Evaluation of SAUBHAGYA (Universal Electrification) Scheme of Government of India

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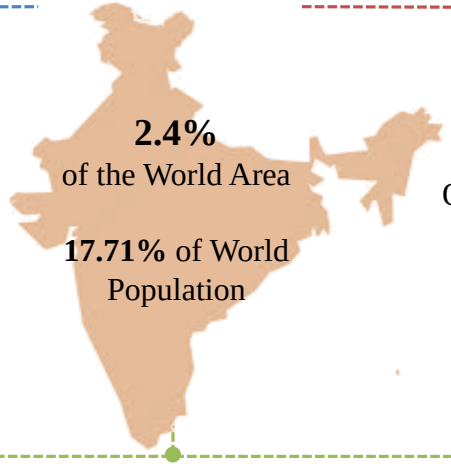
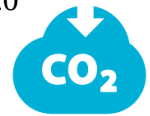
India’s commitment to climate change action

Second most populous country

Entered into 37 year demographic dividend period



One of the lowest per capita emissions amongst G20



Reduced the emissions intensity of GDP, by 21% below 2005 levels

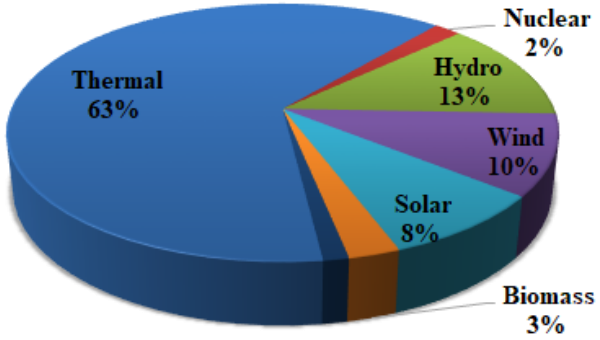
Renewable promotion
5th largest in RE installed capacity

Climate Action
Ambitious commitments under NDCs to UNFCCC

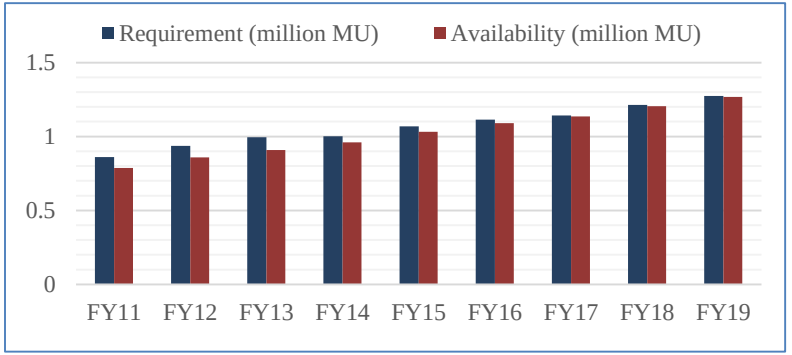
Energy Access
Committed to SDGs, energy access to each and every household by 2020

Indian Power sector at a glance

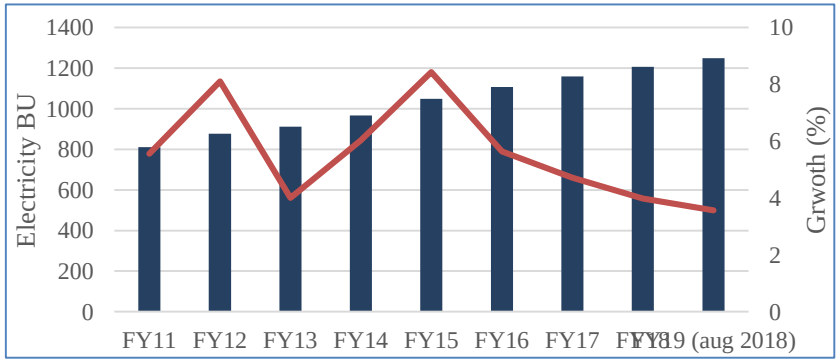
Total installed capacity (362 GW)



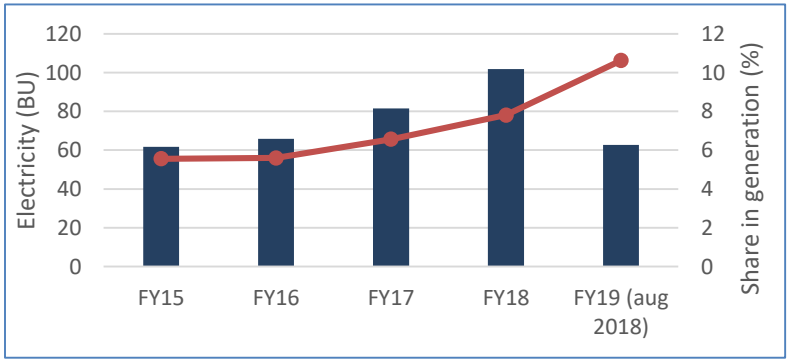
Power supply position



Generation and growth of conventional sources



Generation and growth of renewable sources



SDG 7 – Strong emphasis on energy access to poor rural and urban households

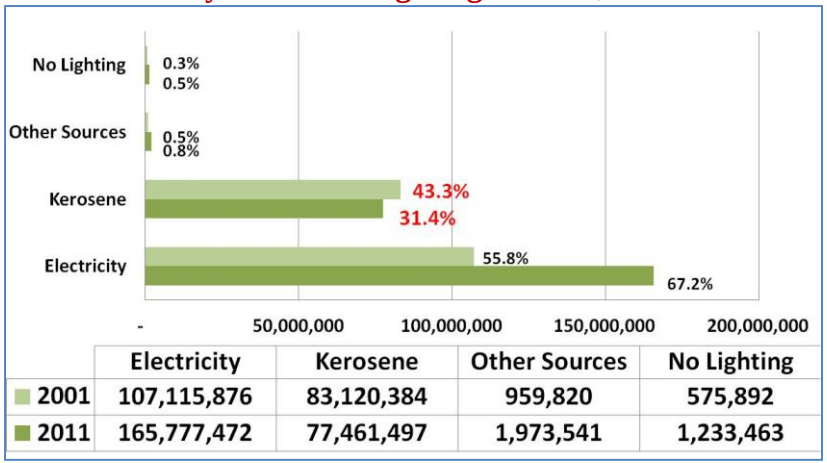
SDG 7: Affordable and Clean Energy to All

ENSURING *universal access* TO MODERN ENERGY SERVICES.

DOUBLING THE SHARE OF *renewable energy* IN THE GLOBAL ENERGY MIX.

DOUBLING THE GLOBAL RATE OF IMPROVEMENT IN *energy efficiency.*

Households by Source of Lighting in India, Census 2011



	Electricity	Kerosene	Other Sources	No Lighting
2001	107,115,876	83,120,384	959,820	575,892
2011	165,777,472	77,461,497	1,973,541	1,233,463

Priorities of Government of India

- Achieve 100% rural electrification across India.
- Reduce the cost of light generated by using alternate sources like kerosene, coal etc., and offer least cost energy supply.
- Mainstreaming rural population in Indian Growth Story

India has been trying to achieve full electrification for long time…

1969

Rural Electrification Corporation (REC)
Built upon the Tennessee Valley Authority (TVA) experience in the US. GoI used USAID assistance to create the Rural Electrification Corporation (REC)

2003

The Electricity Act
USO mandated supply of power to rural households by DISCOMs. Section 12 delicensed generation and supply to rural areas

2005

Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY)
100% electrification of all villages and habitations in the country and building of essential electricity supply infrastructure including off-grid solutions

2015

Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)
Designed to provide continuous power supply to the entire rural India

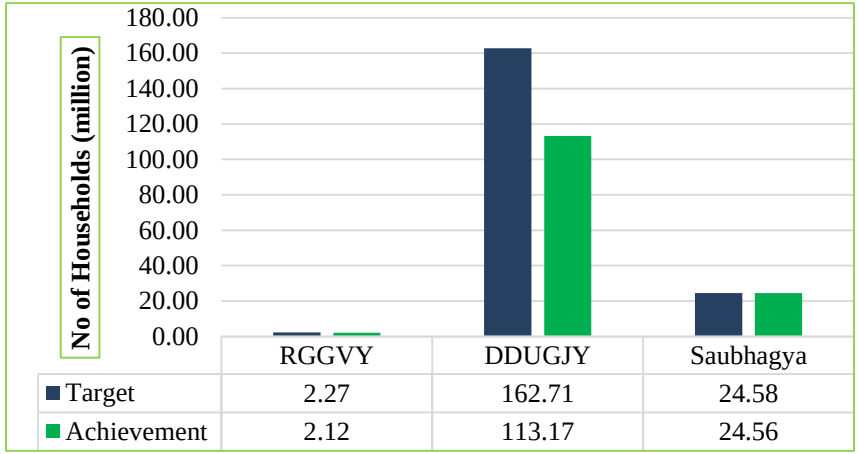
2017

Saubhagya
24/7 power available to all households, industry, commercial, any other electricity consumer and agricultural farm holdings by FY 2019

DDUGJY to SAUBHAGYA
Natural progression from village to household electrification

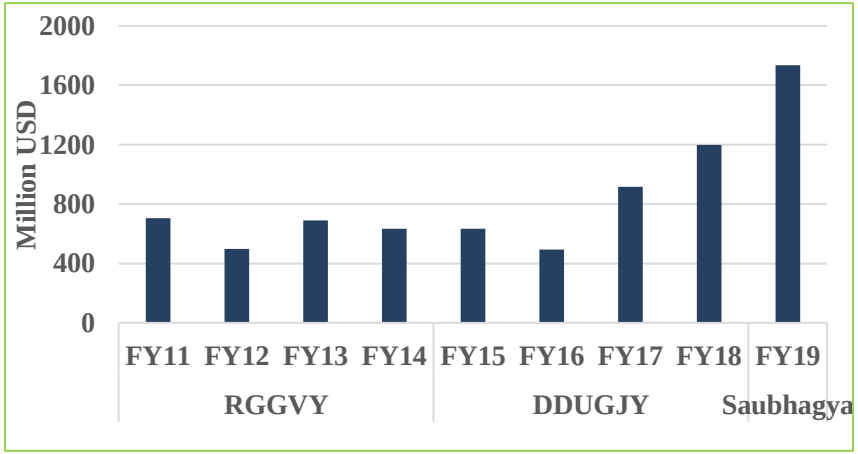
Assessment of rural electrification programs (1/2)

Schemes - Targets & Achievements



	RGGVY	DDUGJY	Saubhagya
Target	2.27	162.71	24.58
Achievement	2.12	113.17	24.56

Budget Allocations



Assessment of rural electrification programs (1/2)

	RGGVY	DDUGJY	Saubhagya
Objectives	(i) Provision of access to electricity to all households by year 2012 (ii) Quality and reliable power supply at reasonable rates. (iii) Minimum lifeline consumption of 1 (one) unit per household per day as a merit good by year 2012. **Merged all ongoing schemes**	(i) Electrification of all villages (ii) Agri-Feeder separation (iii) Improvement of Sub-transmission and distribution network to improve quality and reliability of the supply (iv) Metering to reduce the losses **Subsumed RGGVY**	Energy access to all by last mile connectivity and electricity connections to remaining un-electrified households in rural as well as urban areas to achieve universal household electrification in the country by 2019 **Subsumed DDUGJY electrification portion**
Implementation mechanism	90% grant is provided by Govt. of India and 10% as loan to the Discoms via state governments	60% grant from GoI, 10% contribution from DISCOM, and 30% loan 50% of loan converted to grant on achievement of target	60% grant from GoI, 10% contribution from DISCOM, and 30% loan 50% of loan converted to grant on achievement of target
Implementing agency	REC	REC	REC
Expenditure per household (USD)	1194	29	71
Key lessons	Focus on village electrification than households led to dissatisfaction Slow pace and missed yearly targets	Energy plus approach Top down approach	Top down approach Focus on universal household electrification Carrot and stick approach for meeting targets

Providing Last Mile Connectivity and 24/7 Power - Saubhagya Scheme

DDUGJY was launched to electrify 18,000 villages across India by providing power to 10% of households and in public areas, DDUGJY was taken over by 'Saubhagya' to provide power to all households.

Pradhan Mantri **S**ahaj **B**ijli **H**ar **G**har **Y**ojana (Saubhagya)

Announced

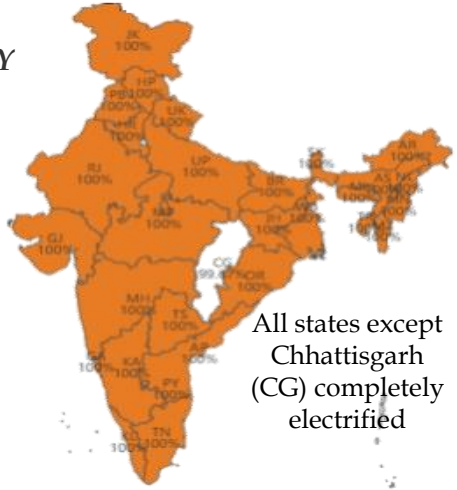
September 2017

Objective

- Universal household electrification
- 40 Mn connections by December 2018

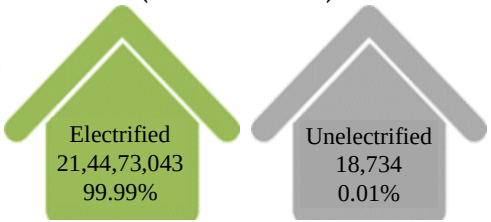
Features

- Policy transition from electrification of villages to connecting households
- Free electricity connections in rural households and urban poor homes



All states except Chhattisgarh (CG) completely electrified

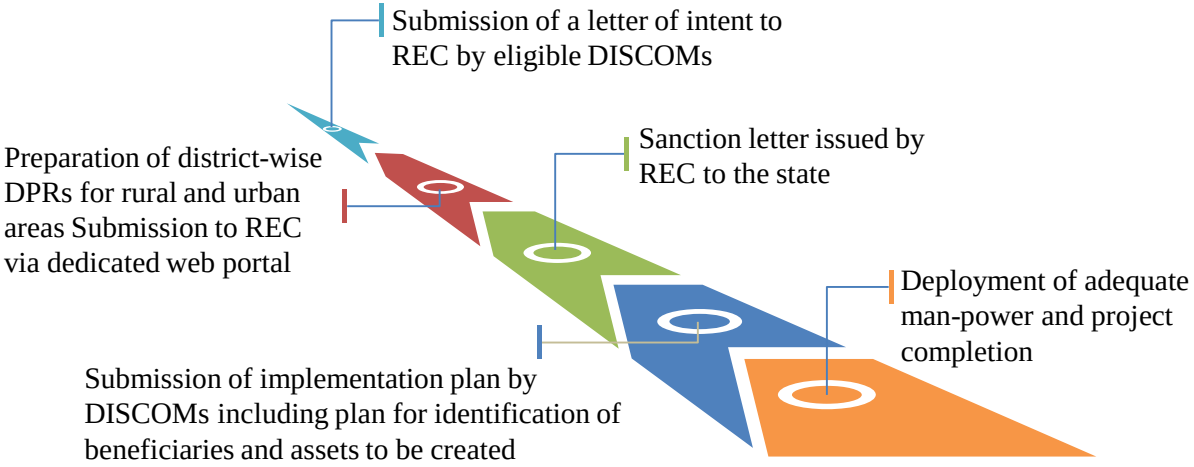
Household Electrification Status (31 March 2019)



- The ₹16,320 crore Saubhagya scheme funds the cost of last-mile connectivity to 'willing households'
- 99.9% or 26.28 million of target households have got electricity connections as on 31 March 2019.
- The remaining 0.07% or 18,734 households yet to be electrified

Source: Saubhagya Dashboard

Implementation and monitoring arrangement under Saubhagya



Monitoring of Implementation

- Daily updation of electrification data for each connection
- Online monitoring of progress through dashboards available on Ministry website

Funding Structure of Saubhagya

Agency	Nature of Support	Quantum of Support (%)	
		Other States	Spl Category States
Government of India	Grant	60	85
Utility/State Contribution	Own Fund	10	5
Loan (FIs/Banks)	Loan	30	10
Additional Grant (on achieving targets)	Grant	50% of total loan	
Maximum Grant by GOI	Grant	75	90

What helped India achieve the target?

Challenges noticed during evaluation of scheme

- Discrepancy in data uploaded in SAUBHAGYA portal
- Electrification through VESP or other mini grid projects
  - Lacks sustainable supply infrastructure
- Census data was old (2011), created problems in ensuring authenticity of numbers
  - Distribution companies must carry out regular ground surveys to identify unelectrified households
- Need to ensure access; not only for lighting demand but also for appliances and productive loads
- Potential forlarge number of rural youth jobs as electricians for installation and then maintenance
  - Need to work effectively with Skill India to ensure skilling of local youth
- Utilities need to adopt innovative business models to manage dispersed low intensity electricity demand
  - Feeder level/ DT level franchisee models
  - Distributed generators and distributors
- While access has been established, 24X7 supply of power is challenge
  - Most consumer in this category are BPL, will not be able to pay electricity bills
  - Need effective DBT schemes to bring them into mainstream

Policy Evaluation of SAUBHAGYA

Area	Parameter	Assessment	Sustainability
Effects	Effectiveness	Effective in creating access to intended beneficiaries.	Overall policy is successful in creating sustainable access to electricity to large number of intended beneficiaries. It has helped India in achieving SDG#7.
	Unintended Effects	Increased sales to subsidised category consumers may impact health of utilities	
	Equity	Helps in improving societal and gender equity	
Implementation	Cost	No significant, though unit cost is high	
	Feasibility	One time cost provided by Central Govt	
	Acceptability	High acceptability given social benefits	

Conclusion

- One of the largest and the most successful household electrification programs anywhere in the world:
  - Whopping 26 million households got electricity access in short span of less than two years
- Barring a few pockets all villages and households have been electrified
  - Huge impetus to local economic development with availability of productive power
- Could be ‘Best Practice’ for many other developing economies struggling with access challenge

Thank You

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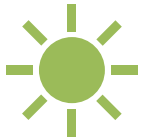
Pradhan Mantri
Sahaj Bijli Har Ghar Yojana
SAUBHAGYA

Transformational Change Policy

Government of India
$2,300,000,000

Result



Electrification of about 26 Mn households in remote parts of the country by way of grid expansion

Relevance –

Decreasing greenhouse gas emissions
Increasing electricity access

Depth of change –

System and market-level
(removing barriers for quality, affordable, clean, and safe electricity appliances)

Scale of change –

Countrywide

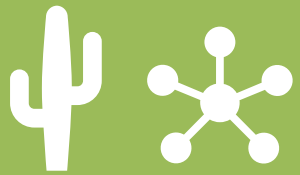
Sustainability –

Increased disposable income on hand
Self-sustaining market. Opens up market for electric appliances.

Depth and scale of project objectives

Market Focus

Aiming to transform markets associated with global environmental benefits



System Focus

Aiming to transform system components that affect the environment

(economy, public sector, private sector, community)

Transformational mechanism

A mechanism to expand and sustain the impact of the intervention

Mainstreaming

Demonstration and replication

Catalytic effects

Key Implementation Factors

Internal Factors

- Quality of implementation
- Speed of execution
- Pre-intervention activities
- Involvement of state govts
- Involvement of third layer of governance

External Factors

- Government ownership and support
- Implementation capacity of local institutions
- Adequacy of the policy environment
- Private sector participation
- Economic and market conditions

OUTCOMES

Depth and scale

Sustainability

Success factors for transformational change

Clear policy ambition

Addressing market and system changes through policies

Concurrent implementation across country

Quality of implementation and execution

Effective use of IT Tools to monitor progress