Perspective Plan 2030

To be global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance practices.

Mumbai
20th July 2013
Perspective Plan
2030

...blue print for a brighter future
Many years since last such exercise conducted

- Perspective Plan 1985 – 2005
- Perspective Plan 1990 – 2010
- Both very detailed reports focused on domestic E&P business and resourcing requirements, particularly drilling

New Perspective Plan

- international opportunities as key component
- full spectrum of energy and downstream business opportunities
- detailed financial projections
workshops involving over a hundred ONGCians

expert conversations with McKinsey and industry experts from around the world

pages of detailed suggestions submitted via the intra-net website (average submission > 1000 words)

hours of executive time in meetings, workshops and individual discussions
The result of the exercise was the projection for different Business portfolios which the company will be holding in the year 2030.

The Board approved the Perspective Plan 2030 on 29th May’12 and desired that actions be initiated for implementation of the plan on a time bound target basis.
Aspirations

2. Fold production growth in E&P
3. Fold growth in Revenue & EBITDA
4. Fold growth in Market cap
5. Verticals for Non E&P Business
6. Fold growth in international E&P production
Shaping Moves

1. Grow overseas E&P to source 60 mmtoe/year of O+OEG by 2030

2. Unlock 450+ mmtoe from domestic YTF (yet-to-find) reserves

3. Accelerate 300-400 mmtoe of (re)-developments

4. Secure alliances for new resource types

5. Build non-E&P business to 30% of group revenue
1. Sustained production growth 4-5%

2. > 130 mmtoe production in 2030 (50% international)

3. 1,300 mmtoe proved reserves

4. 6.5 GW alternate energy, 9 MMTPA LNG

5. Full downstream value capture in petrochemicals
> 130 mmtoe/year of O+OEG production

Overseas
> 60 mmtoe/year

New unconventional
> 20 mmtoe/year

Existing + YTD + YTF
> 40 mmtoe/year
Shaping moves
Shaping move-1

Grow overseas E&P to source 60 mmtoe/year of O+OEG by 2030
Shaping move- I

Grow overseas E&P to source 60 mmtoe/year of O+OEG by 2030

OVL acquired 2.7213% PI in ACG* fields in Azerbaijan & 2.36% interest in BTC* on March 28, 2013

OVL & Oil India Limited (OIL) jointly signed definitive agreements on June 25, 2013 with Videocon to acquire 10% PI in Rovuma Offshore fields in Mozambique (Area 1)

Opportunities mapping is on

First activity hub setup at Calgary

All opportunities – unconventional, LNG, Conventional bidding round being pursued

ACG : Azeri, Chirag & deep Water portion of Guneshli
BTC : Baku-Tbilisi-Ceyhan
Growth in OVL six-fold to 60 mmtoe/year production by 2030

Expanding Exploration Portfolio

**RONDA COLOMBIA 2012 (Colombia Bid Round 2012)**

OVL was awarded Exploration Block Gua Off-2 in Guajira Offshore Basin adjacent to ONGC-VL’s Block RC-10.

Mansarover Energy Colombia Limited (MECL), a joint venture between OVL and Chinese Sinopec was awarded Exploration Block LLA-69 in onland Llanos Basin.

OVL actively pursuing exploration bid rounds in Australia, Bangladesh, Myanmar and Lebanon.
Shaping move-2

Unlock 400+ mmtoe of cumulative production from domestic exploration (YTF)
Six Priority plays identified – Conventional, HP-HT/Tight Reservoirs, Basement, Deep-water, Shale gas & CBM

<table>
<thead>
<tr>
<th>Domestic exploration opportunity prioritisation matrix</th>
</tr>
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<tbody>
<tr>
<td><strong>Accretion potential by 2030, in place, MMTOE for High Case</strong></td>
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**Big bets**
- KG DW Inc., HPHT
- Andaman DW
- KG Onshore HPHT & conv
- Mumbai SW
- Kutch SW
- KG SW HPHT & conv
- CVR onshore HPHT & conv
- KG SW

**No regrets**
- Mumbai basement
- Kutch SW
- Cambay onshore & deeper plays
- KG SW

**Low Priority**
- Shale gas in Stpra
- Cauvery DW
- Tripura & Cachar & MZRM
- Cat II & III Onshore basins
- Bengal, Purnea, Ganga, HF, Vindhyan, PR-GVR, Spil-Znskr, Narmada
- Rajasthan

**Options**
- Low
- High

**Prioritised plays**
- 2nd tier priorities with significant upside but feasibility challenges
- De-prioritised plays to allow better resource allocation

**Significant volumes still to find in existing conventional fields**

**SOURCE**: Basin Managers workshop; PP 2030 exploration focus sub-team; PP 2030 team analysis
Unlock 400+ mmtoe of cumulative production from domestic exploration (YTF)

<table>
<thead>
<tr>
<th>High Priority Play</th>
<th>Accretion (MMTOE)</th>
<th>Production (MMTOE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional Plays</td>
<td>1550</td>
<td>200</td>
</tr>
<tr>
<td>Onshore and Shallow HP/HT</td>
<td>500</td>
<td>70</td>
</tr>
<tr>
<td>Shale Gas</td>
<td>850</td>
<td>80</td>
</tr>
<tr>
<td>Coal bed methane</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Basement Plays</td>
<td>250</td>
<td>15</td>
</tr>
<tr>
<td>Deepwater in KG</td>
<td>400</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3580</strong></td>
<td><strong>410</strong></td>
</tr>
</tbody>
</table>

Accretion of 3.5 Billion Tonnes envisaged by 2030 from six high priority plays = production of 400+ mmtoe
Expected contribution from different plays & the milestones

- Milestone 1: 1250 MMTOE
- Milestone 2: 1035 MMTOE
- 2022 – 30: 1305 MMTOE

Legend:
- PP-CONV
- PP-HPHT
- PP BSMT
- PP DW
- Shale Gas / Oil
- CBM
Mitigating the PLAY challenges

Four Centre of Deliveries established – to focus on identified plays. Domain experts engaged for various plays.

- Delhi: CBM (Oct’12)
- Vadodara: Shale gas (Nov’12)
- Mumbai: Basement exploration (Nov’12)
- Chennai: HP/HT (Nov’12)

- **Blade Energy** for HP-HT
- **UNSW** for Basement Play
- **ConocoPhillips** for Shale gas

Establishing Centre of excellence for unconventional plays in association with Schlumberger
Shaping move-3

Accelerate 300-400 mmtoe of (re)-developments
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- Identified (re)developments that contribute significant production and involve major CAPEX spend.
- 10 fields identified for priority accelerated development.
- Rigorous Stage Gate Project Management Process implemented for project evaluation and monitoring.
The 10 major projects identified for (re)development

1. Mumbai High (North & South) Redevelopment Phase-III
2. Neelam-Heera redevelopment
3. South Bassein – Additional Development
4. Daman-C Series
5. GK-28/42
6. Manik
7. KG-98/2
8. KG-98/2-UD
9. Assam
10. Ahmedabad

Accelerate 300-400 mmtoe of (re)-developments
Implementation of Stage-gate PMP in ONGC

- All future and current development projects proposed to be executed with Stage-gate PMP.
- To develop comprehensive **Stage-gate** PMP, Project Management Office (PMO) is being set up at corporate level (at Delhi) & regional level (at Mumbai).
- A reputed consultant being hired for setting up PMOs. 200 people to be trained for project management.
Shaping move-4

Secure alliance for the new resource types
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Alliances

- Alliance with ConocoPhillip in Mar’12 for Deepwater & Shale gas
- MOU with CNPC for cooperation in hydrocarbon sector in June’12
- MOU with Ecopetrol for jointly studying the fan-belt traps of Cachar Region in India & for cooperation in developing EOR/IOR technologies
- MOU with Mitsui for LNG
- Alliance with Blade energy for HP/HT
- Alliance with UNSW for Basement play
Shaping move-5

Build non-E&P business to 30% of group revenue
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ONGC to selectively invest in the non-E&P sector, leveraging integration benefits from its existing portfolio and its balance sheet for competitive advantage.

Investments will include:
- Further expansion in petrochemicals at MRPL
- LNG re-gasification,
- Commercialization of stranded gas
- Capacity in alternative energy – Solar, wind, Nuclear, etc.
Build non-E&P business to 30% of group revenue

Ongoing Projects

- **MRPL Refinery Expansion to 15 MMTPA**
  - **Capex:** ₹12,000 Crore
  - **Scheduled completion:** 2013

- **OPaL – Olefinic Petchem at Dahej**
  - **Capex:** ₹21,396 Crore
  - **Scheduled completion:** 2014

- **OMPL – Aromatic Petchem at Mangalore**
  - **Capex:** ₹6,000 Crore
  - **Scheduled completion:** 2013
Shaping move-5

Build non-E&P business to 30% of group Revenue

Planned Refinery Projects

1. MRPL Refinery Expansion to 18 & 21 MMTPA

2. Green Field Refinery Barmer
   - ONGC equity stake in project under discussion after HPCL’s MOU with GoR

3. M&A – Cuddalore Refinery (12 mmtpa)
   - Considering strategic stake
   - Considering availability of land bank, logistic advantage.
   - Technical due diligence is in progress
Build non-E&P business to 30% of group Revenue

Planned Petrochemical Projects

- 120 KTPA LAB plant, integrating Kerosene from refinery & Benzene from Petrochemical Complex OMPL (approx USD 404 million) under consideration

- OMPL to tie-up long-term sale of Paraxylene and Benzene with off-takers interested in setting up PTA & Phenol plants with option of OMPL’s equity participation.

- ONGC along with its partner GAIL is examining viability of implementing a 100 KTPA PBR project by utilizing Butadiene, available from OPaL, as feedstock

- Ethylene Cracker’ and Pet-coke gasification project at MRPL
Gas/ LNG Planned

- R-LNG Terminal at Mangalore along with Mitsui & BPCL (5.0 mmtpa)
- Pursuing sourcing LNG from Mozambique leveraging MOU with Mitsui & BPCL
- CGD – MOU with BPCL to target organic growth
- Pursuing M&A opportunity for 65% BG’s stake in GGCL in consortium with BPCL and GSPC
- Pursuing Greenfield / Brownfield opportunities for participation in LNG value chain project in several countries like; Mozambique, Russia, Canada, USA, Papua New Guinea etc.
Power including Renewable/Alternate

- Monetization of idle gas asset at Tripura – OTPC (726.6 MW)
- Pursuing opportunity to acquire 49% equity in GSPC Pipavav Power (GPPC) (702MW gas based)
- Discussion with Nuclear Power Corporation (NPCIL) to set up 6 units of 1,740 MW each at Jaitapur
- In addition to 51 MW in Gujarat, another 103 MW wind farm in Rajasthan awarded in Jan’13 to be commissioned in March’14
- JV being planned for developing & exploiting offshore wind project
Shaping move-5

Power – Renewable/ Alternate

- Solar Power Plants: Target 1.5 GW once grid parity is achieved.
- Investment opportunity in revolutionary ultra thin crystalline silicon Solar PV technology being pursued.
- Develop pilot canal top 5 MW Solar PV project above IG canal in Rajasthan.
- Discussion with various players in wind, solar & ‘Run of river’ hydro projects. Targeting stake in renewable energy company.
Setting up 1.3 mmtpa fertilizer plant at Tripura with an investment of Rs. 5,000 Crore to monetize discovered gas.

ONGC signed a MoU with M/s Chambal Fertilizers & Chemicals Ltd. (CFCL) and Government of Tripura on 9th April 2013 for setting up the plant.

Natural gas (2.4 mmscmd) to be supplied from Khubal field in AA-ONN-2001/1 block where substantial gas reserves have been established.
Opportunities in Marketing

- The existing approval for Retail outlets – ONGC (1100) & MRPL (500) – planned to be leveraged for marketing MRPL products

Other ventures

Energy Efficient Lighting
- 19% of domestic power consumption is towards lighting loads
- Opportunity for setting up LED chip manufacturing facility being pursued (49%). Due diligence, valuation completed & investment terms finalized
1. Strengthen OVL processes & technical systems
2. Continued regulatory engagement on prices & policy
3. Strengthen staffing & capabilities in focus areas
4. Improve services delivery under new operating model
5. Align R&D with 2030 technology priorities
Investment > Rs. 11,00,000 Crore during 2013-2030

Prior to IX Plan
- 51,000

IX Plan
- 22,700

X Plan
- 170,000

XI Plan
- 2,65,000

XII Plan
- 11,00,000

PP-2030
- > Rs. 11,00,000 Crore
Thank you