

#### **Reliance Power Limited**

Corporate Presentation February 2014



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# **RELIANCE**

#### Contents

- 1. Company Overview
- 2. Unique Strengths
- Operational and financial performance
- 4. Projects under implementation
- 5. Financial Performance





**Section 1** 

**Company Overview** 



# Reliance Power: A Snapshot

#### Reliance



One of India's leading power development companies



Largest portfolio of power projects under construction and development in the private sector



Largest coal reserves amongst private power generation companies



Portfolio well diversified by fuel, fuelsource, geography and offtake



Focus on environmentally friendly technologies



Reliance Group's brand, experience and position in the Indian Power Sector

#### **Power Generation**



- 3,205 MW of operational capacity
- Over 20,000 MW under implementation
- Constructing India's largest gas-based power plant of 2,400 MW
- Won 3 of the 4 UMPPs awarded by Gol
- One of the largest capacities of renewable energy projects under construction in India

#### Resources



- 3 captive coal blocks in India with aggregate coal reserves of c. 2 bn tonnes
- Coal production started at Moher Mines (Sasan) peak production 20 million tonnes per annum
- 3 coal concessions in Indonesia with estimated coal resources of c. 2 bn tonnes
- Planned peak coal production of 95 million tonnes
- 4 Coal Bed Methane (CBM) blocks

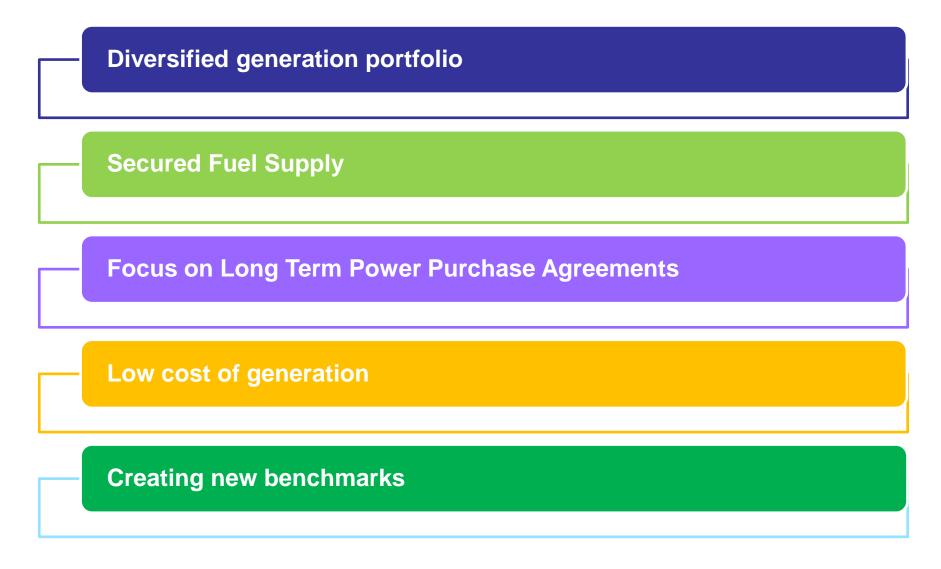


**Section 2** 

**Unique strengths** 

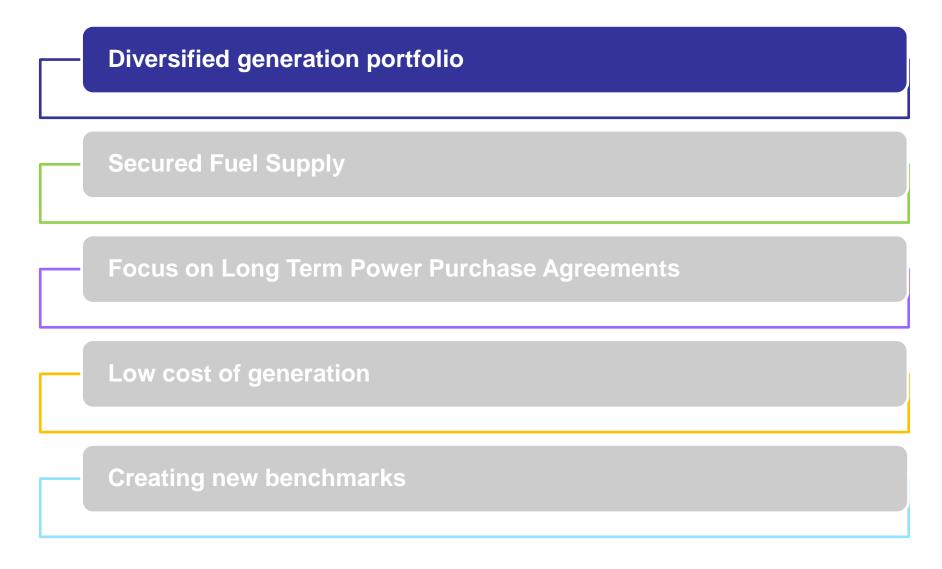


#### **Reliance Power: Key Strengths**





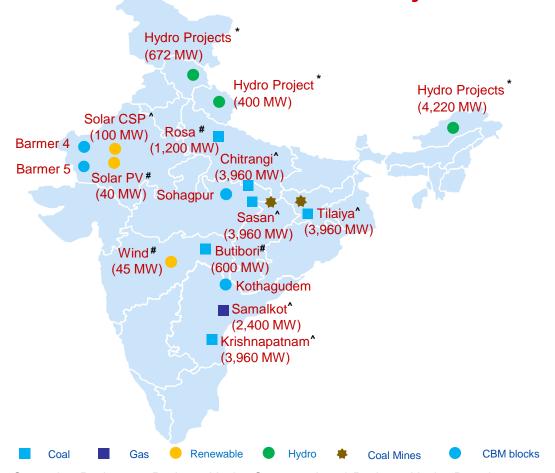
#### **Reliance Power: Key Strengths**





# Reliance Power: Projects Portfolio

#### Power - Operation



Project	No.	Capacity (MW)
Coal based	3	3,120
Solar	1	40
Wind	1	45

Power – implementation			
Project No. Capacity (			
Coal based	4	14,520	
Gas based	1	2,400	
Solar	1	100	

Power –Development			
Project No Capacity (M			
Hydroelectric	12	5,292	
Coal based	1	~5,000	

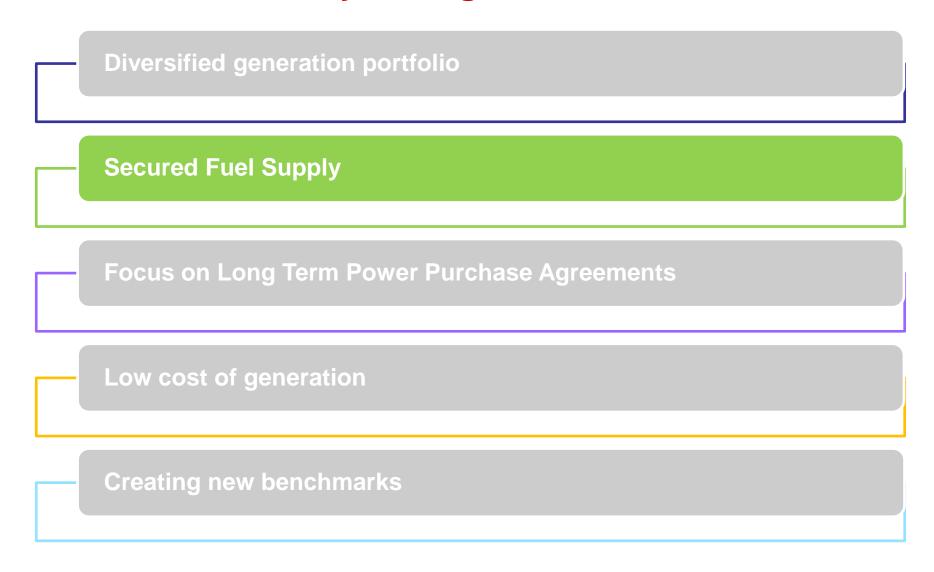
Resources			
Asset	No	Resources	
Coal blocks-India	3	~ 2 bn tonnes	
Coal mine-Indonesia	3	~2 bn tonnes	
CBM blocks	4	193.92 BCM	

# Operating Projects; ^ Projects Under Construction; \* Projects Under Development

Generation portfolio is well diversified by fuel type, offtake and location



#### **Reliance Power: Key Strengths**



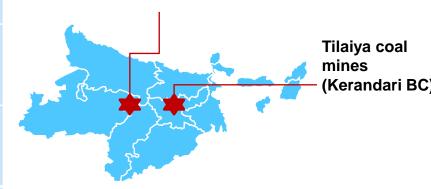


#### Secured Fuel Supply – Domestic coal

Projects	Sasan	Tilaiya	
Coal block	Moher, Moher- Amlori extn, Chhatrasal	Kerandari BC	
Location	Singrauli, Madhya Pradesh	Hazaribagh, Jharkhand	
Resources (Million tonnes)	707	1,229	
Peak Production (Million tonnes per annum, MTPA)	25	40	

~2 bn tonnes of coal reserves within a range of 450 km

Sasan coal mines (Moher, Moher Amlori Ext. and Chhatrasal)



65 million tonnes of annual production can support 16,500 MW

Can support a capacity of 16,500 MW; production started in Moher



#### Secured Fuel Supply – Imported coal (Indonesia)

~2 bn tonnes of coal resources in South Sumatra, Indonesia

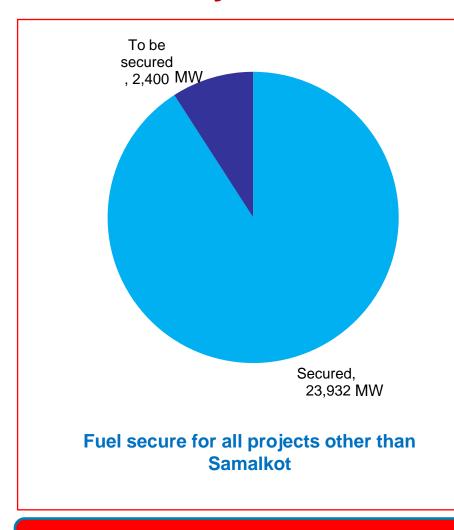


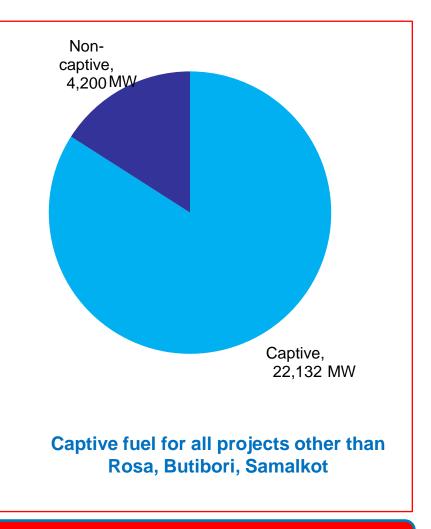
Annual production target of 30 million tonnes

Can support a capacity of 8,000 MW; production to start in FY14



#### **Fuel Security - Portfolio**

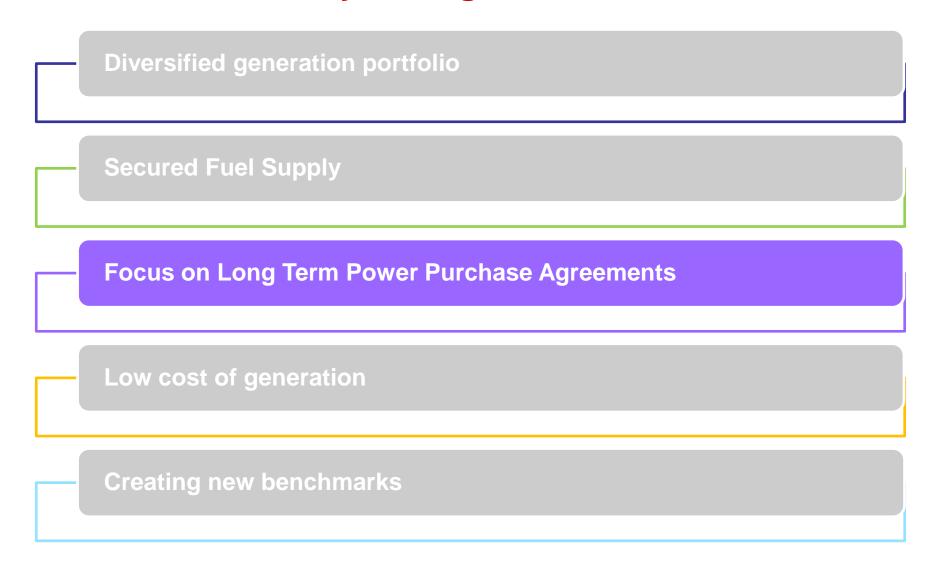




Fuel secured for 91% capacity, captive fuel for 84% capacity



#### **Reliance Power: Key Strengths**



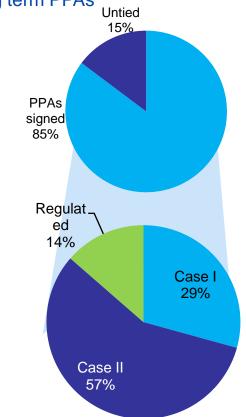


# Focus on Long-Term Power Purchase Agreements (PPAs)

85% of generation capacity Under Operation and Construction is tied-up through long term PPAs

Project	Capacity (MW)	
PPAs signed	13,865	
<b>Untied Capacity</b>	2,400	

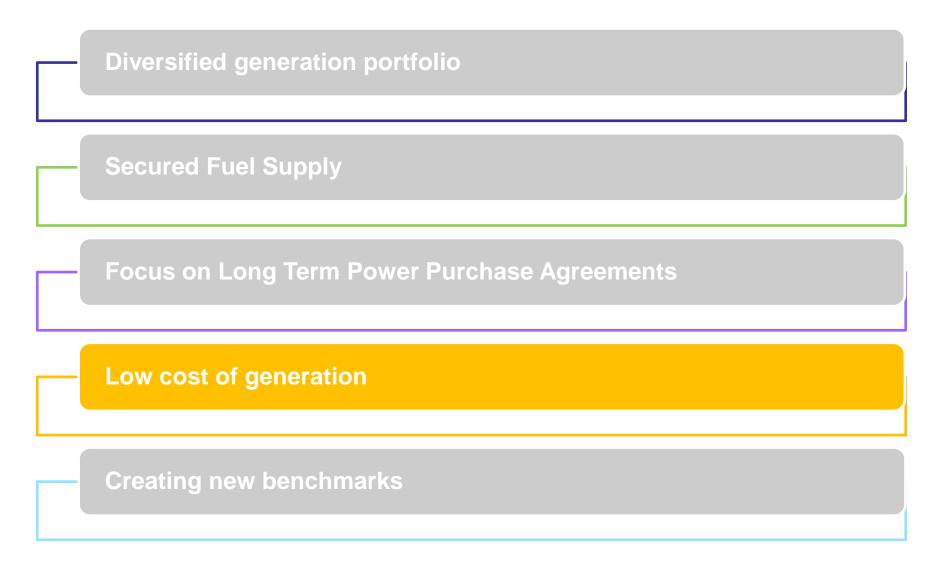
Off Take Arrangement by type (MW)		
Case 1	Case 2	Regulated
4,060	7,920	1,885



Long-term PPAs to provide secured revenue and cash flow streams

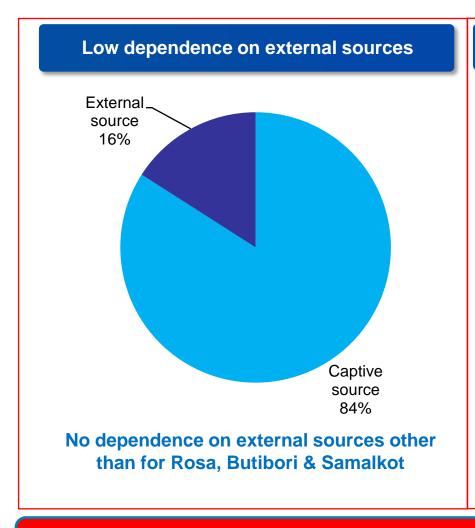


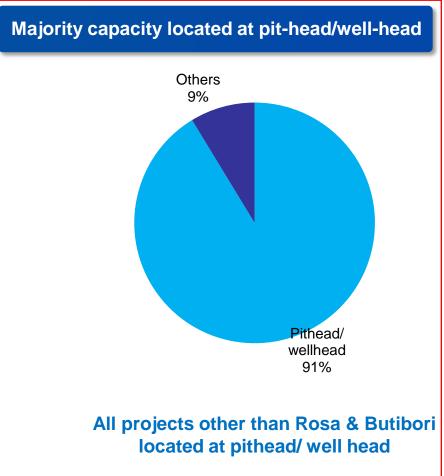
#### **Reliance Power: Key Strengths**





#### Low Cost of Generation





Captive and pit-head/well-head source ensure control over costs



#### **Low Cost of Generation**

Standardized equipment / processes

High repeatability

**Efficient operations** 

Low operations and maintenance cost

Standardized equipment lead to high efficiency & lower operating costs



#### **Low Cost of Generation**

**Captive Fuel Sources** 

Pithead / Wellhead Project Locations

**Standardization of equipment** 

Strategic tie-ups with equipment vendors

**Access to ECB Funding** 

Low fuel cost

Low fuel transportation cost

Low O&M expense

Low lifecycle cost

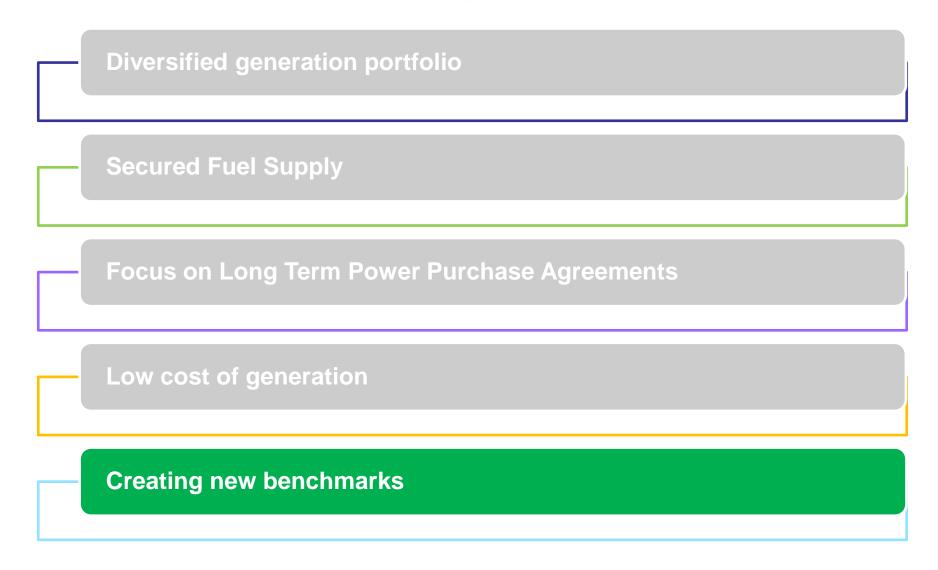
Low financing cost, diversification of funding sources

Low cost of generation

Low cost of generation to act as a significant competitive advantage



### **Reliance Power: Key Strengths**





#### **Benchmarks in Power plant development**

Rosa I: 600 MW

Commissioned 3 months ahead of schedule

Rosa II: 600 MW

Commissioned 4 months ahead of schedule

Solar PV: 40 MW

Constructed in record time of 129 days

Samalkot: 2,400 MW

• Gas turbines ready for commissioning in just 15 months

**Butibori: 600 MW** 

• First unit synchronized in just 21 months

**Sasan: 3,960 MW** 

Units commissioned ahead of PPA schedule

Constantly implementing projects ahead of schedule



#### **Benchmarks in Coal mine development**

Reliance Approach

Standard Mining Approach in India

**Planning** 

Adopting global norms

Conservative norms

**Technology** 

Innovative and globally advanced technology

Domestically tried and tested technology

Size of equipment

Largest eqpt.

Dragline: 61 m<sup>3</sup>

Shovel: 42 m<sup>3</sup>

Dumper: 240 ton

Smaller eqpt. (majority)

Dragline: 24 m<sup>3</sup>

Shovel :10 m<sup>3</sup>

Dumper: 85 ton

**CAPEX Decision** 

Driven by life-cycle analysis

Driven by initial capex minimization

Ramp-up period

Peak capacity in 5/7 years

Peak capacity in 10-20 yrs

Coal mine efficiency to be in line with global standards

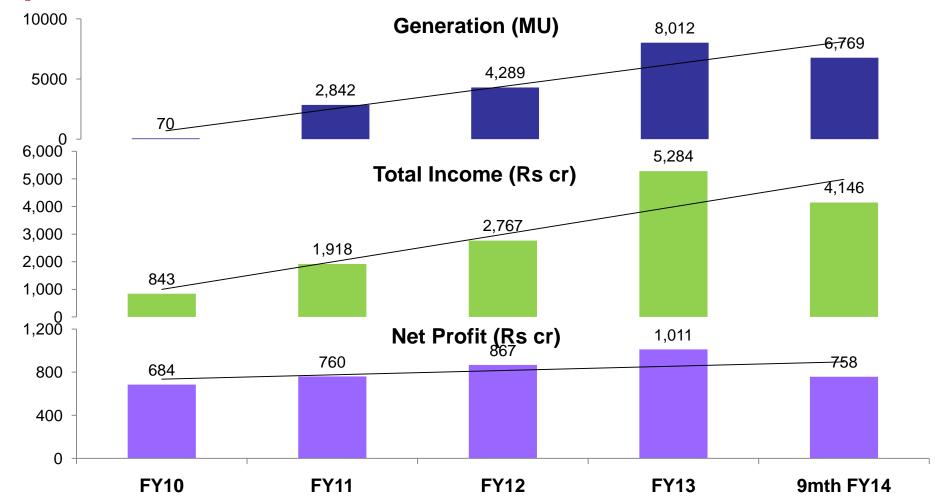


**Section 3** 

**Operational and Financial Performance** 



# **Operational and Financial Performance\***



\*Excludes performance of Sasan UMPP

Over 8 billion units generated in FY13; net profit of over Rs 1,000 crore



#### **Highlights of 9mth FY2013-14**

Rosa

96% Availability, 79% PLF

Solar PV

Record generation of 55 million units, average PLF 21%

**Butibori** 

- One unit declared commercial (4<sup>th</sup> April 2013)
- Started supplying power through own generation

Sasan

- Second unit commissioned
- Steam blowing completed for 3<sup>rd</sup> unit

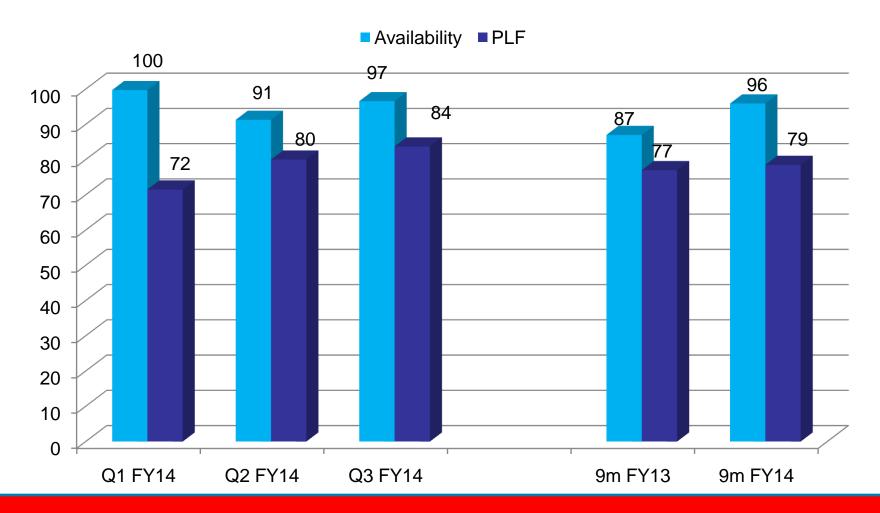


**Section 4** 

Performance of operating plants



# 1,200 MW Rosa: Operating Performance



Robust performance on a continuous basis

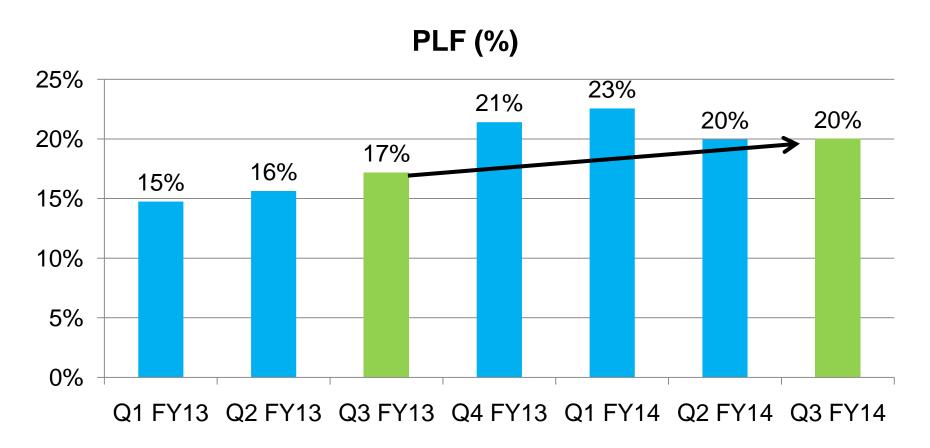
#### 1,200 MW Rosa: Meritorious Award from MoP



Rosa received 2 awards from MoP for meritorious performance: Unit-4: Gold Shield; Unit-3: Silver Shield



#### 40 MW Solar PV: Operational Performance



#### **Continuous increase in generation**



### 45 MW Vashpet Wind: Performance

	Jul-Dec'13	
PLF (%)	22	
Units generated (MU)	22	
Revenue (Rs cr)	26	
PAT (Rs cr)	6	



33% PLF in first full quarter of operation; COD on 30th June 2013



Section 5

**Projects under implementation** 



#### 600 MW Butibori, Maharashtra

· Both units ready for generation

Currently supplying power to RInfra through medium term PPA (till March 2014)

 Signed long term PPA with RInfra for sale of entire capacity at regulated tariff from April 2014 – provisional tariff approval received from regulator (MERC)

FSA's expected to be signed shortly

To have long term power supply tie-up from next year



#### 3,960 MW Sasan UMPP, MP

- First unit commissioned in March 2013
- Second unit commissioned in January 2014

- Coal production from Moher Mines started in September 2012
- Sufficient coal stock at plant for smooth operations
- All major coal mining equipment deployed at site
- Dragline assembly in progress

• All subsequent units expected to be commissioned on schedule

2 units commissioned. All units expected by Jun-14



# 2,400 MW Samalkot, Andhra Pradesh

Four gas turbines ready for generation

Combined cycle commissioning to be based on gas availability

- Applied to PFC and REC for total loan amount of Rs 4,700 Cr.
- Due diligence in process

 Sustained advocacy efforts for gas allocation and equitable treatment of all gas based projects



### 100 MW Solar CSP, Rajasthan

PPA

Signed with NVVN at a levelized tariff of Rs 11.97/unit

**EPC** 

Signed with R-Infra

AREVA to provide Solar Field technology supply

Financing

 Financial closure achieved with involvement of US Exim, ADB, FMO and others

Construction

· Construction at site in full swing

To be commissioned by the end of this financial year



### 3,960 MW Chitrangi, MP

Land

- Entire govt. land under possession
- Entire private land awarded, mutation and diversion completed

Water

CWC clearance for water from Gopad received

Construction

- Site leveling completed
- Main plant civil work ready to commence

Coal

Awaiting Stage II forest clearance for Chhatrasal

To commence construction after forest clearance of Chhatrasal mines



# 3,960 MW Krishnapatnam UMPP, Andhra Pradesh

- Changes in coal regulations by Govt. of Indonesia has impacted viability of the project
- Company raised dispute with procurers under the PPA. However, the procurers sent a notice for termination of the PPA.

 Hearing in Division Bench of Delhi High Court in progress against issuance of the termination notice

 Also filed petition before CERC and Indian Council of Arbitration for adjudication of issues concerning the PPA

Hopeful of positive resolution based on CERC orders on similar cases



# 3,960 MW Tilaiya UMPP, Jharkhand: Highlights

#### Land

- Private land (186 acres): Ownership Transferred
- Forest land (1220 acres): Stage II Forest Clearance received. Final handover expected shortly
- Govt. land (167 acres): Final approval expected shortly

#### R&R

• R&R survey complete, R&R plan submitted to district administration

#### **CSR**

- Medical camps, Hand pump installation, Blanket distribution taken up
- NGOs identified and SHGs being formed for livelihood generation

#### Financing

- Escrow Assessment study completed; ESIA/ESMP to meet IFC Performance Standards prepared
- Discussion with overseas & domestic banks in progress

Have filed petition with CERC for tariff adjustment



# Tilaiya Coal Mines, Jharkhand: Highlights

Land

- Application for Section 4 notification under approval at State revenue dept.
- Forest Diversion proposal under approval at State Forest Department

R&R

- Socio-economic survey completed
- LA proposal for 988 acres of land for R&R colony with State Revenue Dept. for issuance of Section 4

EC & FC

- EIA/EMP submitted to MoEF; public hearing conducted in May 2012
- Stage-I Forest Clearance being processed for recommendation by State Govt.

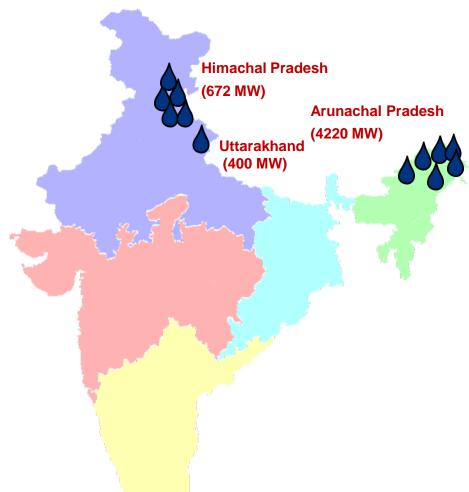
**Coal Mining** 

- Mining lease application with State Mining Dept. for prior approval to Gol
- NIT issued for major equipments; Discussions with OEMs in progress

**CCI** has clarified that Compensatory Afforestation not required for FC



#### 5,292 MW Hydro Portfolio



Project	Location	Capacity (MW)
Tato II	Arunachal Pradesh	700
Siyom	Arunachal Pradesh	1,000
Kalai II	Arunachal Pradesh	1,200
Urthing Sobla	Uttarakhand	400
Emini	Arunachal Pradesh	500
Amulin	Arunachal Pradesh	420
Mihundon	Arunachal Pradesh	400
Purthi	Himachal Pradesh	300
Teling	Himachal Pradesh	94
Shangling	Himachal Pradesh	44
Sumte Kothang	Himachal Pradesh	130
Lara Sumta	Himachal Pradesh	104
		5,292

Development activities in progress for each project



# 700 MW Tato-II, Arunachal Pradesh: Status Update

#### Land

- Award for entire project land (786 acres) pronounced by State Govt.
- R&R Plan submitted to GoAP for approval & implementation

#### Techno-Economic Clearance

Techno-economic clearance obtained from CEA

# Environmental Clearance

Environmental clearance and Consent to establish obtained

#### Power Sale

 UPPCL has accorded in-principle approval for purchase of power on long term basis through regulatory route in UP

#### Project at advanced stage of development



# **Indonesian Coal: Highlights**

51,000 m of drilling completed in all 3 concessions

JORC Resources and Reserves certified by Marston, USA

All major clearances obtained

Under discussions with consumers/traders for sale of coal

**Coal production to start in FY15** 



### Sohagpur CBM Block : Current Status

- 12 Core Holes and 2 Test Wells drilled against Minimum Work Program of 8 core holes & 2 test wells in Phase-I
- Reserve certification by NSAI of USA completed in Dec 13
- Value of reserves of works out to be ~US\$ 1.7 Billion at gas price of 8.4 \$/MMBTU to be recovered in 20 years with plateau peak production of 10 years
- Cumulative Gas Produced > 1 lakh m3 in one well & ~ 0.5 lakh in second well



**Gas Flaring** 

12th Sept 2013: Well SPNT-1A

Commercial production of gas targeted by 2016



#### **Thank You**