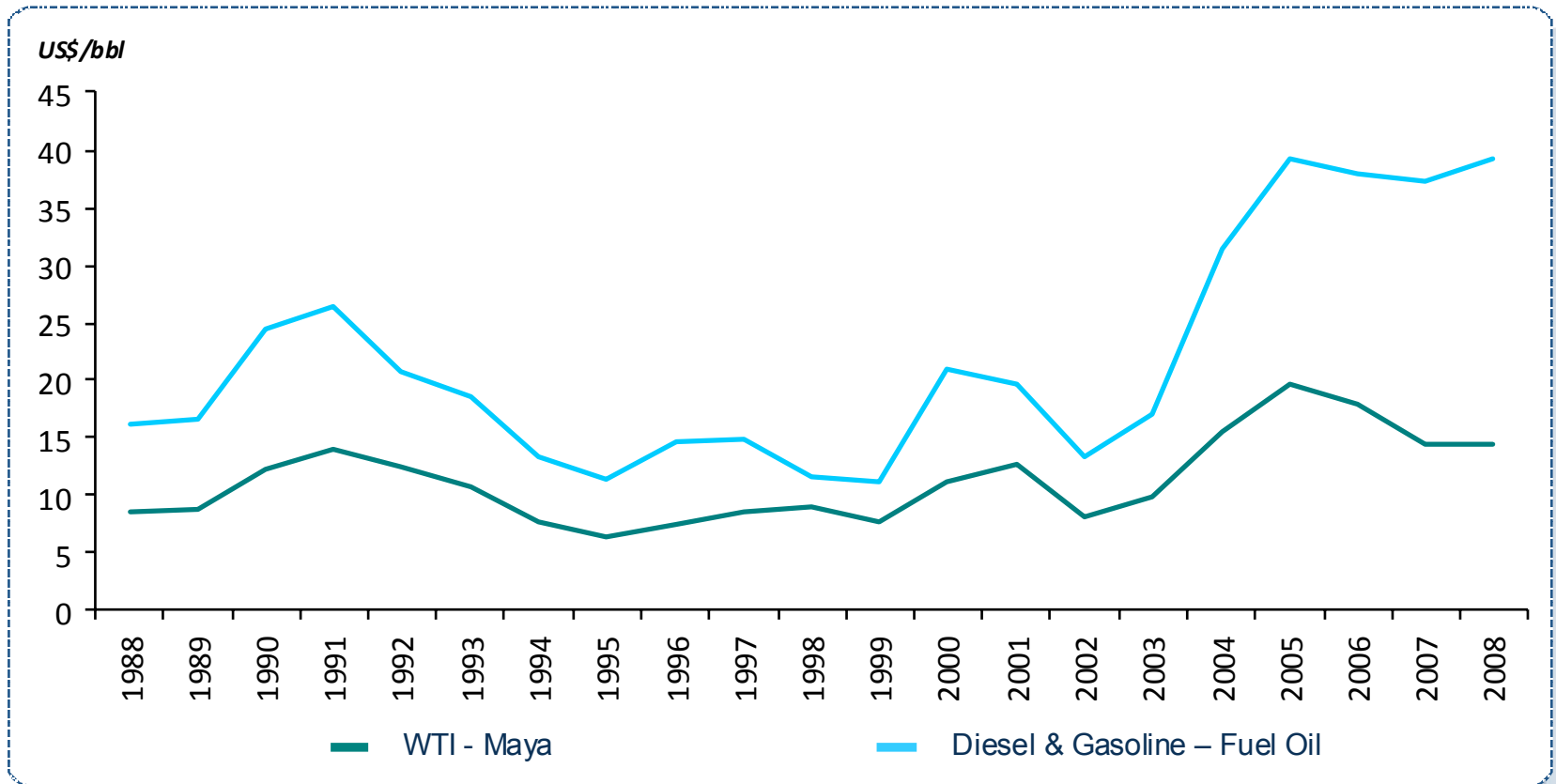


▪ Gross Refining Margins =  
Products prices minus crude  
oil

▪ Margin WTI Cracking = USGC  
Margin of using WTI with  
cracking yields

▪ Margin Maya Coking = USGC  
Margin of using Maya with  
coking yields

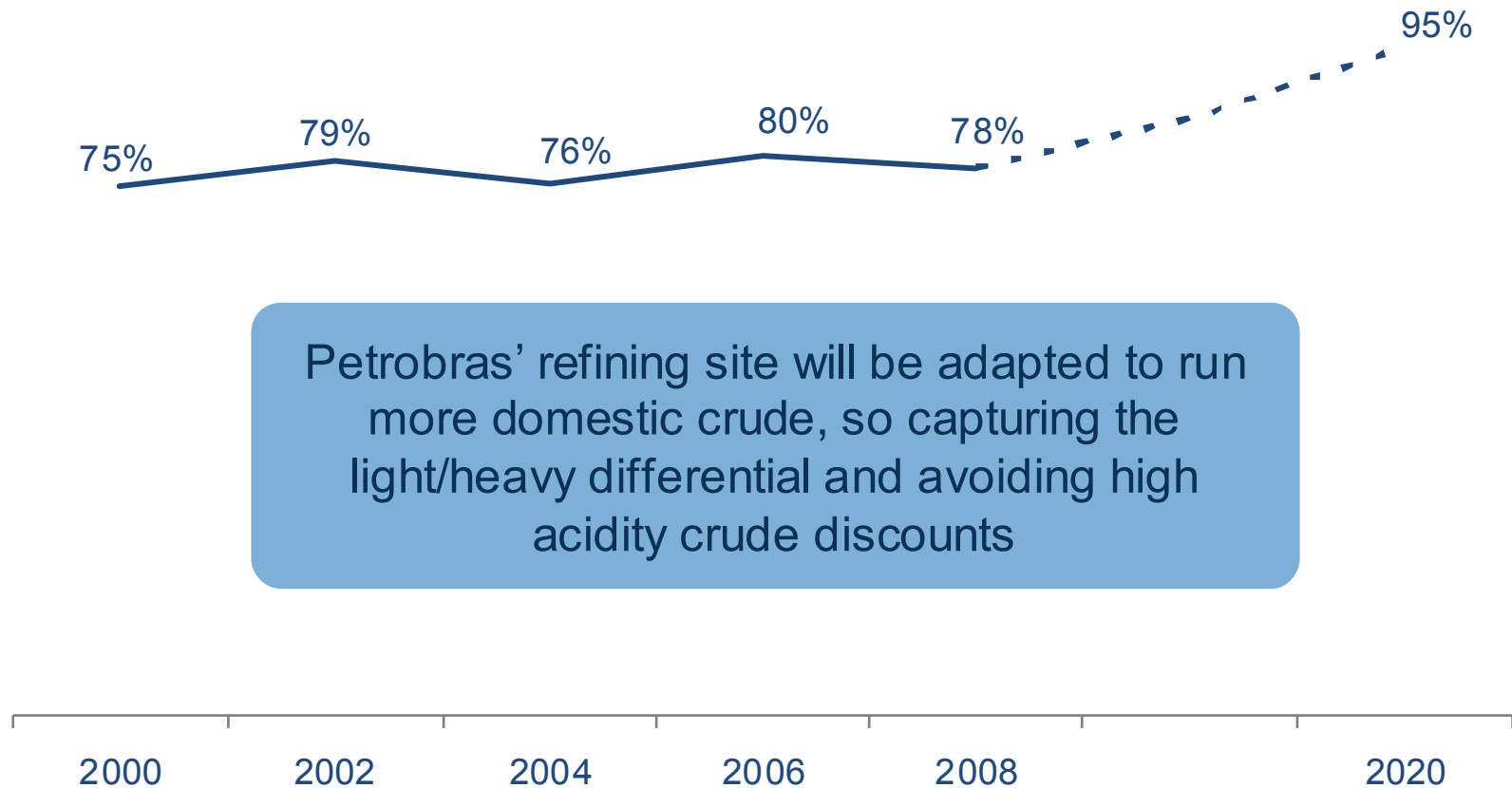
# AND CAPTURING THE LIGHT/HEAVY DIFFERENTIAL



- Spread Crude Oil Light-Heavy = WTI - Maya
- Spread Oil Products Light-Heavy = (Unleaded USG + N2 Diesel USG)/2 - Fuel Oil 3% USG

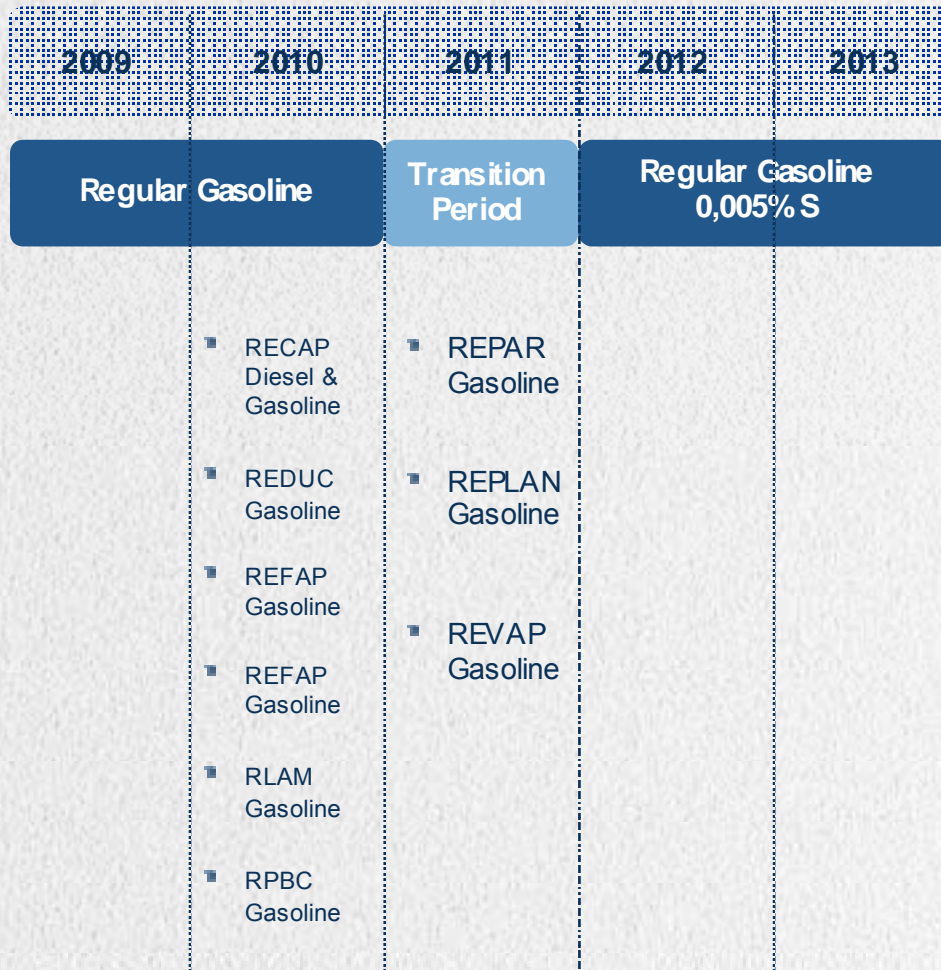
# LESSENING IMPORTED CRUDE REQUIREMENTS FOR REFINING INPUTS

## Domestic Crude as a Percentage of Total Feedstock Processed

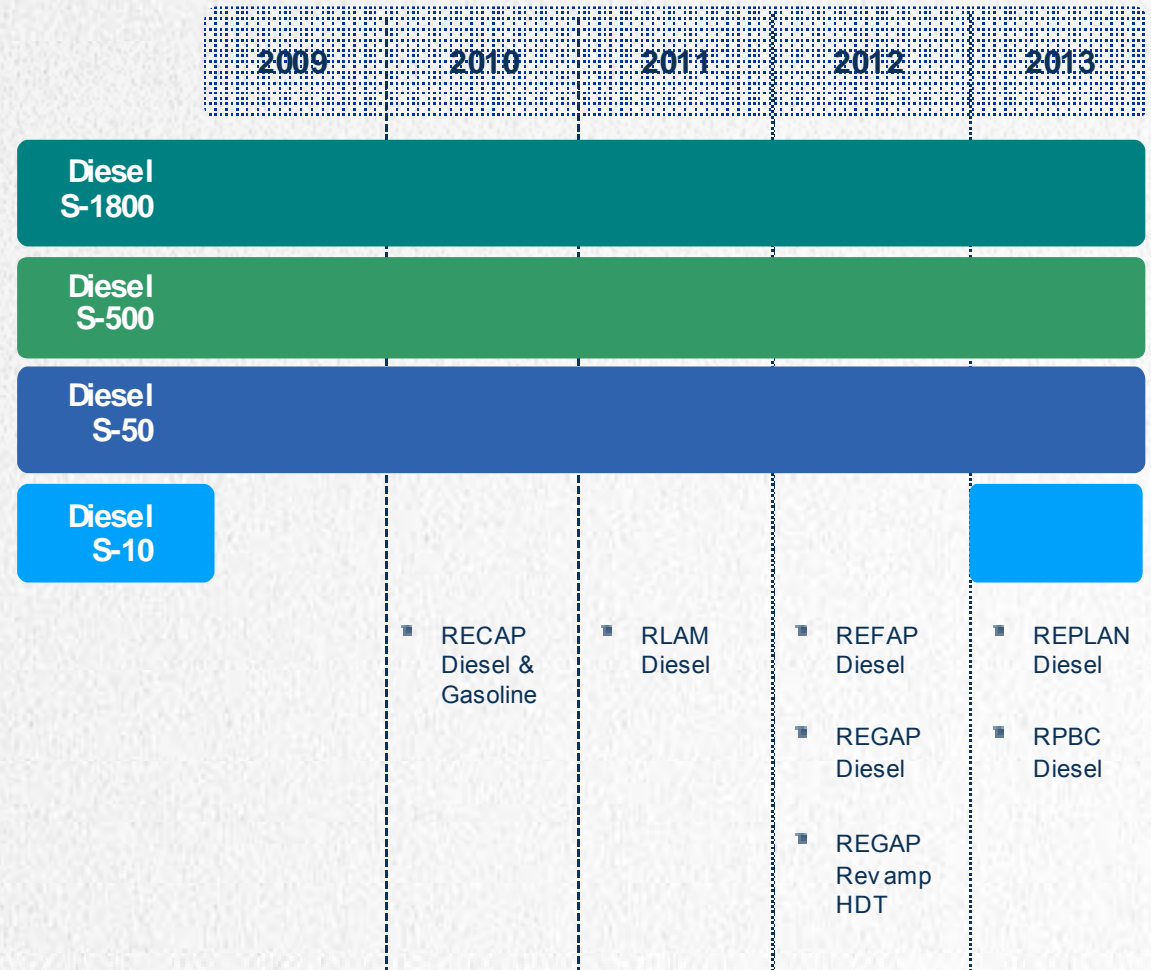




## QUALITY OF GASOLINE



## QUALITY OF DIESEL

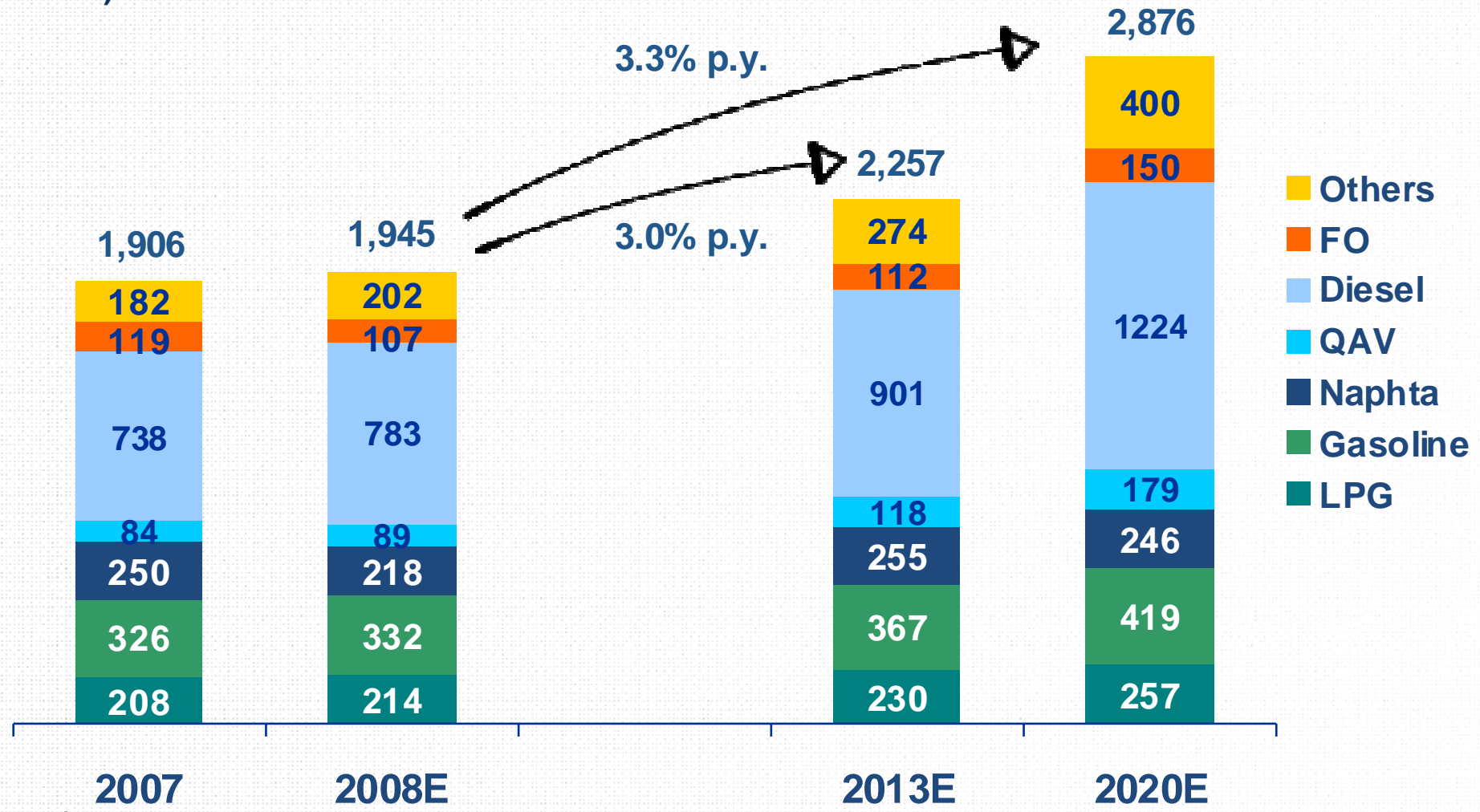


IMPROVING GASOLINE AND DIESEL QUALITY TO COMPLY WITH TIGHTER ENVIRONMENTAL REGULATIONS AND REDUCE EMISSIONS & GASES STREAMS

# FAST GROWING DOMESTIC DEMAND...

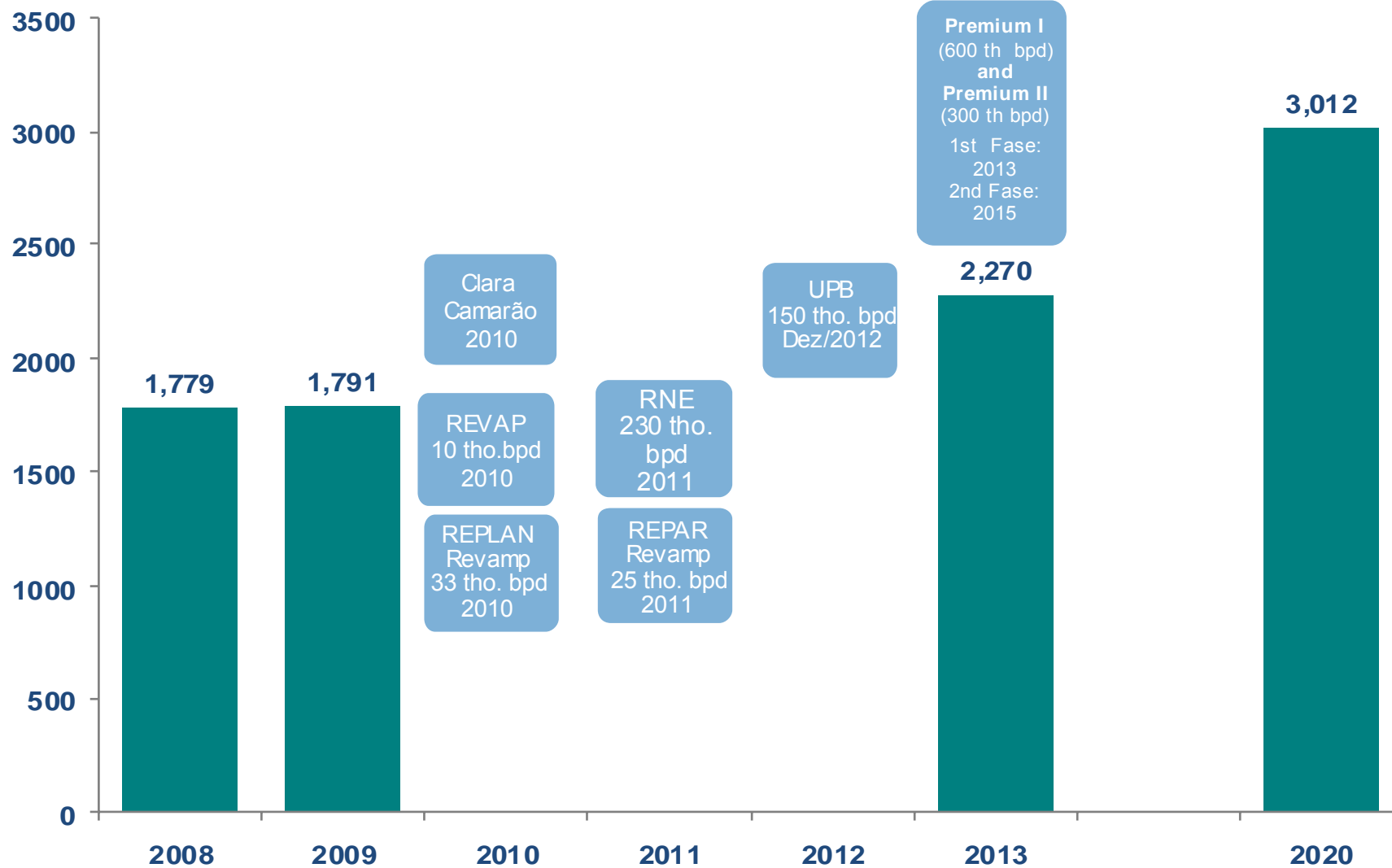


(000 b/d)

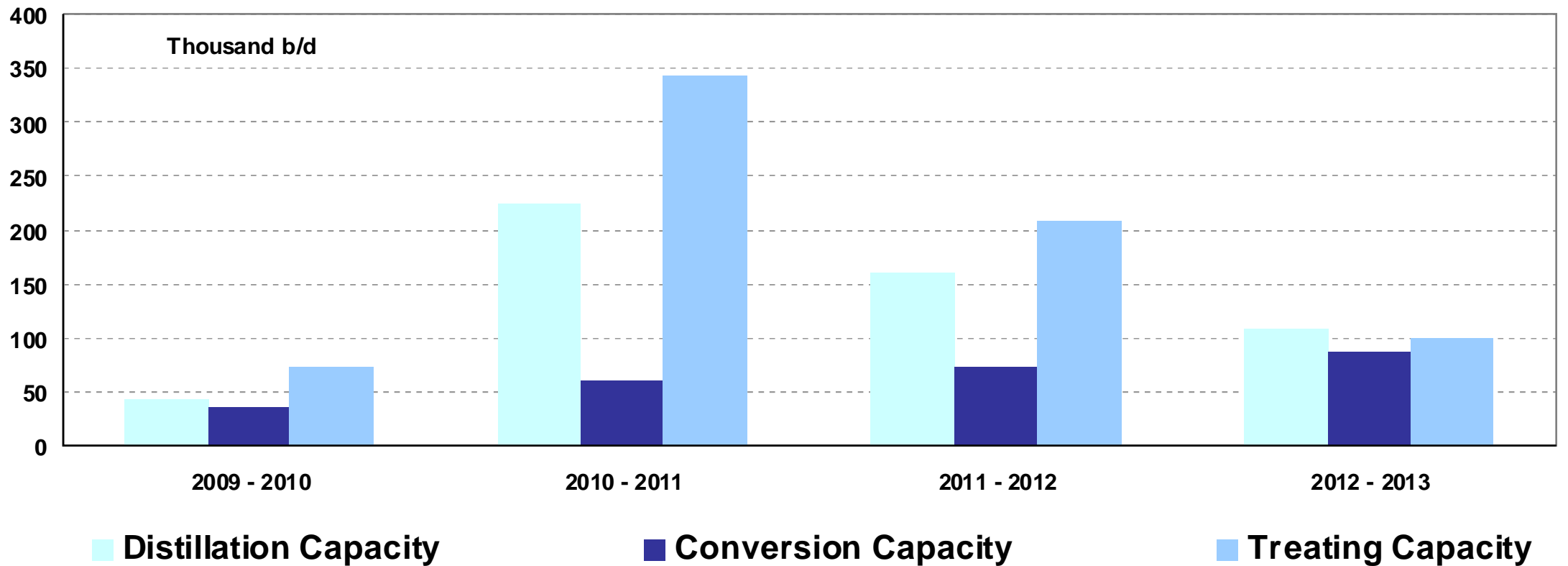


# WILL BE MET BY INVESTMENTS TO SIGNIFICANTLY INCREASE REFINING CAPACITY

## Domestic Crude Throughput (000 b/d)



# DOMESTIC REFINING CAPACITY ADDITIONS



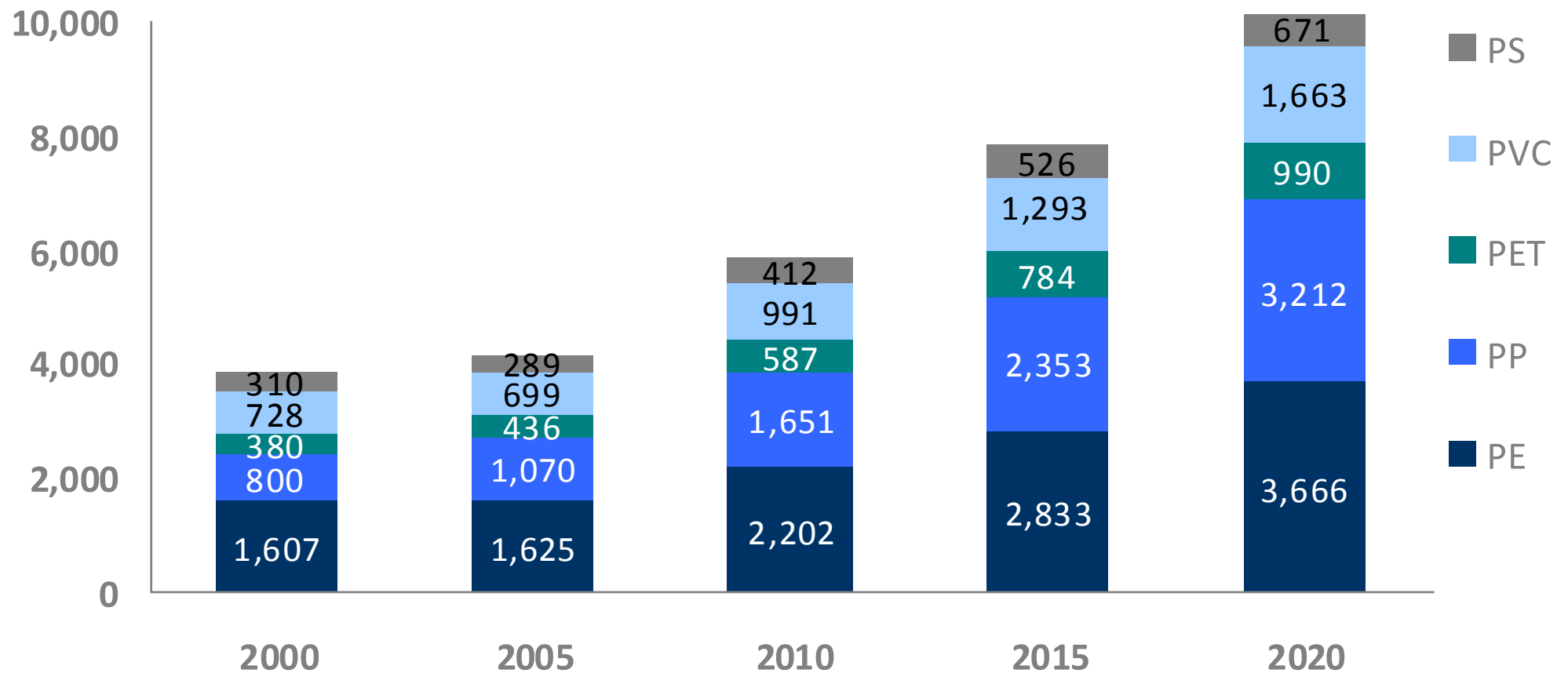


## MAIN DRIVERS FOR THE NEW REFINERIES

- ▣ **Access to oil products market**
- ▣ **Access to raw material**
- ▣ **Logistic potential**
- ▣ **Shared infrastructure**
- ▣ **Adaptation to social and environmental issues (sustainability)**
- ▣ **Capital discipline and solid returns**
- ▣ **Adaptation to international product quality specifications**
- ▣ **Add value to stakeholder through accessing new markets abroad**

# ADDRESSING GROWING DOMESTIC DEMAND FOR PETROCHEMICALS

(000 tons p.a.)



# BY INTEGRATING THE DOWNSTREAM SUPPLY CHAIN THROUGH TARGETED INVESTMENTS

## Investment decisions in this segment are based on the need to:

- Secure a natural hedge between petrochemical and refining cycles
- Diversify into higher value-added products
- Maintain flexibility and access to competitive feedstocks
- Develop cost leadership
- Improve competitiveness

### QUATTOR



**PRODUCTION**  
 1.020 kta ethene  
 320kta propene  
 1.040 kta PE  
 875 kta PP

PQU

QUATTOR

PU

RIOPOL

UDQ

37,3% Petrobras/Petroquisa  
 56% UNIPAR | 6,6% BNDES

### BRASKEM



**PRODUCTION**  
 2.480 kta ethene 1.180 kta propene  
 510 kta PVC  
 1.975 kta PE  
 1.090 kta PP

COPELUL

IQ

IPQ

23% Petrobras/Petroquisa  
 38% Grupo Odebrecht  
 36% Others



# COMPERJ WILL CONTRIBUTE TO THE PETROBRAS VALUE CHAIN

## Comperj will:

- Expand the domestic petrochemical market
- Utilize Marlim crude as feedstock
- Capture synergies from existing regional infrastructure
- Improve the balance within the commercial value chain for oil, oil products and petrochemicals

### BASICS

	Products	Production (kta)
Fuels	Diesel	535
	Naphtha	284
	Coke	700
Petrochemicals	Ethylene	1,300
	Propylene	881
	Benzene	608
	Butadiene	157
	p-Xylene	700
	Sulphur	45

### DOWNSTREAM

Products	Production (kta)
Polypropylene	850
Polyethylene	800
Styrene	500
Ethylene glycol	600
PTA	500
PET	600

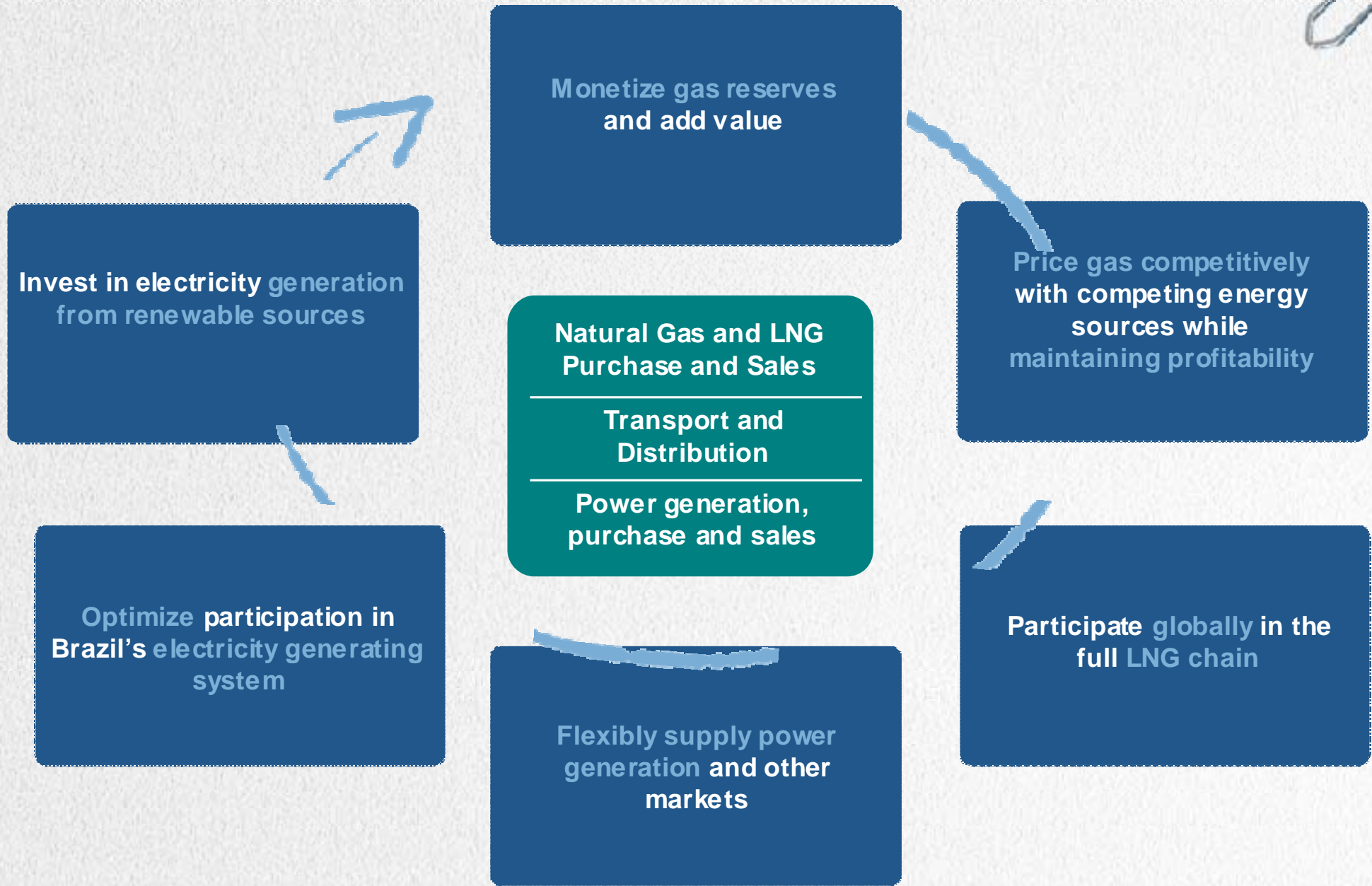


**GAS & ENERGY**



**PETROBRAS**

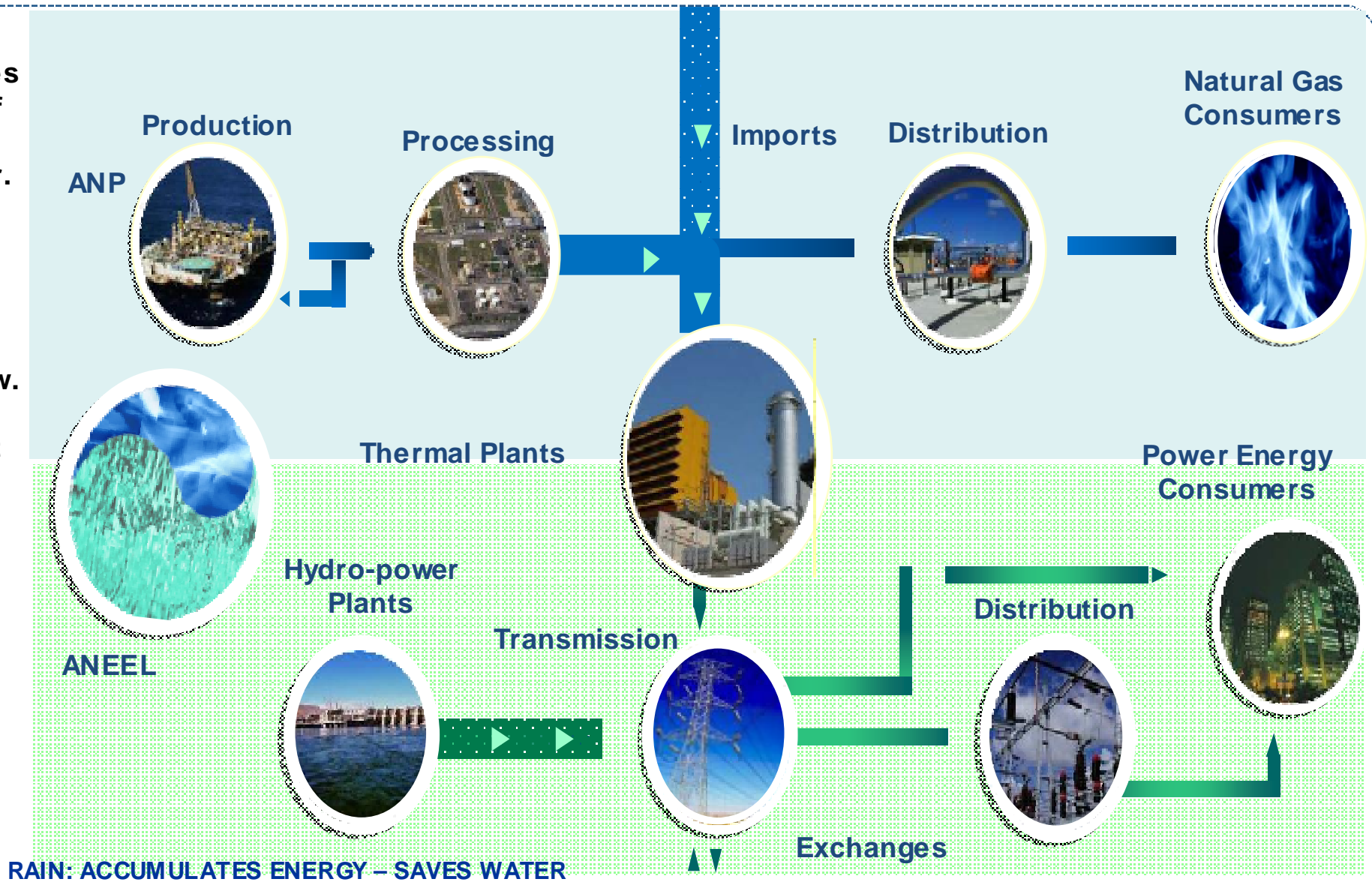
# FOCUSED STRATEGY



# INTEGRATED GAS AND POWER SYSTEM

ONS coordinates the operation of Brazilian electrical power.

Hydro-power provides base load electricity where natural conditions allow. Thermal plants minimize deficit risk.

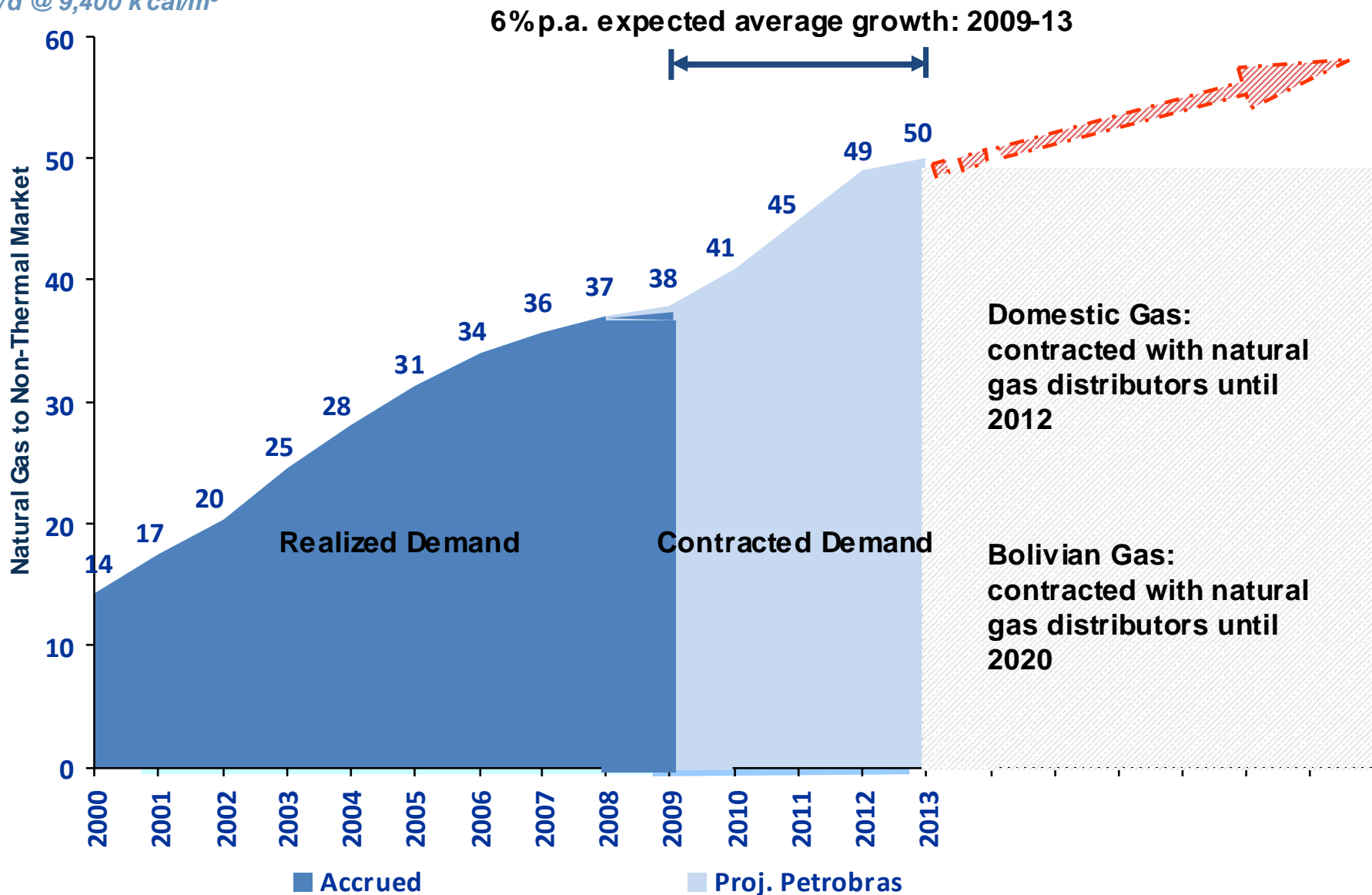


# INCREASING GAS DEMAND

## Non-thermal Demand

million m<sup>3</sup>/d @ 9,400 kcal/m<sup>3</sup>

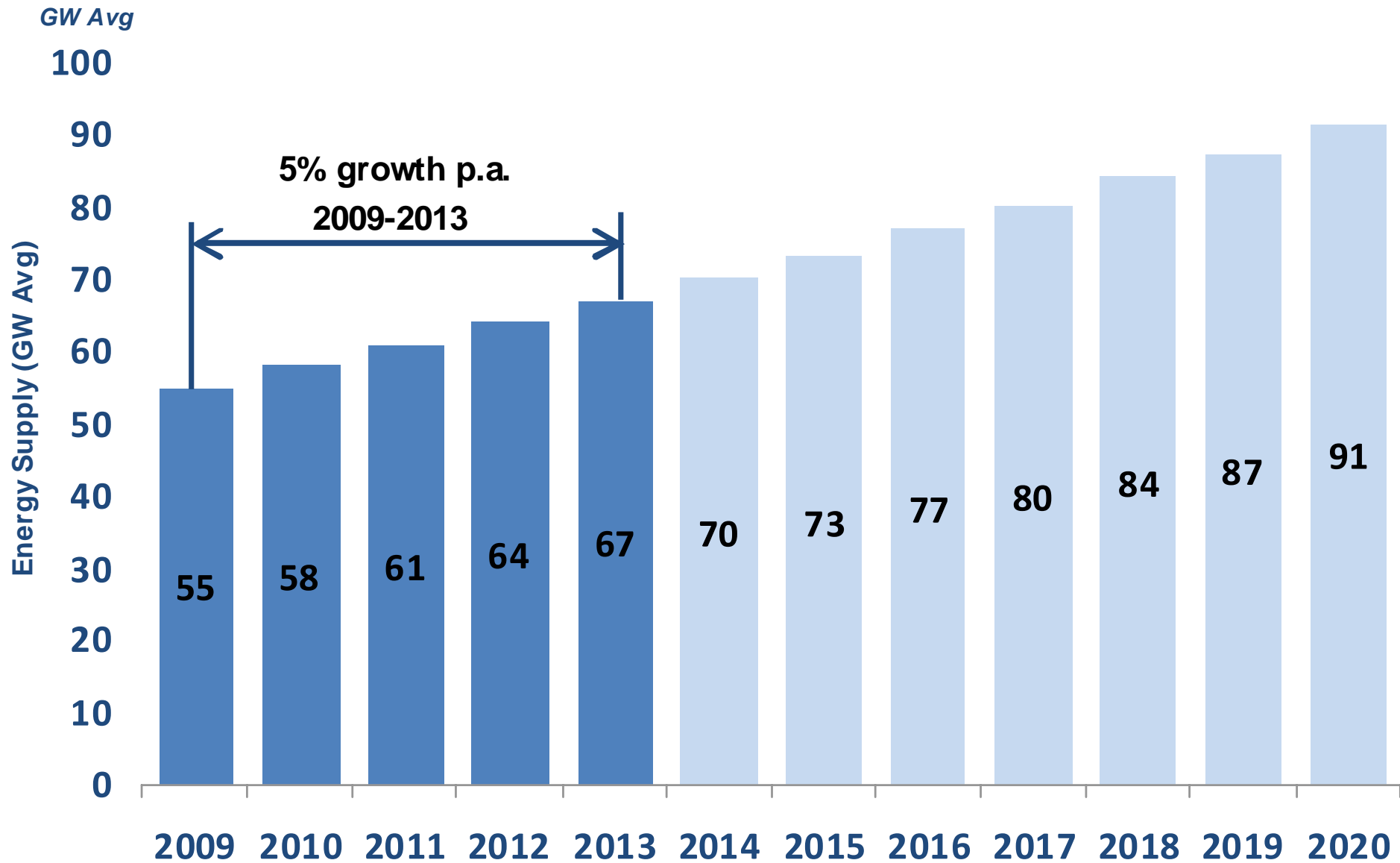
- Industrial  
Price parity with fuel oil, accepted by the market
- Automotive  
Flex fuel fleet, more expensive kits, higher NG prices
- Commercial  
Following services GDP projection
- Residential  
Following urban population growth



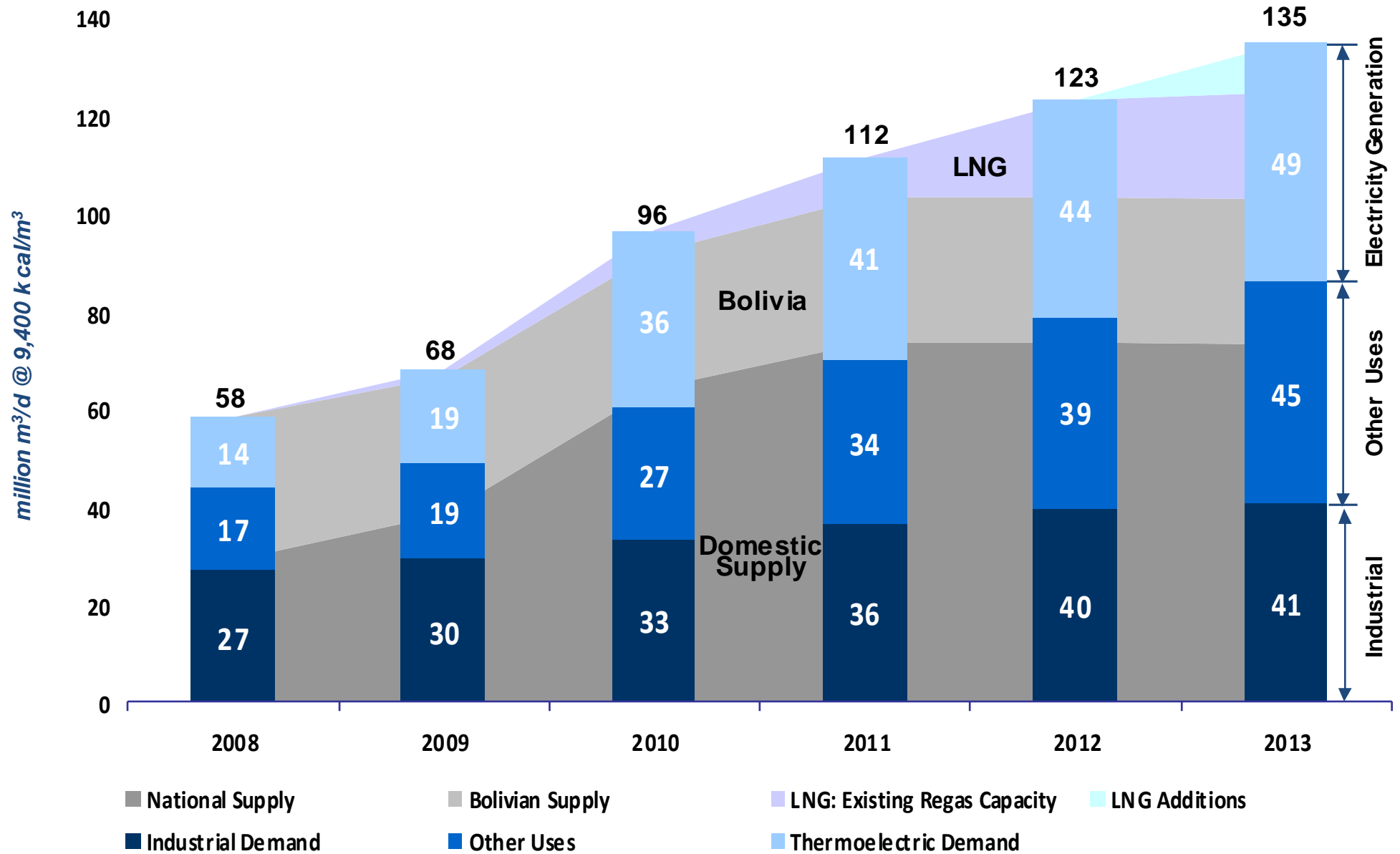


# INCREASING DEMAND FOR GAS-FIRED GENERATION

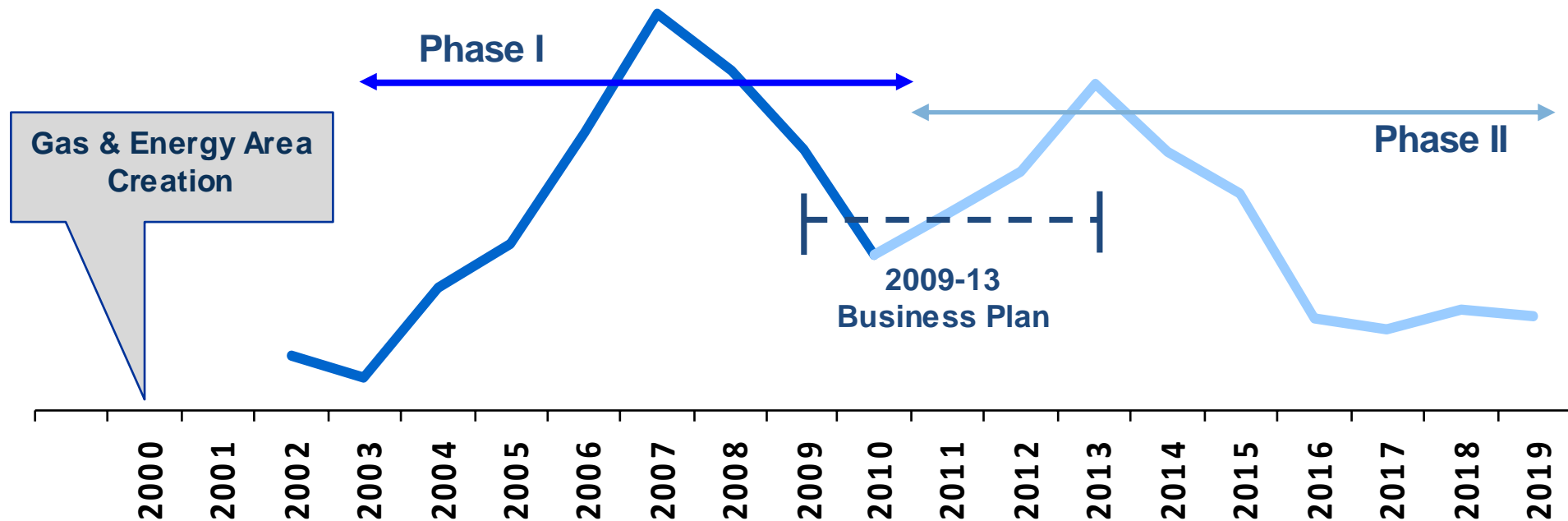
Average Supply 2008: 52 GW



# BALANCING SUPPLY & DEMAND



# PHASED INVESTMENT PLAN



Phase I (2003–2010): Diversify Supply and Integrate Network

Rationale:

- Meet domestic needs of power generation and non-thermal market
- Diversify supply: Bolivia and LNG;
- Increase power generation capacity

Result:

- PLANGAS, network integration, regasification terminal construction

Phase II (from 2011): Increase Supply Flexibility and Network Integration

Rationale:

- Expand natural gas supply and transmission capacity
- Create options to reach domestic and international markets

Result:

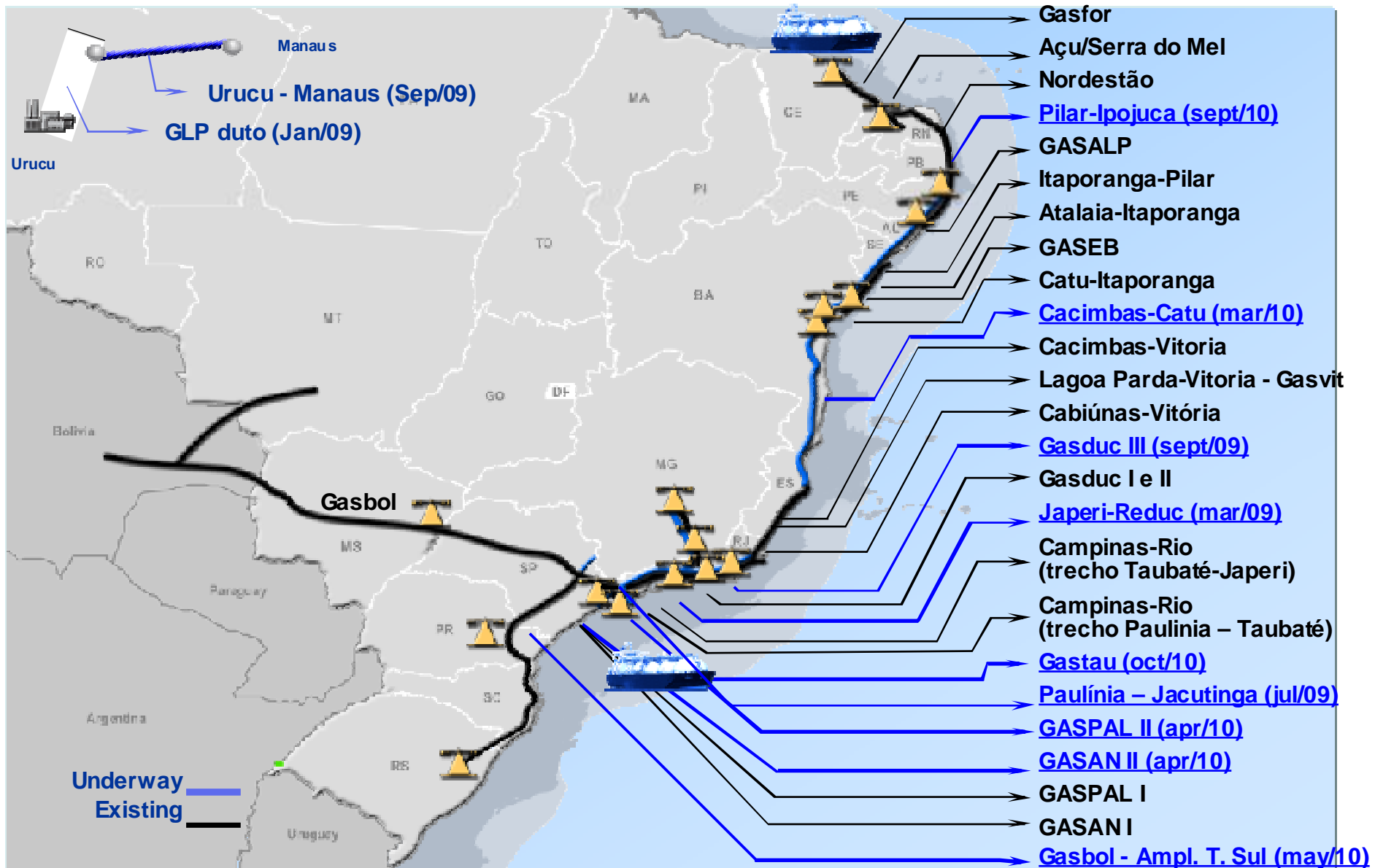
- Pre-salt production offloading, regasification terminals, expanded thermoelectric power generation

# PHASE I: DIVERSIFY SUPPLY & INTEGRATE NETWORK (A) EXPAND PIPELINE SYSTEM

70% expansion 2003-2010

**Existing Transportation Pipelines:**  
 2003 – 5,451 km  
 2006 – 5,495 km  
 2007 – 6,157 km  
 2008 – 6,933 km

**Pipelines Underway:**  
 2009 – 7,930 km  
 2010 – 9,265 km



# PHASE I: DIVERSIFY SUPPLY & INTEGRATE NETWORK (B) ADD FLEXIBILITY WITH LNG

## PECÉM TERMINAL

**Capacity:**  
7 MM m<sup>3</sup>/d

**Start-up:**  
Jan/09

**Objective:**  
Flexible gas  
supply for  
thermal  
generation in  
the Northeast



Terminal Overview: Regasification Vessel – 01/22/09

# PHASE I: DIVERSIFY SUPPLY & INTEGRATE NETWORK (B) ADD FLEXIBILITY WITH LNG

## GUANABARA BAY

**Capacity:**  
**Terminal: 20 mm**  
**m<sup>3</sup>/d**

**Regasification**  
**Vessel: 14 mm**  
**m<sup>3</sup>/d**

**C&A completion:**  
**Jan/09**

**Objective:**  
**Flexible gas**  
**supply for**  
**thermal**  
**generation in the**  
**Southeast**

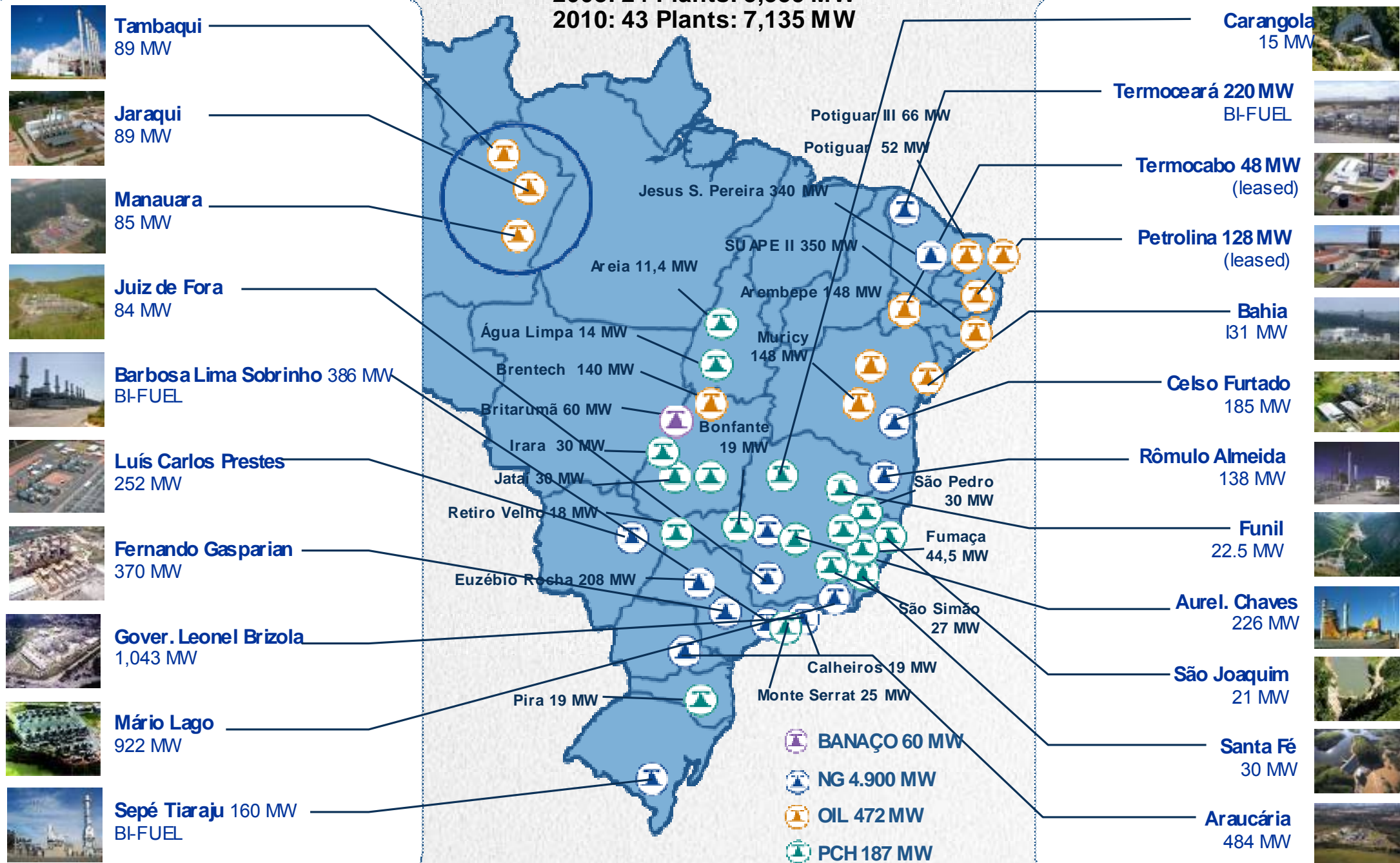


**Terminal Overview: Construction and Assembly (C&A) Completion – 01/22/09**

# PHASE I: DIVERSIFY SUPPLY & INTEGRATE NETWORK

## (C) INCREASE POWER GENERATION CAPACITY

2008: 24 Plants: 5,559 MW  
 2010: 43 Plants: 7,135 MW



## PHASE II: INCREASE SUPPLY FLEXIBILITY & NETWORK INTEGRATION

### (A) TRANSPORTATION INFRASTRUCTURE

- Increase natural gas supply and flexibility:
  - Additional regasification terminals will:
    - Increase supply to meet thermal demand
    - Create opportunities to supply domestic and international markets
- Increase natural gas transmission capacity:
  - Add 307 km of pipelines and new compression facilities
  - Increase (net) natural gas flow between the Southeast and Northeast
  - Connect new natural gas supplies, including pre-salt and third and fourth LNG terminals

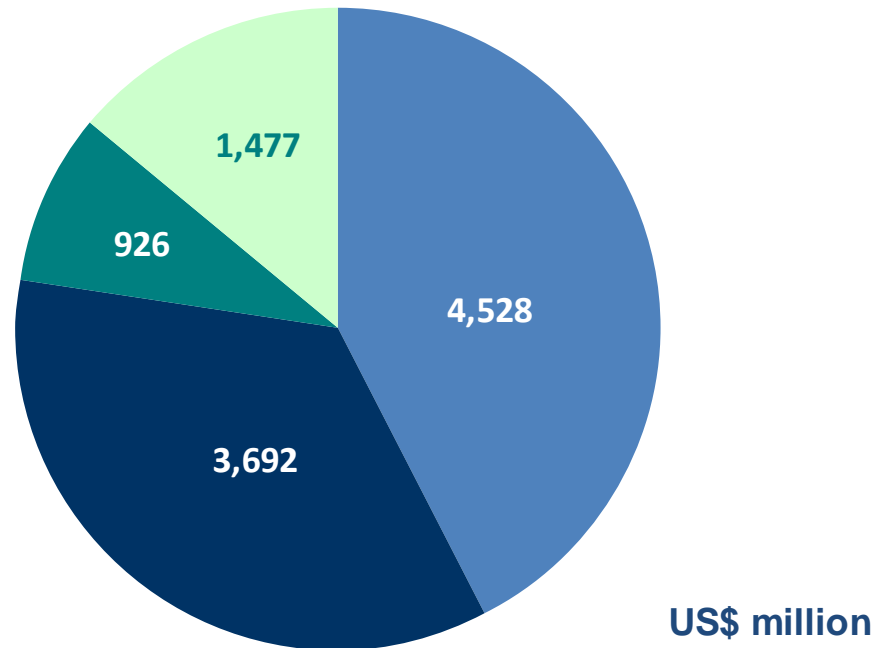


## PHASE II: INCREASE SUPPLY FLEXIBILITY & NETWORK INTEGRATION (B) ENERGY INVESTMENTS

- Expand thermal generation
  - Federal government plan (2008-2017) creates opportunities to expand power supply from natural gas-fired plants;
  - Petrobras foresees participation in future energy bids, assuring fixed revenue before investment;
  - Petrobras may participate as:
    - LNG supplier
    - Logistical service provider (transportation and/or regasification)
    - Power generator
    - Combinations of the above
  - This will be done via competitive bidding

# GAS & ENERGY INVESTMENT PLAN 2009-2013

## G&E Investments US\$ 10.6 billion



**Natural Gas**  
US\$ 8.2 billion

■ Projects in Portfolio

■ New Investments Proposed

**Energy**  
US\$ 2.4 billion

■ Projects in Portfolio

■ New Investments Proposed



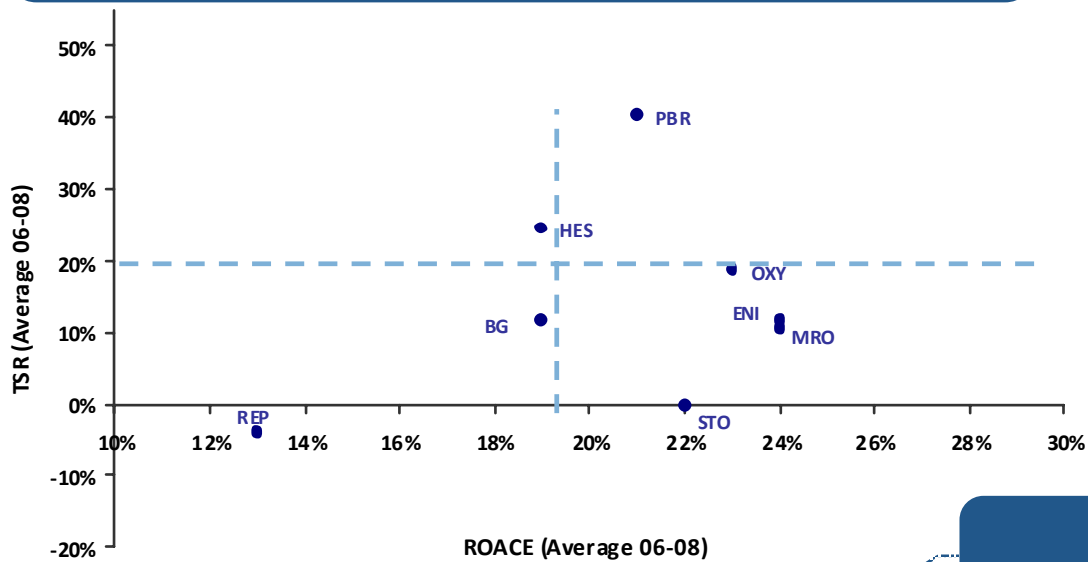
FINANCE



**PETROBRAS**

# CREATING SHAREHOLDER VALUE AND IMPRESSIVE RETURNS ON CAPITAL

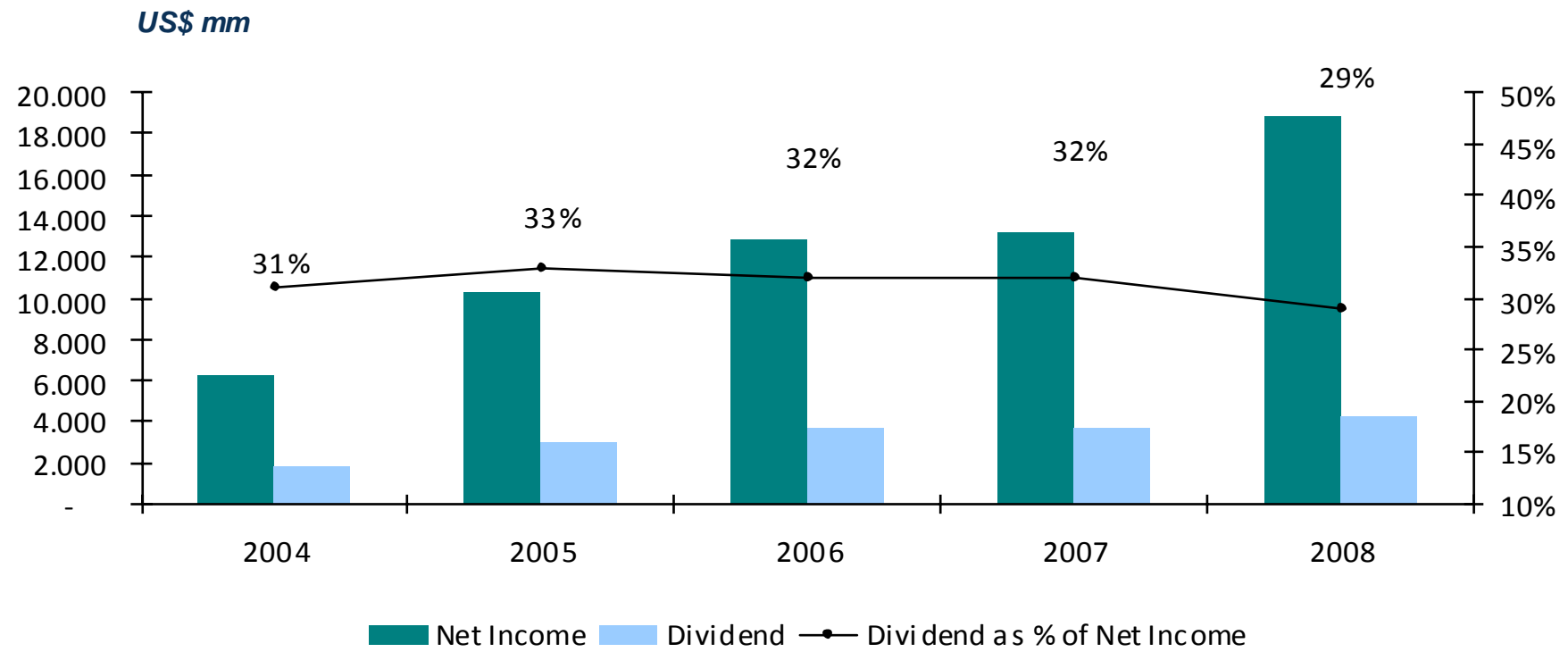
## Total Shareholder Return (TSR) vs. ROACE



## Shareholder Return (TSR)



# STEADY PAYOUT AND INCREASING INCOME HAS LED TO HIGHER DIVIDENDS

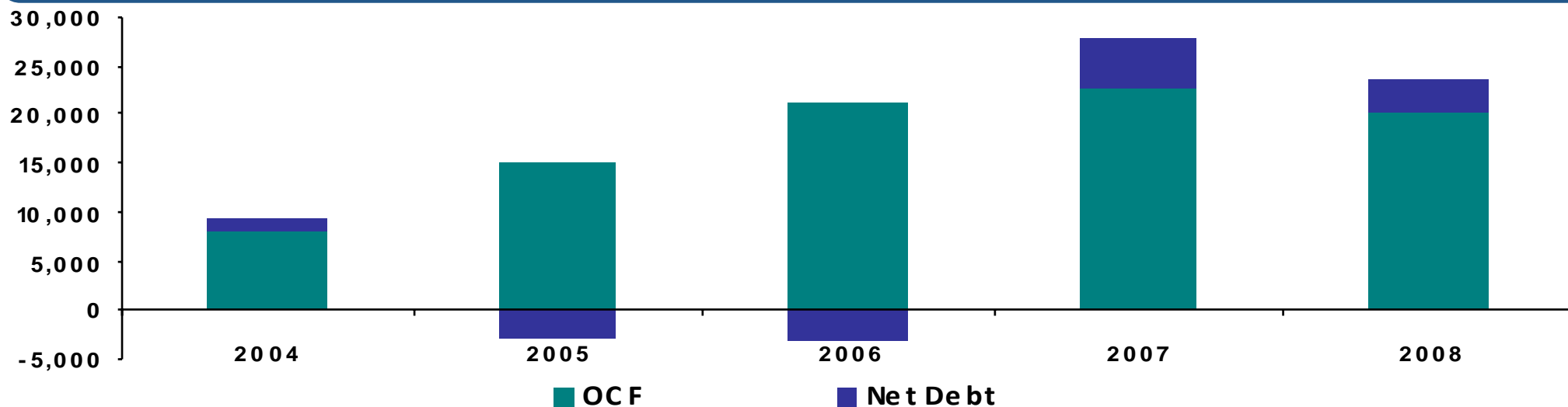


Brazilian Corporate Law requires a minimum annual distributions equal to 25% of net income

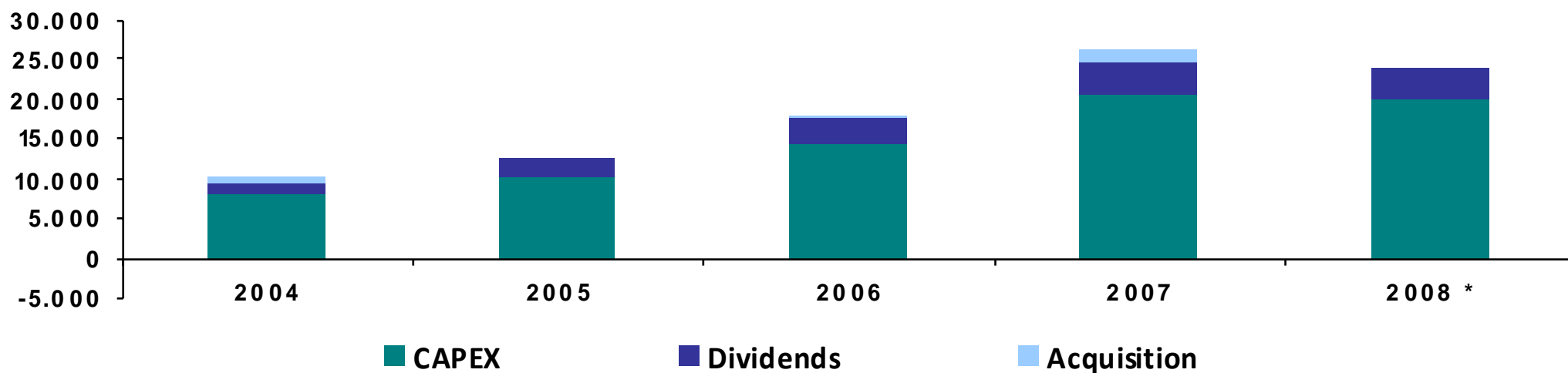


# GROWING CASH FLOW DRIVES CAPEX...

## SOURCES

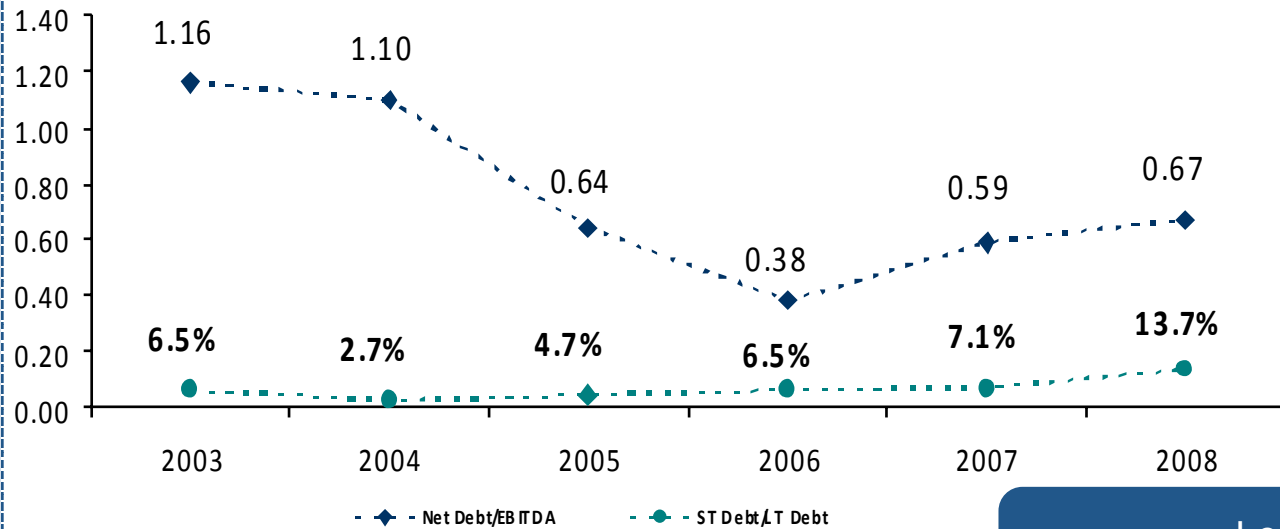


## USES



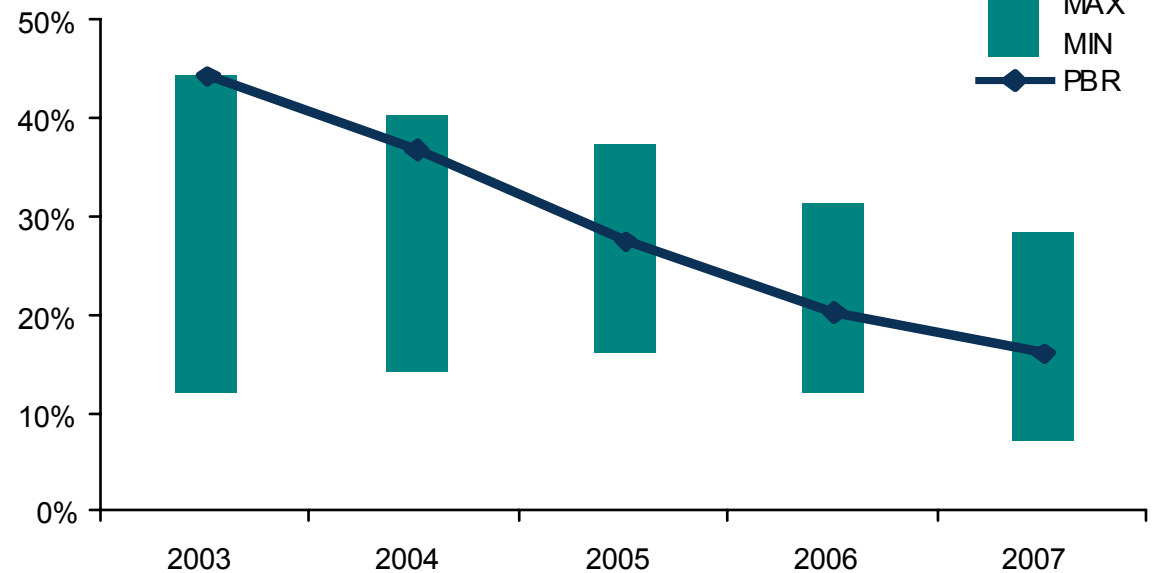
# ...ACCOMPANIED BY STRENGTHENING CREDIT RATIOS AND INCREASED DEBT CAPACITY

Net Debt/ EBITDA and ST Debt/LT Debt



Sound credit ratios and commitment to maintaining investment-grade ratios

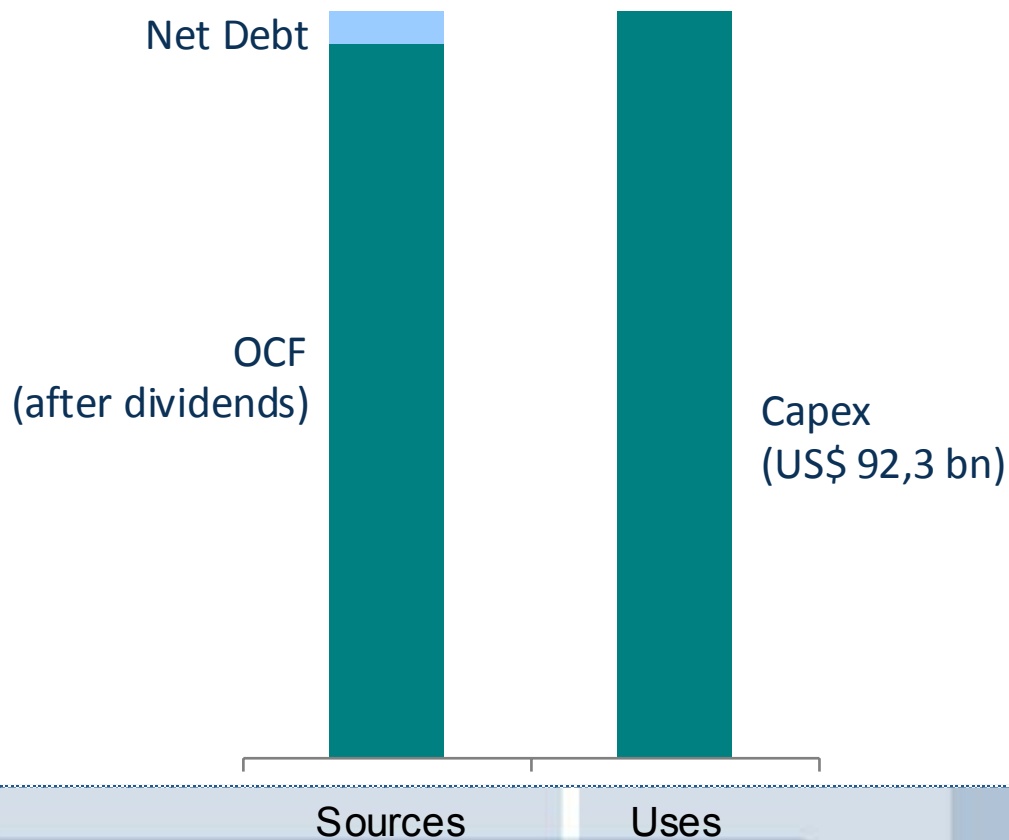
Long Term Debt to Long-term Capital \*



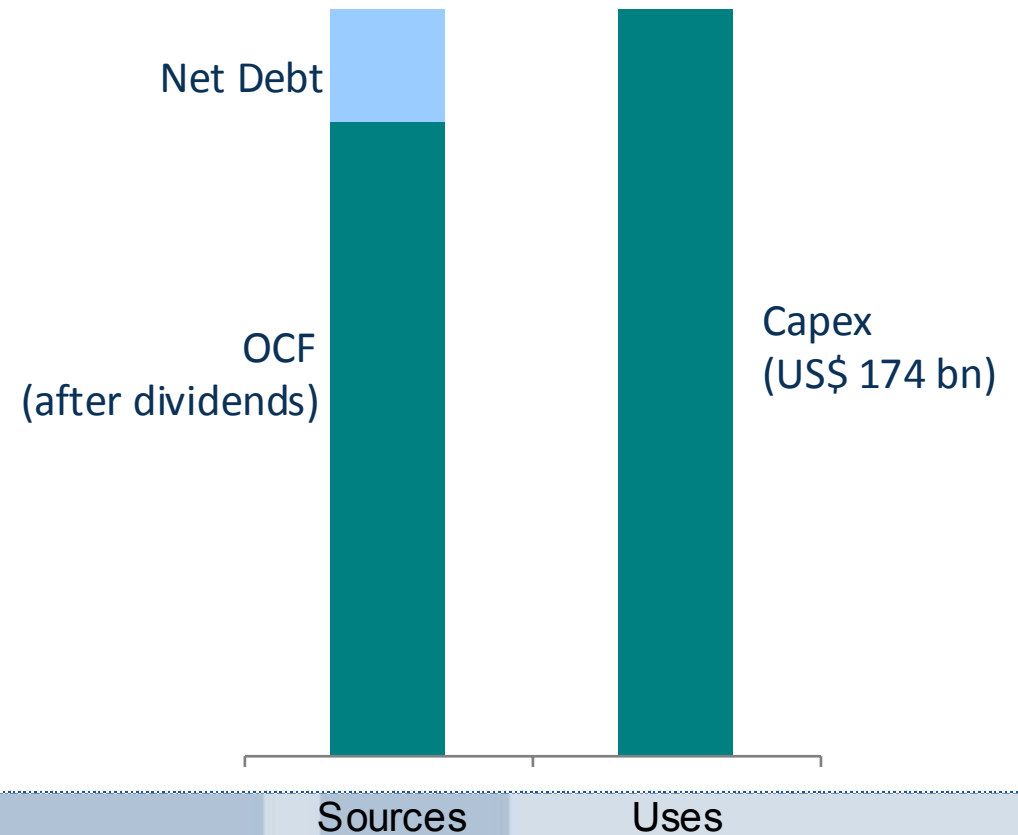
\* Source: Company reports (REP, HES, ENI, BG, OXY, MRO, STL)

# HISTORICALLY, CONSERVATIVE PLANNING HAS LED TO A BALANCE BETWEEN OCF AND CAPEX; NEW PLAN WILL FOLLOW SIMILAR APPROACH

**Historical**  
US\$ 88.5 bn (2003 – 2008)



**Projected**  
US\$ 148.6 bn (2009 – 2013)



■ Average Brent: US\$ 60/bbl

■ Average Oil Production: 1,720 (thousand boe/d)

■ Average Brent (e): US\$ 66/bbl

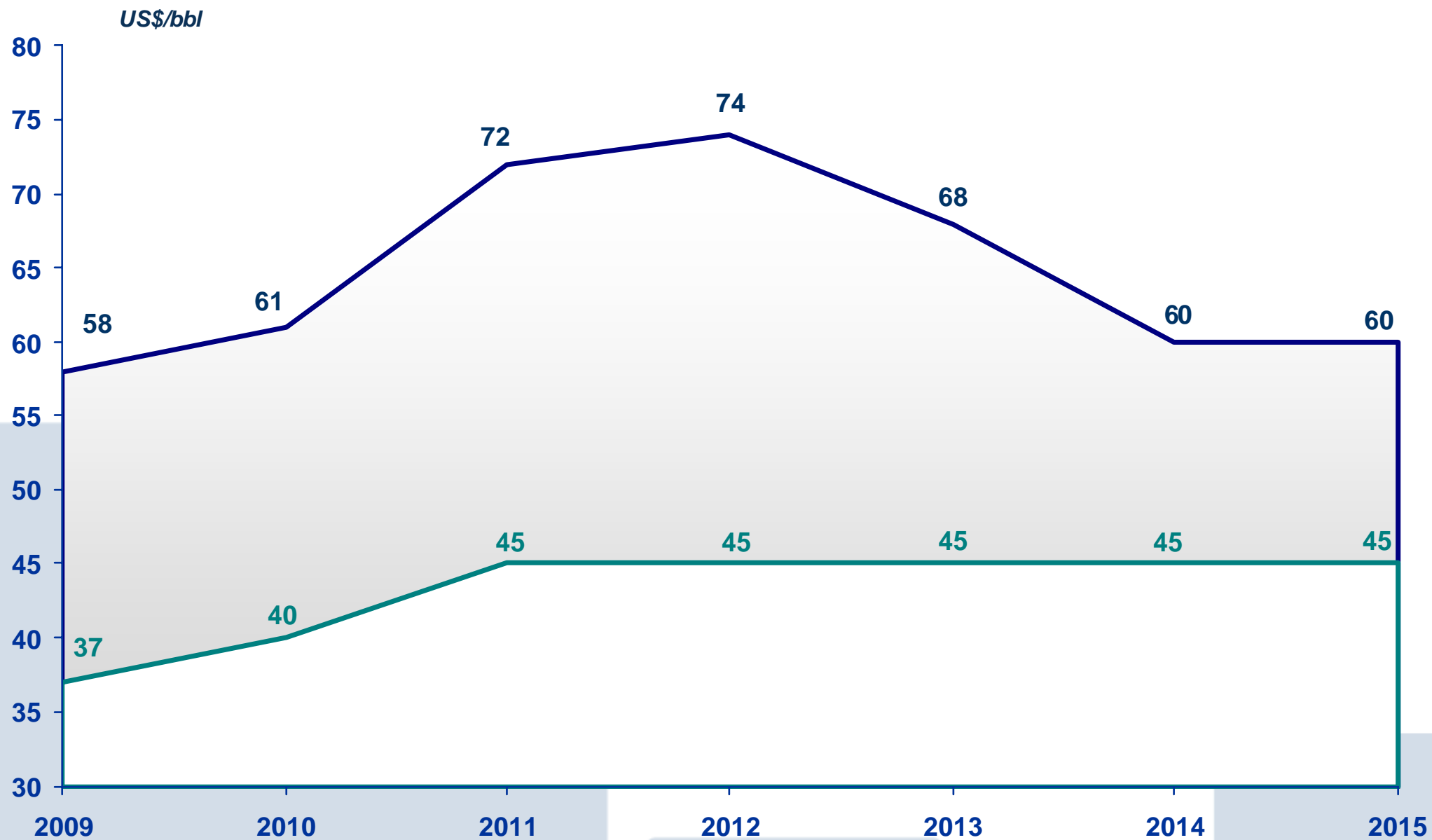
■ Average Oil Production (e): 2,398 (thousand boe/d)



## 2009-2013 ASSUMPTIONS AND CAPEX ARE DESIGNED TO MAINTAIN TARGETED FINANCIAL RATIOS

INDECES	2009-2013 Plan	2008-2012 Plan
FX Rate (R\$/US\$)	2.0	2.18
Brent for Funding (US\$/bbl)	2009 – 58.00 2010 – 61.00 2011 – 72.00 2012 – 74.00 2013 – 68.00	2008 – 55.00 2009 – 50.00 2010 – 45.00 2011-2012 – 35.00
Projected Net Cash Flow (After dividends) (US\$ bn)	148.6	104.4
Projected Investments (US\$ bn)	174.4	112.4
Net Debt/Net Debt + Shareholders' Equity (Leverage)	Up to 35%	20%
Minimum cash balance (US\$ bn)	5	3.8

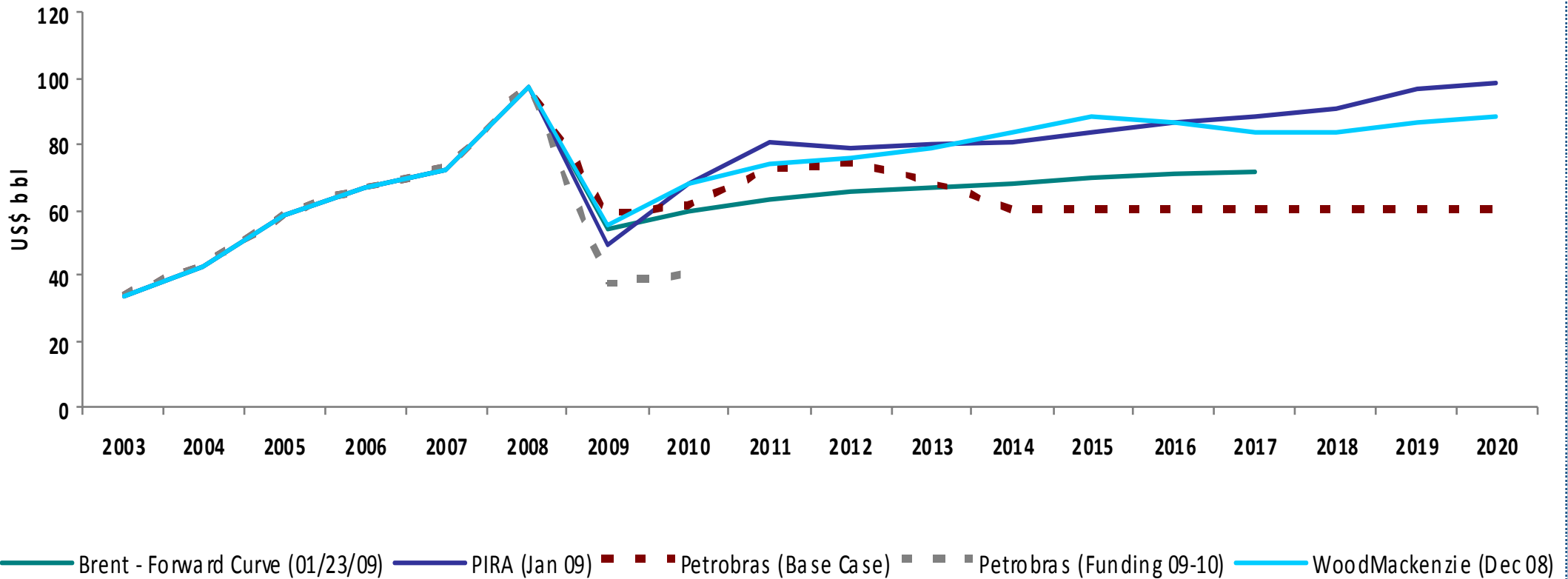
# 2009-2013 PLAN: BRENT PRICE ASSUMPTIONS



Reference Curve Robustness Curve

**LONG-TERM PRICING ASSUMPTIONS AT OR BELOW MARKET FORECASTS.  
NEAR-TERM FUNDING REQUIREMENTS ASSUME PRICES WELL BELOW THE  
FORWARD CURVE.**

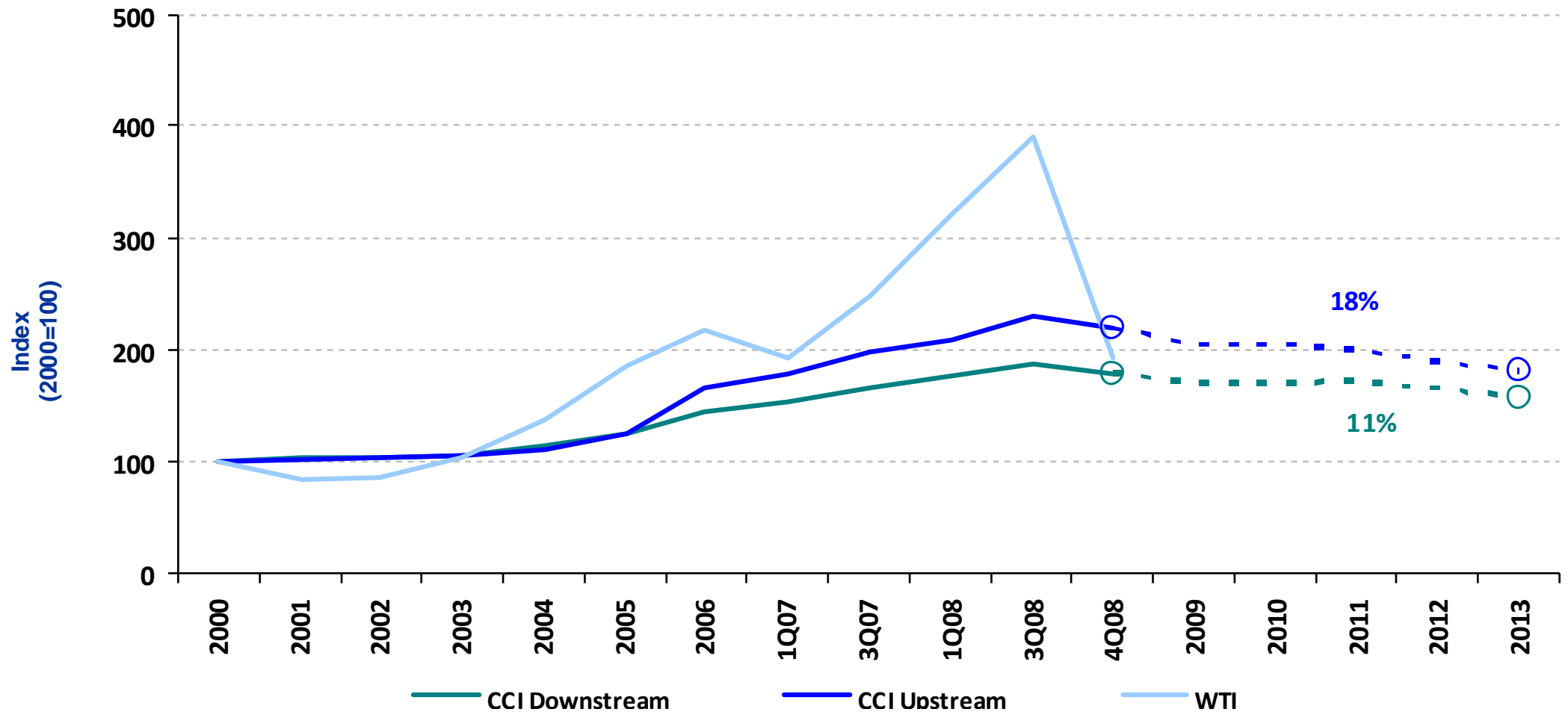
**Projected Brent Curves**



- Petrobras uses a `severe stress` scenario to project financial need through 2010

THE PLAN DOES NOT ASSUME CAPITAL COSTS WILL DECLINE, ALTHOUGH LOWER OIL PRICES SHOULD PRODUCE DOWNWARD PRESSURE ON COSTS

### Capital Cost Index



## Key Variables to Petrobras Cash Flow

- International price of crude oil and oil products
- Internal domestic prices
- Exchange Rate
- % of investment execution
- Cost of capital investment

### Minimum Projected Cash Flow (US\$ bn)

	2009	2010*
OCF including amortization and after dividends	10.5	16.0
Capex	28.6	35.0
Funding Needs	(18.1)	(18.9)
Brent (US\$ / bbl)	37	40

\* Capex for 2010 is based on the annual average of the Plan's total spending.

# FUNDING FOR 2009 COMPLETED, WITH REMAINING NEEDS FOR 2010 TO BE MET VIA TRADITIONAL SOURCES AND COST REDUCTIONS

2009

## Needs

- US\$ 18.10 bn

## Sources

- BNDES: **US\$ 12.5 bn**
- Capital Market: **US\$ 6.5 bn (bridge loan)**
  - \*US\$ 2.75 bn (Global Notes due 2019, in 2 tranches: 1.5 bn, yield 8.125%+ 1.25 bn, yield 6.875%)
- US Exim : **US\$ 2 bn**
- CDB: **US\$ 10 bn**

2010

## Needs

- US\$ 18.9 bn

## Sources

- BNDES: **US\$ 10.0 bn**
- Remainder to be financed : **US\$ 8.9 bn**
- **15%** reduction in capex would reduce remaining financial needs to less than **US\$ 4 bn**



**For more information:  
Investor Relations**

[www.petrobras.com.br/ri](http://www.petrobras.com.br/ri)

+55 21 3224-1510

[petroinvest@petrobras.com.br](mailto:petroinvest@petrobras.com.br)



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