

# **Many Sparks but Little Light: The Rhetoric and Practice of Electricity Sector Reforms in India**

Prayas (Energy Group), Pune

Reflections on Contemporary Issues in the Electricity Sector

10<sup>th</sup> March 2017

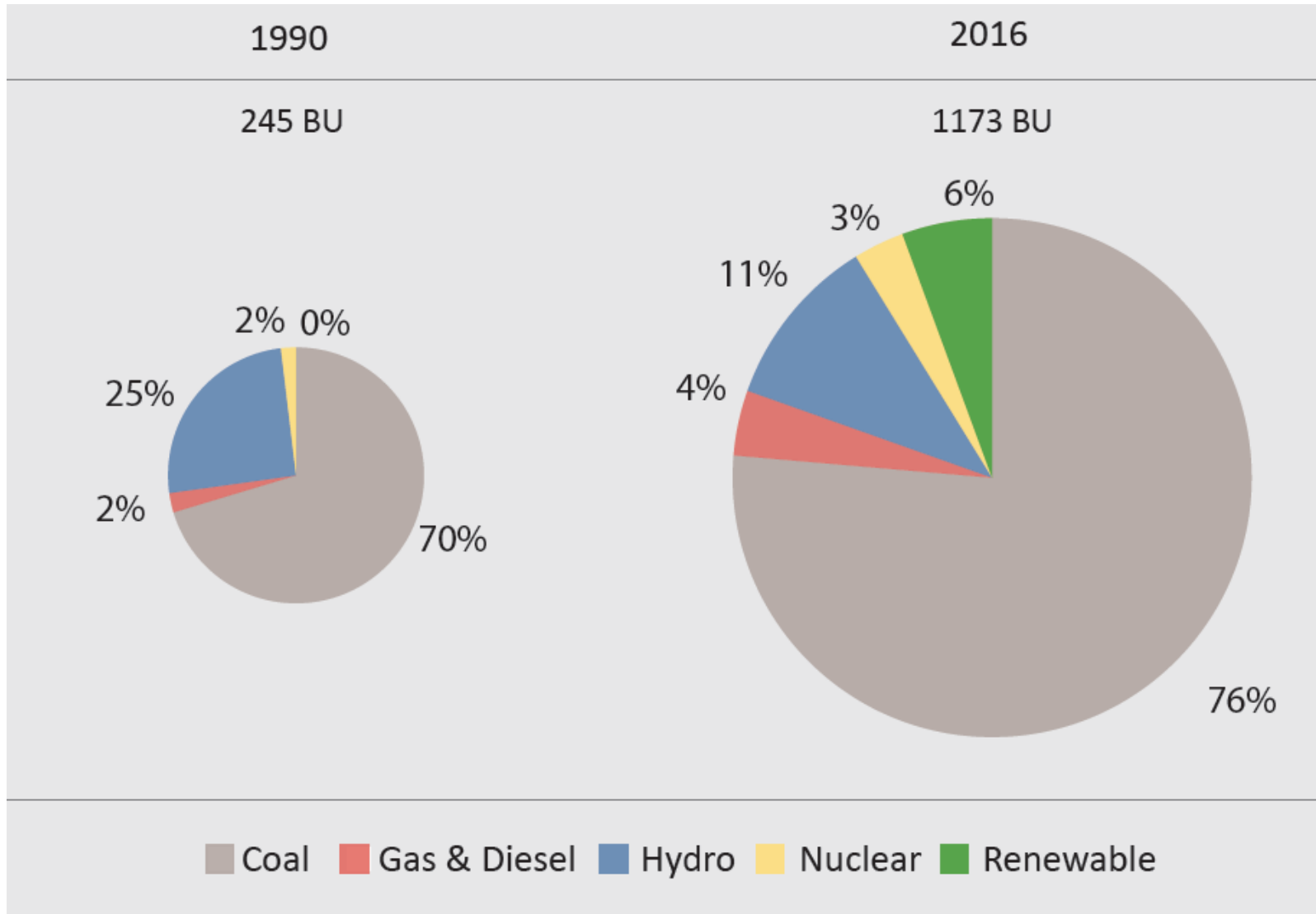
# Many Sparks but Little Light: The Rhetoric and Practice of Electricity Sector Reforms in India

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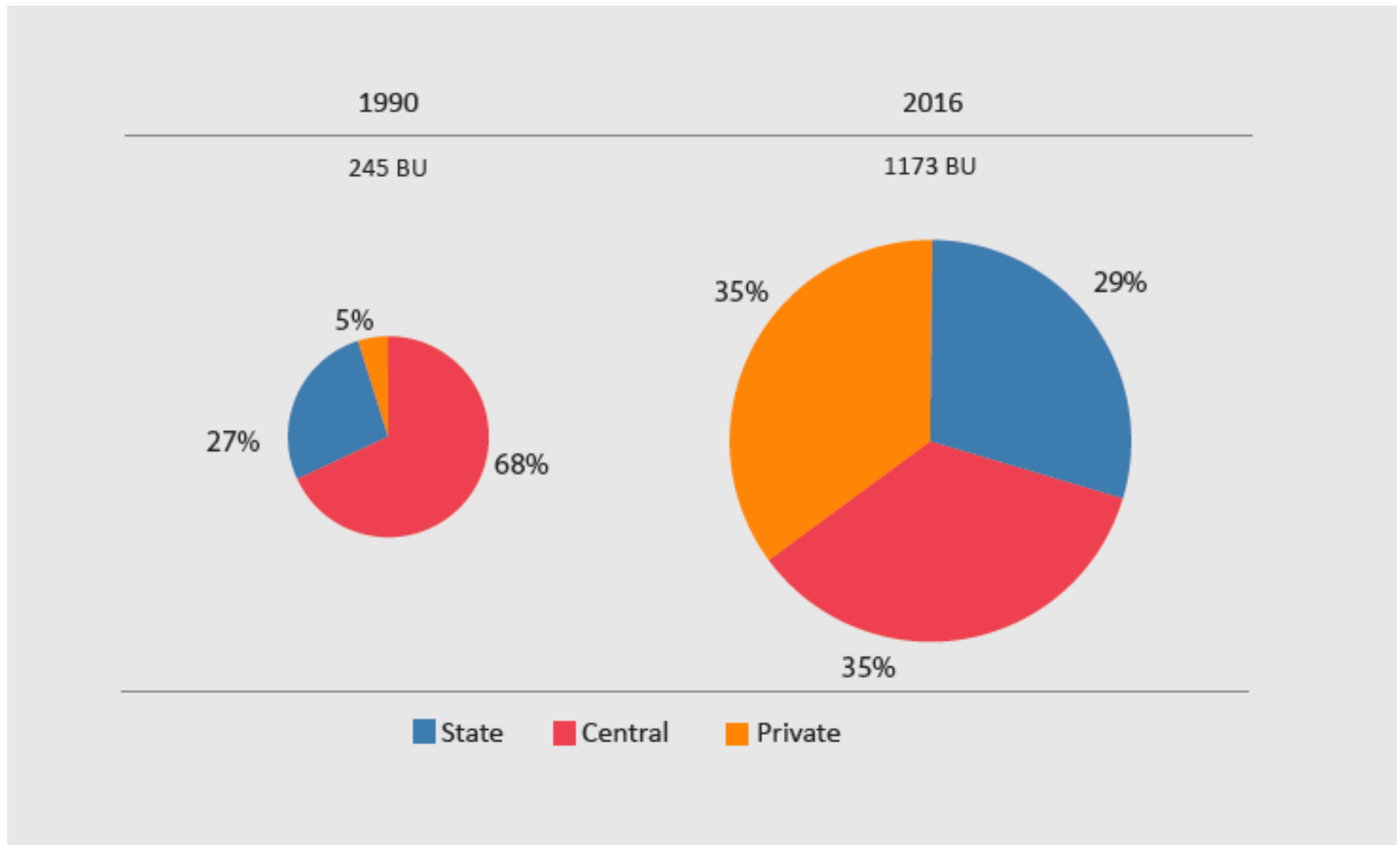


- Twenty Five Years of Reforms
  - A lot has happened..

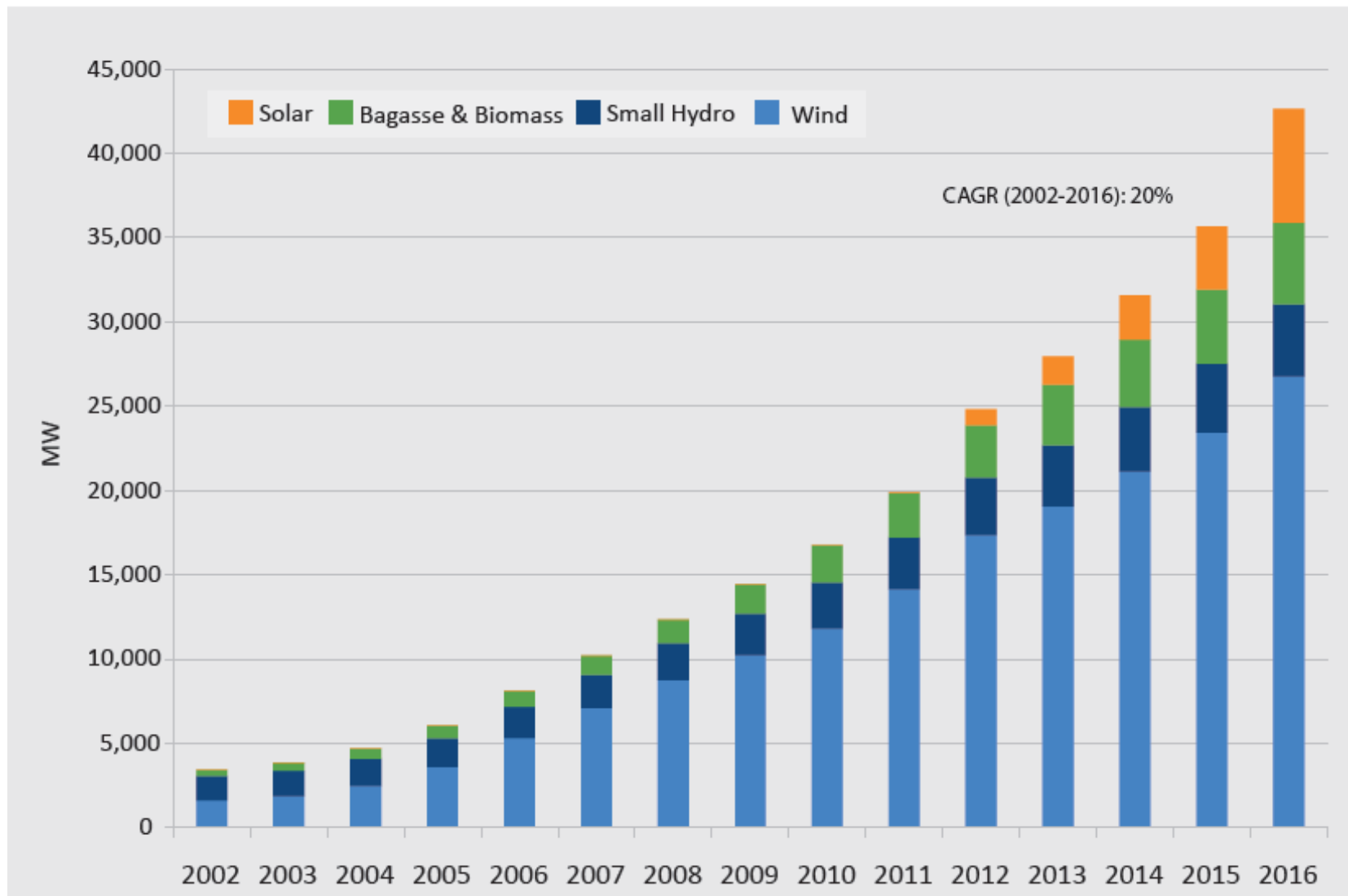
# Generation-fuel mix 1990 and 2016



# Generation-ownership mix 1990 and 2016



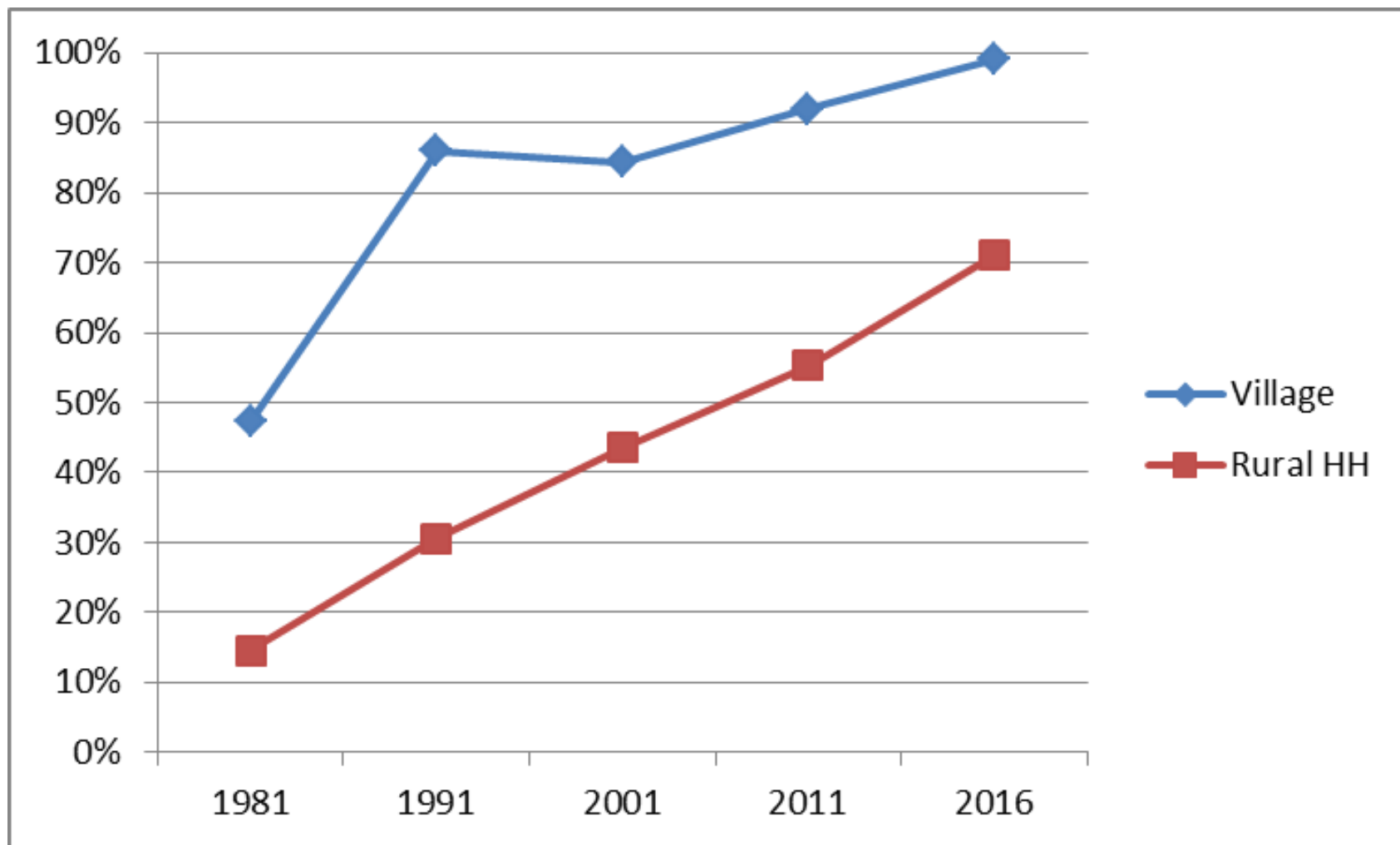
# RE generation capacity (MW) from 2002–16



Source: Ministry of New and Renewable Energy

- Twenty Five Years of Reforms
  - A lot more needs to happen...

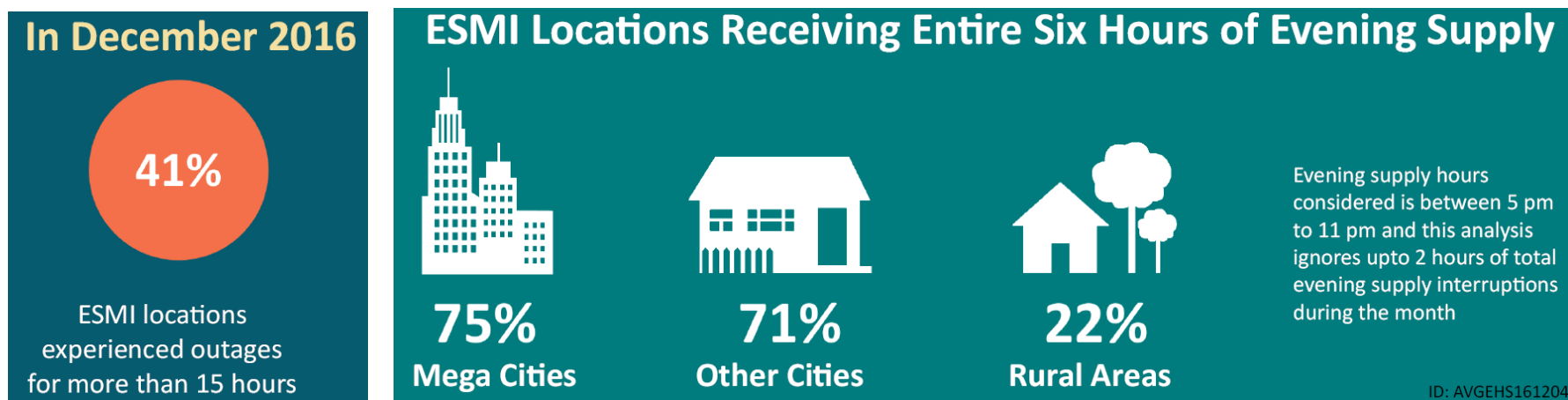
# ~ 30 % Rural HHs still do not have access...





# Electricity – going beyond access

- Poor quality of supply even for HHs that are electrified



- Poor voltage
- Access does not translate to better lives (labour saving, entertainment, productive uses)

# Twenty Five Years of Reforms

## – Many challenges... some old, some new

- Financial viability of the sector and affordable tariff
- Fundamentally changed context of global climate debate and its implications for India
- Grid integration of renewable energy (RE)
- Rapid changes in costs and technology
  - Renewable Energy (centralised and de-centralised)
  - End use efficiency, Electric vehicles
  - Electricity storage
- Movement towards retail competition
  - Carriage and content
  - Open access, RE captive

# Motivation for the book

- Review the experience of reforms in last 25 years
  - What has worked and what has not, and why ?
  - Look at reforms in multiple sub-sectors and their inter-linkages, which are often neglected
- Draw attention to lessons
  - To improve the design and implementation of further reforms
  - So that the sector overcomes its challenges in an *equitable, sustainable and timely manner*.
- Neither feasible nor desirable to present a 'blue-print' or 'plan' for reforms

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The long and winding road of electricity sector reforms in India



Too good to be true: The story of thermal generation



Reforms in hydropower: Missing the woods for the trees



Renewable Energy : The imperative for the future

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Electricity distribution: On square one, even with reforms after reforms



The Indian coal sector: A black past and a grey future



Natural gas: Running on empty



What's past is prologue

# Examples of major reforms reviewed

- IPP process and competitive bidding era
- Hydro power policy 1998 and 50,000 MW initiative
- Solar and Wind sectors
- Private sector participation in distribution, consumer choice experiments, DISCOM bailouts
- Coal allocation – linkages and captive blocks
- NELP, Gas pricing

# Why did the reforms not deliver as expected ?

- Poorly conceived objectives
  - Increase investment, generation capacity
  - Universal access became major objective after a decade of ushering in of reforms in 1991
- Weak plans and design flaws
  - Inadequate attention to interlinkages to other sectors
  - Ambiguous framing of New Coal Distribution Policy
- Weak institutions
  - PNGRB – never meant to perform effectively
  - Coal sector regulator – still on paper

# Why did the reforms not deliver as expected ?

- Insufficient competition
  - Oil and Gas sector
  - Many private DISCOMs – most power procurement from affiliate / group companies
- Entrenched vested interests
  - Allocation of captive coal blocks and linkages
  - Granting of pipeline contracts just before enactment of PNGRB



# What can one learn from the experience so far ?

- Need clear prioritisation of social and environmental objectives (Access, quality of supply, environmental norms)
  - Explicitly stated, comprehensively planned and effectively monitored
- Agile and comprehensive planning
  - Interlinkages with sub-sectors, global context, rapid changes in technology and costs
- Transparent, accountable and effective institutions
  - Data, resource maps, regulatory structure in oil & gas and coal, autonomy and capacity of SLDCs

# What can one learn from the experience so far ?

- Participative policy formulation and regulation
  - Fuel sector, monitoring, generation capacity planning
- Enhancing competition
  - Unequal risk-reward regime in open access, adhering to competitive bid processes and contracts
- Improving efficiency of sector actors
  - Effective use of technology to monitor energy flows, strengthening planning capacity of DISCOMs

# More about the book

Preview at :

<http://tinyurl.com/ManySparksButLittleLight>

Suggested contribution: ₹ 500

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