



UJWAL BHARAT



YEARS

ACHIEVEMENTS & INITIATIVES

of
Ministries of Power,
Coal, New & Renewable
Energy and Mines
Government of India

MAY 2017



TOWARDS NEW INDIA



MISSION
24x7
AFFORDABLE
CLEAN POWER
FOR ALL

BILLION WATT

SMILES

- 😊 13,511 villages electrified out of 18,452 villages as on 19th May, 2017
- 😊 First ever power surplus year with no shortage of electricity and coal
- 😊 India's rank increases to 26 in 2017 from 99 in 2015 on World Bank's Ease of Getting Electricity Index
- 😊 55.4 cr. tonnes coal production by Coal India in 2016-17 versus 46.2 cr. tonnes in 2013-14
This 9.2 cr. tonne increase in the last 3 years took almost 7 years to achieve before 2013-14
- 😊 Amount of coal required to generate per unit of electricity has reduced by 8% in the last 3 years
- 😊 In 2016-17, for the first time, net capacity addition of renewable power exceeded that of conventional power
- 😊 Record low tariffs achieved in solar and wind energy
- 😊 Almost one-third drop in average all-India price of short term electricity purchased at the exchange in 2016-17 compared to 2011-12
- 😊 Highest ever increases in transmission capacity for transmitting affordable power to consumers
- 😊 UDAY Bonds worth about Rs. 2.32 lakh cr. issued leading to savings of ₹ 12,000 cr in interest
- 😊 Over 56 cr. LED bulbs distributed. 23 cr. by Government under UJALA and 33 cr. by private sector
- 😊 Transparently auctioned 24 mineral blocks with estimated value of resources over ₹ 1.1 lakh cr.
- 😊 New mobile apps launched for transparency, accountability and public convenience. Download by giving missed call to 18002003004

ANTYODAYA

SERVING THE LAST MAN

INSPIRED BY
PANDIT DEEN DAYAL
UPADHYAYA



Celebrating centenary
year of Pandit Deen
Dayal Upadhyaya's birth
as 'Garib Kalyan Varsh'

“IT IS NOW THE SOLEMN PLEDGE OF 'TEAM INDIA' OF 125 CRORE COUNTRYMEN THAT THE TARGET OF PROVIDING ELECTRIC POLES, ELECTRIC WIRES AND ELECTRICITY TO THESE 18,500 VILLAGES WOULD BE ACHIEVED WITHIN THE NEXT 1,000 DAYS.”

- Hon'ble PM Shri Narendra Modi
on 15th August, 2015

ENSURING ELECTRICITY IN ALL HAMLETS AND HOUSEHOLDS



As on 19th May, 2017

13,511 villages electrified out of 18,452 (as on 1st April, 2015) under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) as per data submitted by the states



SIGNIFICANT INCREASE IN SPEED OF RURAL ELECTRIFICATION BENEFITTING THE POOREST OF THE POOR

- 22.4 lakh free connections to BPL households in 2016-17 versus 9.6 lakh during 2013-14



MONITORING QUANTITY AND QUALITY OF POWER IN RURAL AREAS

- Rural feeder monitoring scheme covers all 1 lakh rural and agriculture feeders



4.2 TIMES INCREASE in intensive electrification of villages from 14,956 villages in 2013-14 to **63,330** in 2016-17

24X7 AFFORDABLE, RELIABLE AND ADEQUATE POWER FOR ALL THROUGH DDUGJY

- Priority to Rural Electrification with about 76,000 cr. allocated
- Comprehensive coverage of villages under Sansad Adarsh Gram Yojana (SAGY)
- New scheme with complete flexibility in upgradation of rural distribution infrastructure
- Free connection to each BPL household
- Strengthening and augmentation of sub-transmission and distribution infrastructure
- Micro-grid and off-grid distribution network
- Separation of agriculture and non-agriculture feeders
- Meters for feeders, distribution transformers and consumers

FROM VILLAGE TO HOUSEHOLD



APP FOR TRACKING HOUSEHOLD ELECTRIFICATION

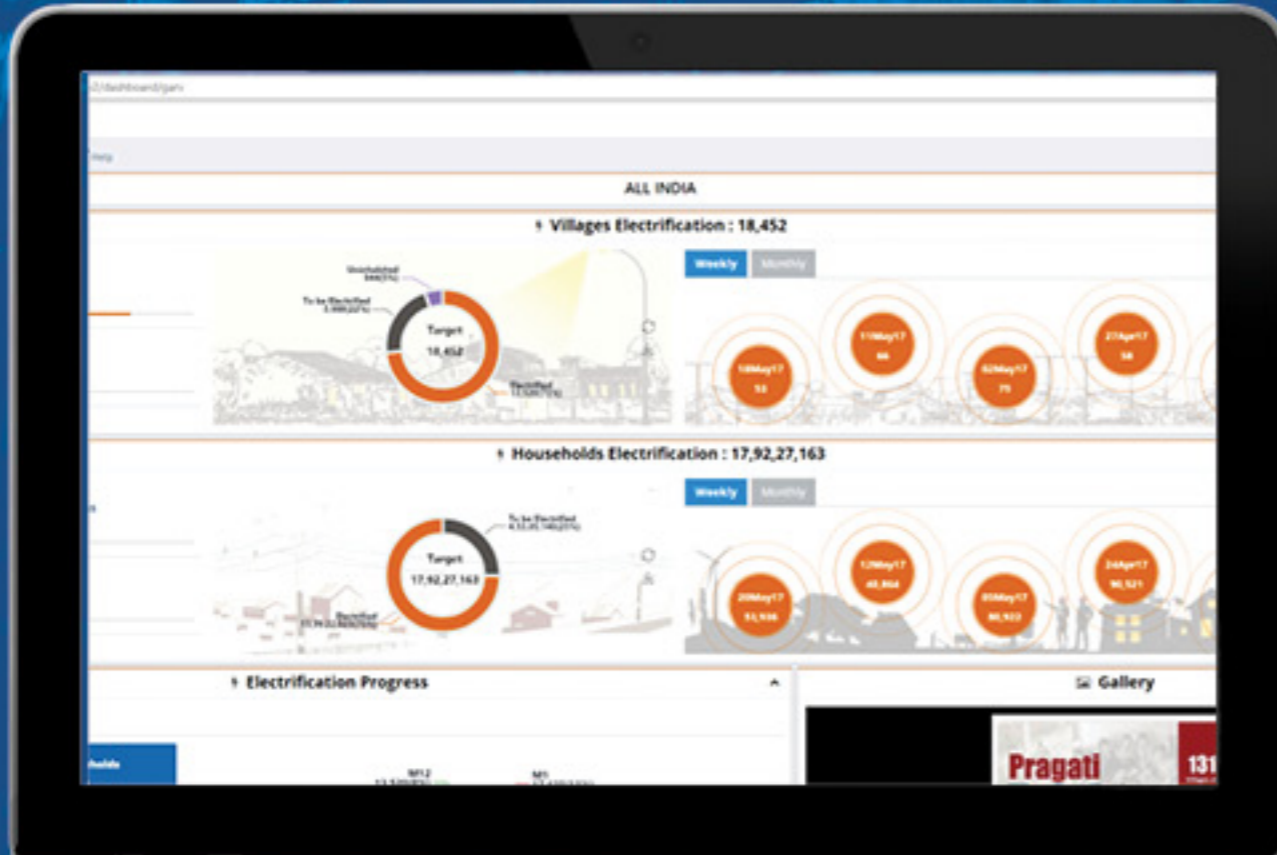
6,00,000 villages

17.92 cr. households

MAPPED

Drill down maps provide district-wise details of the status of village and household electrification

Target of electrifying remaining **4.53 cr.** rural households



GRASSROOTS IMPLEMENTATION THROUGH GRAM VIDYUT ABHIYANTAS (GVAs)

For verifying progress



TRACK PROGRESS ON
www.garv.gov.in



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ELECTRICITY

FOR A BETTER FUTURE



DAMPURA VILLAGE

Rajasthan

When GVA told residents of village Dampura in Rajasthan that their village would soon be electrified, their response was, "Till now, we were the ones to approach Government officials. But today, when you've come to us it makes us feel that our needs are being taken care of, and that our village will soon be electrified." The villagers were happy and smiling with tears in their eyes. An old woman out of joy raised her hand in blessings and said, "Thanks, Modi ji, for serving us. He has lit up my village."



KHAJUHAN VILLAGE

Bihar

As soon as Sachidand, an enterprising and responsible youth of Bihar's Khajuhan village, got to know his village was part of Government's Mission to electrify 18,452 villages, he pursued the cause devotedly through Twitter and other social media. The constant responses he received to his tweets encouraged him greatly.



The day the village got electricity, the residents had tears of joy streaming down their faces. The mood in the village turned festive, sweets were distributed all around, and the people showered praises on the efforts of Government of India to empower people and make them prosperous.

FROM POWER DEFICIT TO POWER SURPLUS



About 60 GW capacity addition in conventional power

- Highest ever for a period of 3 years
- Increase of over one-fourth from capacity installed till March 2014

All States onboard 24x7 'POWER FOR ALL' with Uttar Pradesh's signing of the MoU

- A joint initiative of Government of India and State Governments with the objective of providing 24x7 power to all

Mega Power Policy

- Facilitates competitive bidding for future Power Purchase Agreements (PPAs)
- Ensures long-term project viability
- Provides employment generation at large scale

From a net importer of electricity to net exporter of electricity

- Exported to Nepal, Bangladesh and Myanmar in 2016-17

Revised tariff policy 2016 for ensuring

- Electricity for all
- Efficiency for affordable tariffs
- Environment for a sustainable future
- Ease of doing business

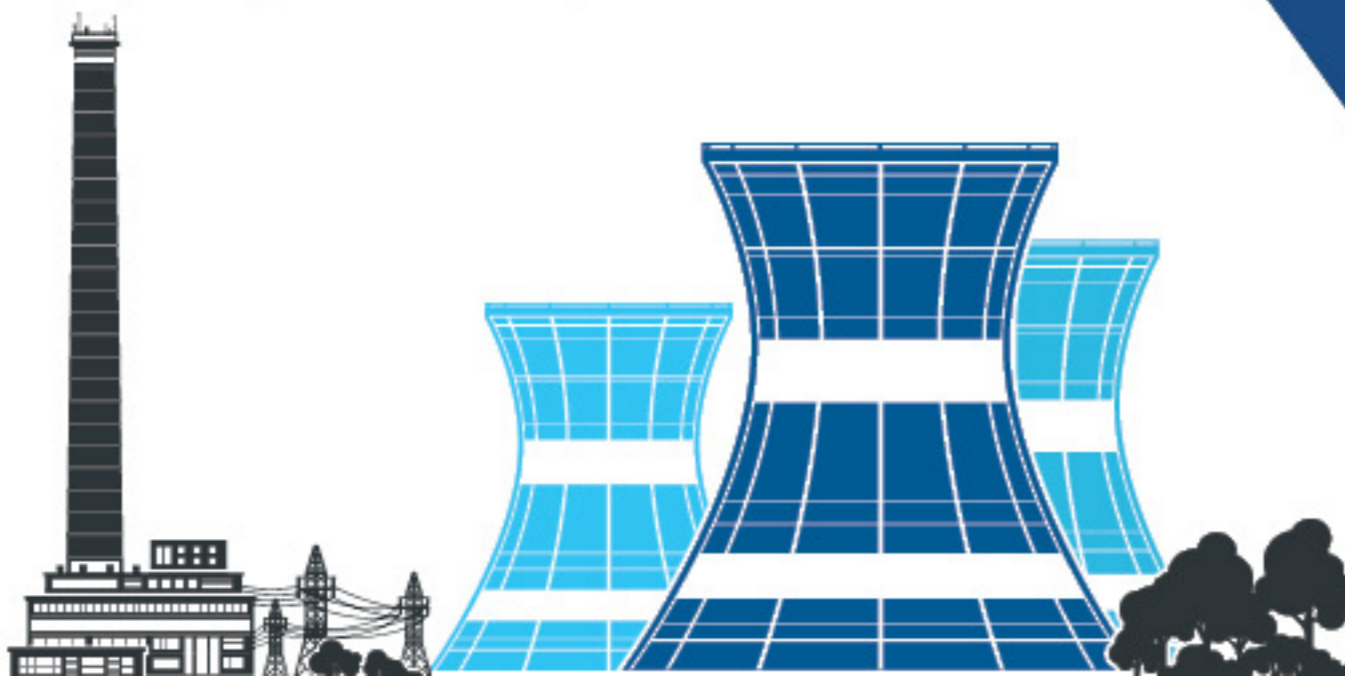
New policy being formulated to harness Hydroelectric power

SHAKTI

(SCHEME FOR HARNESSING AND ALLOCATING KOYALA TRANSPARENTLY IN INDIA)

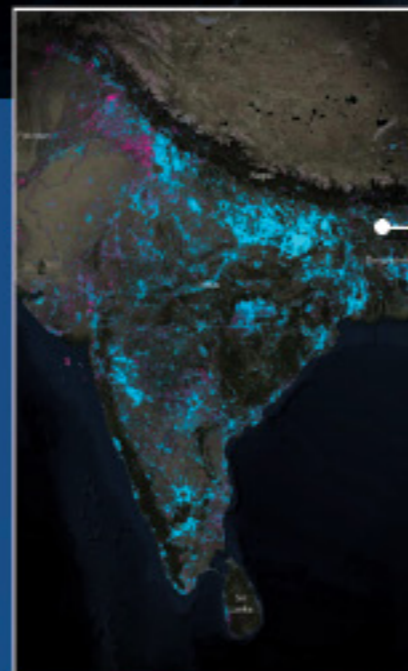
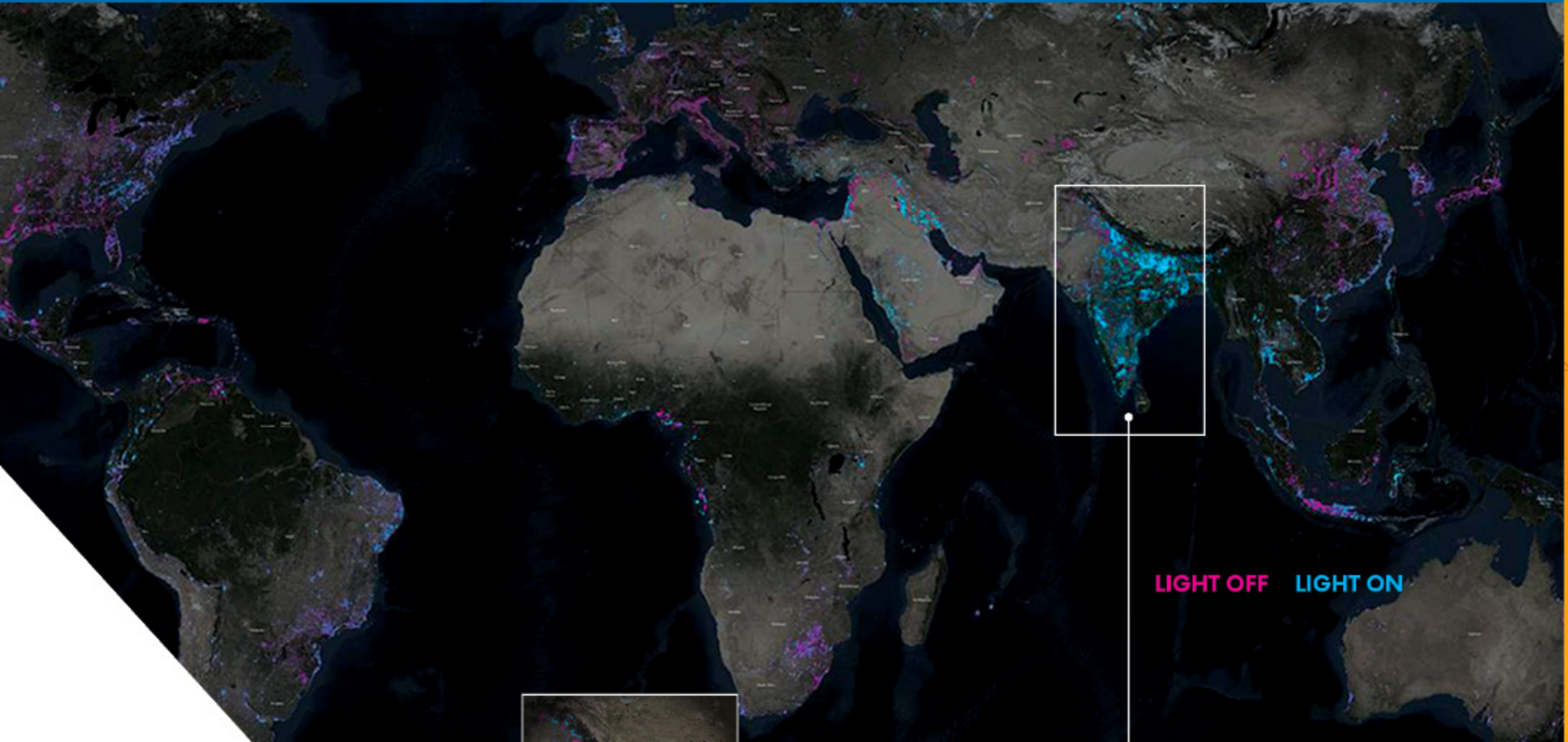
Transformational policy for auction and allotment of coal linkages will lead to -

- Affordable power
- Access to coal
- Accountability in allocation of coal



BRIGHTER INDIA BETTER INDIA

New NASA Night-time Map Shows India in Whole New Light
(2016 v/s 2012)



“India has brightened dramatically, is not a surprise. The country is home to more than its fair share of people living without electricity, and its Government has been working to change that by establishing a rural electrification program and investing heavily in renewable energy” – *National Geographic*

SOURCE: NASA; Betsy Mason & John Nelson,
National Geographic dated on 29th April, 2017

TRANSFORMING TRANSMISSION

ONE NATION, ONE GRID, ONE PRICE

RAPID EXPANSION IN TRANSMISSION NETWORK

About 40% increase in transformation capacity
from 5.3 lakh MVA in March 2014 to 7.4 lakh MVA
in March 2017

Over one-fourth increase in transmission lines from 2.9
lakh ckm in March 2014 to 3.7 lakh ckm in March 2017

116% INCREASE IN AVAILABLE TRANSFER CAPABILITY TO SOUTH INDIA FROM MARCH 2014

To be nearly tripled to 18,400 MW by 2019

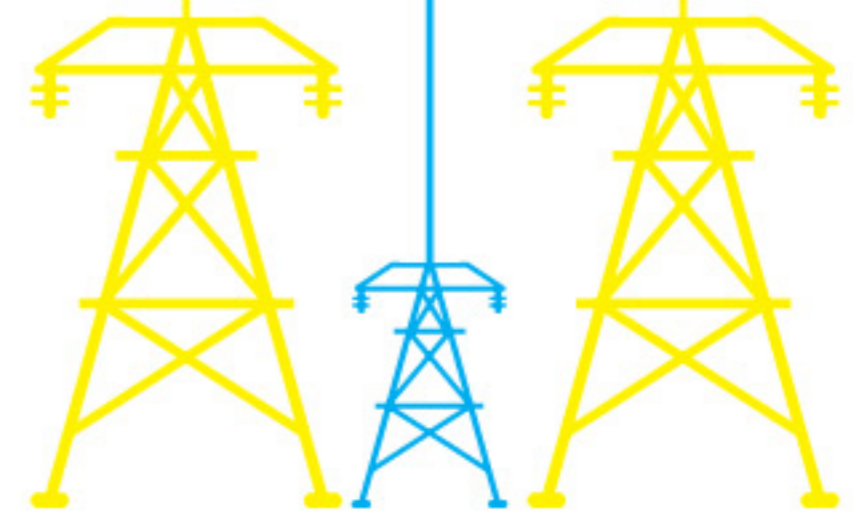
Reduced shortage of power due to removal of transmission constraints

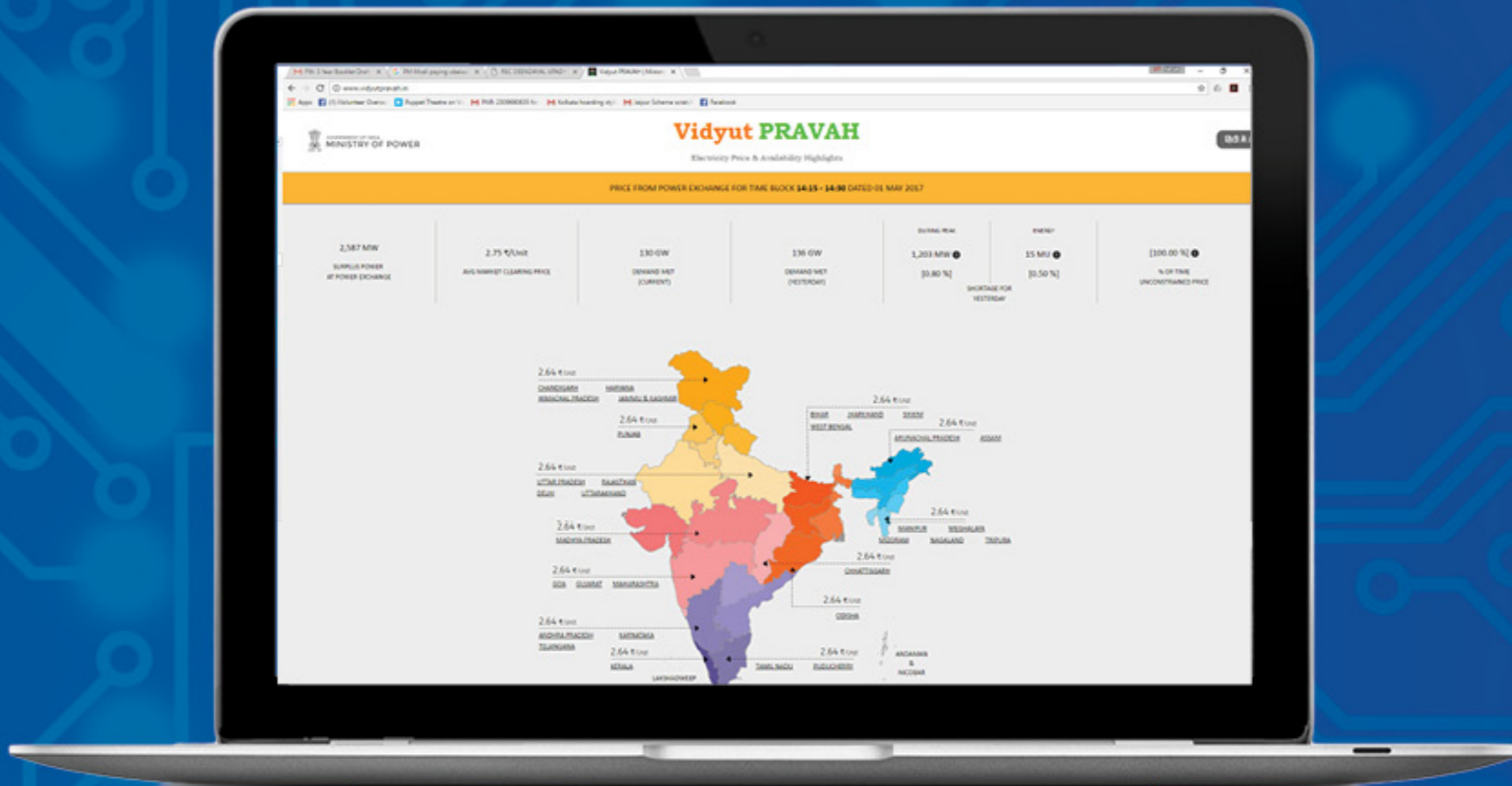
PROJECTS WORTH ₹ 1.5 LAKH CR. COMMISSIONED DURING 2014-17

83% higher than projects commissioned during 2011-14

STABLE AND SECURE GRID

Not a single major disturbance has occurred since May 2014





VIDYUT PRAVAH

CONSUMER IS KING

REAL-TIME INFORMATION ON ELECTRICITY PRICE AND POWER AVAILABILITY

Surplus power is available at low rates which any State can purchase from the exchange



www.vidyutpravah.in

TRANSPARENCY IN TRANSMISSION



TARANG

(TRANSMISSION APP FOR REAL TIME MONITORING & GROWTH)

Tracks upcoming transmission projects and progress of Inter-state and Intra-state transmission systems



www.tarang.website

**E-TRANS
FOR E-BIDDING AND
E-REVERSE AUCTIONS
IN TRANSMISSION
PROJECTS TO DISCOVER
BEST PRICES**

DEEP

(DISCOVERY OF EFFICIENT ELECTRICITY PRICE)



**FOR SHORT AND MEDIUM TERM POWER
PROCUREMENT THROUGH TRANSPARENT E-BIDDING
AND E-REVERSE AUCTION TO ENSURE DISCOMS GET
THE BEST PRICE**

A NEW DAWN FOR DISTRIBUTION SECTOR

UJWAL DISCOM ASSURANCE YOJANA (UDAY)

is the most comprehensive power sector reform ever

PERMANENT RESOLUTION

of past, present and future DISCOM issues

Turnaround DISCOMs through

FINANCIAL AND OPERATIONAL EFFICIENCY IMPROVEMENTS

**27 STATES & UTs, MAKING UP FOR 97% OF TOTAL DISCOM DEBT,
ARE ONBOARD UDAY**

LOW ELECTRICITY PRICES FOR CONSUMERS

- Savings of nearly ₹ 12,000 cr. for DISCOMs due to less rate of interest

MASSIVE OPPORTUNITIES IN DISTRIBUTION SECTOR

- Ripe for future investments • Huge potential for job creation

STATES SHOW THE WAY

HARYANA'S "MHARA GAON JAGMAG GAON" SCHEME

- 24 hours power supply in rural areas in return for commitment from villagers to curtail losses
- Dakshin Haryana Bijli Vitran Nigam (DHBVN) turned around its losses of more than ₹ 2,088 cr. in 2014 to a profit of ₹ 78 cr. in the first half of 2016-17

RAJASTHAN'S "MUKHYA MANTRI VIDYUT SUDHAR ABHIYAN"

- Reducing losses through various technical and anti-theft measures
- 100% feeders metered
- Self-help Women's groups formed to stop power theft



UDAY MOBILE APP & PORTAL

ALLOWS PEOPLE TO

Compare DISCOMs on the basis of 26 major performance parameters

View ranking of States on the basis of DISCOM health



www.uday.gov.in

SMART POWER INFRASTRUCTURE

Integrated Power Development Scheme (IPDS)
for quality and reliable 24x7 power supply to
urban households



OUTLAY OF MORE THAN
₹ 65,000 CR.



www.urjaindia.co.in

CONSUMERS CAN MONITOR
ELECTRICITY SITUATION IN CITIES
SHOWS PROGRESS ON
THE INTEGRATED POWER
DEVELOPMENT SCHEME
(IPDS)

URJA (URBAN JYOTI
ABHIYAAN)

URJA MITRA

INFORMATION IS POWER



Power cut information sent through SMS and email in advance to nearly 9 cr. consumers

Historic power cut data can be checked and compared

For the first time ever, people can lodge complaints through common helpline number **1912**, making DISCOMs accountable

Onboard: 44 DISCOMs of 25 States and UTs



www.urjamitra.com

PRAKASH PATH



UJALA (Unnat Jyoti by Affordable LEDs for All)

World's largest LED distribution programme

Consumers saving about ₹ 12,000 cr. in electricity bills



ENERGY EFFICIENCY

Between 2014-17, Demand Side Management (DSM) brought down annual increase in energy generation from 8.61% to 5.74%



OVER 7 LAKH ENERGY EFFICIENT FANS DISTRIBUTED

Can reduce electricity bills by about ₹ 400-500 per year



OVER 18.5 LAKH LED TUBE LIGHTS DISTRIBUTED

Costs ₹ 230 versus ₹ 400-600 for a fluorescent tube light



OVER 20 LAKH LED STREET LIGHTS INSTALLED UNDER STREETLIGHT NATIONAL PROGRAMME (SLNP)

TRANSPARENT PROCUREMENT REDUCED PRICE OF LED BULBS BY 87%



Wattage of LED bulbs increased from 7W to 9W



TRACKING UJALA

UJALA DASHBOARD PROVIDES REAL-TIME UPDATES OF THE PROGRAMME



www.ujala.gov.in

COAL

SHORTAGE TO SURPLUS

IN 2014, TWO-THIRDS OF MAJOR POWER PLANTS HAD CRITICAL COAL STOCK OF LESS THAN 7 DAYS. TODAY, NO SHORTAGE OF COAL

TRANSPARENT E-AUCTION AND ALLOCATION OF 84 COAL BLOCKS

- Potential revenue of more than ₹ 3.94 lakh cr. to coal-bearing States over the lifetime of the mines

IT-BASED INITIATIVES TO PREVENT COAL THEFT

62% INCREASE IN DRILLING FOR EXPLORATION

- 11.3 lakh metres in 2016-17 from 6.9 lakh meters in 2013-14

REDUCTION IN IMPORT OF COAL

- Foreign exchange worth ₹ 25,900 cr. saved



SURPLUS TO SUPERIOR

MAKING ELECTRICITY CHEAPER:

- Amount of coal required to generate per unit of electricity (specific coal consumption) has reduced by 9% in last 3 years
- Achieved due to improvements in coal quality and supply as well as in power generation
- In 2016-17, 0.63 kgs of coal used to produce 1 kWh of electricity versus 0.69 kgs in 2013-2014

COAL QUALITY IMPROVEMENT

- 3rd Party Sampling of 41.9 cr. tonnes started
- Now 100% crushed coal to power plants

COAL MITRA PORTAL

- Launched to facilitate flexibility in utilization of domestic coal
- Lesser cost of electricity for the consumers

COAL LINKAGE RATIONALIZATION OF ABOUT 4 CR. TONNES

- Potential savings of almost ₹ 3,000 cr.

CLEAN ENERGY

PUTTING THE PLANET FIRST

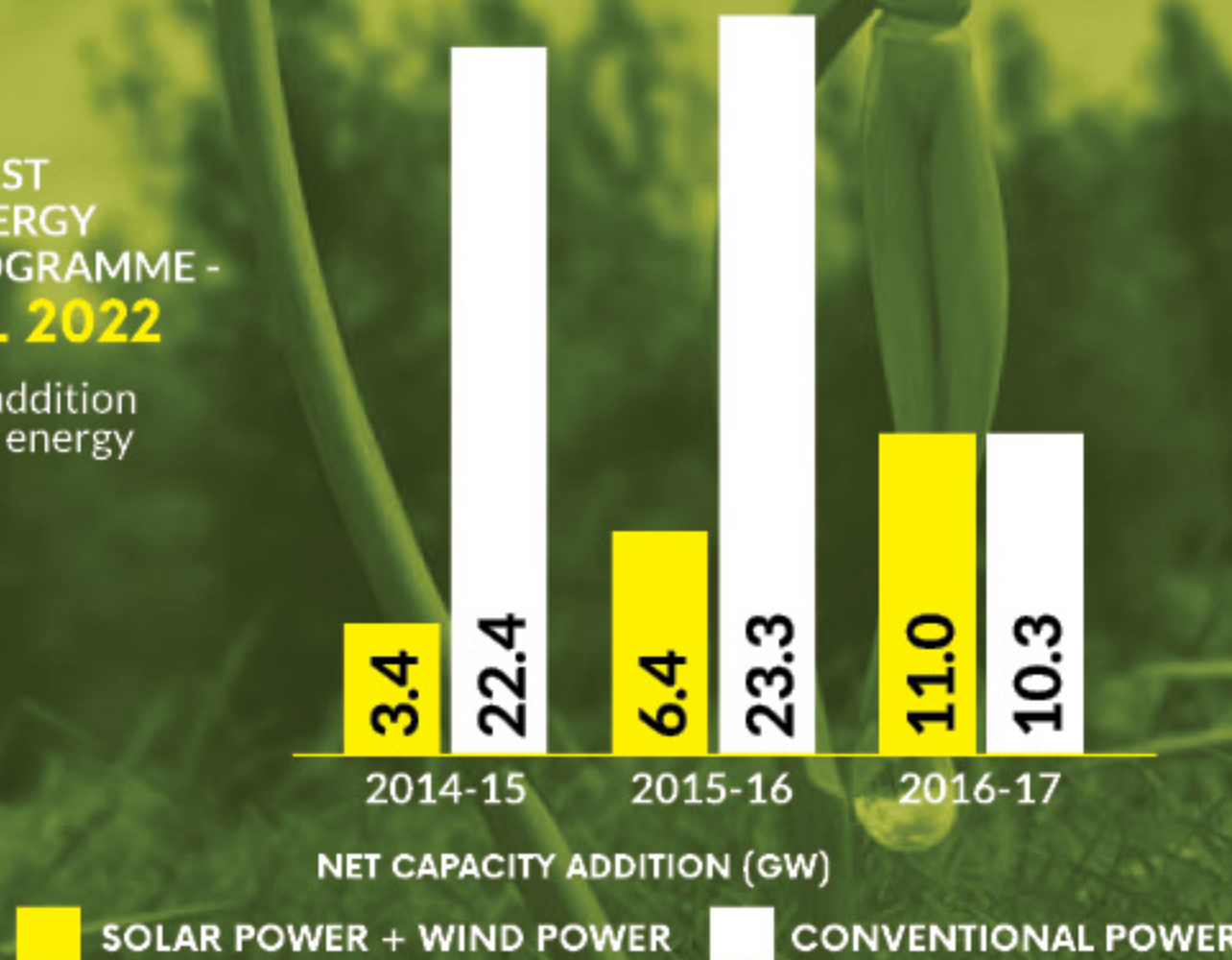
“ FOR ME, RENEWABLE ENERGY IS AN ARTICLE OF FAITH. WE ARE OPTING FOR GREEN ENERGY TODAY FOR A GREENER WORLD TOMORROW ”

- Hon'ble PM Shri Narendra Modi

FIRST TIME EVER, NET CAPACITY INCREASE OF RENEWABLE POWER EXCEEDED THAT OF CONVENTIONAL POWER

WORLD'S LARGEST RENEWABLE ENERGY EXPANSION PROGRAMME - **175 GW TILL 2022**

Highest capacity addition ever in renewable energy in 2016-17



WINDS OF

CHANGE



WIND POWER CAPACITY IN THE WORLD

- Highest ever wind capacity addition of **5.5 GW** in 2016-17
- **52%** increase in installed wind power capacity - **21 GW** in March 2014 to more than **32 GW** in March 2017

RECORD
WIND TARIFF OF

₹ 3.46

PER UNIT

17%

REDUCTION IN
WIND POWER COST
BY MOVING FROM
FIXED TARIFF REGIME
TO COMPETITIVE
BIDDING
FRAMEWORK

NATIONAL WIND-SOLAR HYBRID POLICY DRAFTED FOR

Promotion of large grid connected
wind-solar PV system

Better grid stability

Optimal utilization of transmission
infrastructure

Solar capacity increased **370%** in the last 3 years from around 2.6 GW to more than 12.2 GW



Record low Solar tariff of ₹ 2.44 / unit achieved in Bhadla, Rajasthan



GLOBAL LEADER IN SOLAR ENERGY

International Solar Alliance cements India's status as Jagatguru
Framework Agreement of International Solar Alliance signed by 25 nations
Another 96 prospective member nations



About **9 times higher solar pumps** installed between 2014-17 versus 1991-2014
Close to 1.1 lakh solar pumps now as compared to 11,600 till March 2014



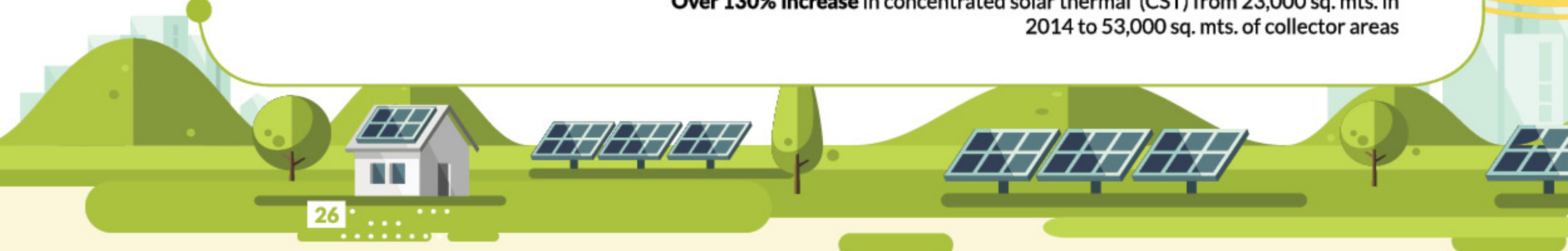
10 lakh solar lamps distributed to students to enable them to study in the absence of electricity
Another 70 lakh rural students to be provided with solar lamps



Over 130% increase in concentrated solar thermal (CST) from 23,000 sq. mts. in 2014 to 53,000 sq. mts. of collector areas



SUN NAMA



SOLAR ROOFTOPS

Installed capacity increased 15 times from 41 MW in 2014-15 to 656 MW in 2016-17



World's largest **ground-based solar plant** and world's largest **rooftop solar plant** are both in India



SOLAR PARKS

Solar power tariff reduced by more than 75% using plug and play model Solar park scheme doubled from 20 GW to 40 GW



Solar power development made attractive with NTPC and Solar Energy Corporation of India (SECI) by taking **offtake risk** and **dedicated green corridors** to transmit renewable energy



New bidding guidelines drafted to increase competition and reduce risks

Mobile apps for consumer convenience

Surya Mitra for Installation, Services and Repairs of solar rooftop installations at customers' door step
ARUN (Atal Rooftop Solar User Navigator) to assist in installation of solar rooftop systems



HARNESSING NATURAL RESOURCES FOR NATIONAL DEVELOPMENT

BOOST TO EXPLORATION

NATIONAL MINERAL EXPLORATION POLICY 2016 TO ACCELERATE EXPLORATION

National Aero-Geophysical Mapping Project

- To gather information on deep-seated minerals
- **27 lakh line kms** of aero-geophysical data to be acquired **by 2019** versus **7 lakh line kms** in the last 30 years





- Baseline geo-science data made available by Geological Survey of India (GSI) in public domain free of cost
 - More than 6,000 geological reports available
- Exploration by MECL (Mineral Exploration Corporation Ltd.) has established mineral resources of about 900 cr. tonnes in the last 3 years
- Kick-starting Offshore Mining activity by amending legislative framework for allotment of offshore blocks

TRANSPARENCY

- Transparent Auctioning
 - 24 mineral blocks auctioned till May 2017, with estimated resources of over ₹ 1.1 lakh cr.
 - Estimated revenue of over ₹1 lakh cr. to States over the lease period of mines
 - First ever diamond block auctioned in the country in Madhya Pradesh
- Mobile App TAMRA (Transparency, Auction Monitoring and Resource Augmentation)
 - Allows monitoring of the status of mining blocks auctioned/to be auctioned
 - Faster operationalisation of mining blocks by tracking and expediting statutory clearances



MODERN TECHNOLOGY

PLUGGING LEAKAGES IN MINING

MINING SURVEILLANCE SYSTEM (MSS)

Eye in the sky to check illegal mining through space technology

296 triggers generated, mining activity detected in more than 90% cases, unauthorized mining found in 15% cases

Dashboard and mobile app launched

Remote Sensing Technology using satellite images to check illegal mining

IT-BASED MINING TENEMENT SYSTEM TO AUTOMATE THE ENTIRE MINERAL LIFE-CYCLE FROM EXPLORATION TO ALLOTMENT TO MINING

PEOPLE AND ENVIRONMENT FRIENDLY

PRADHAN MANTRI KHANIJ KSHETRA KALYAN YOJANA (PMKKKY) FOR WELFARE OF MINING AFFECTED AREAS AND PEOPLE

About ₹ 7,150 cr. collected from mining in 2016-17 under District Mineral Foundations (DMFs) for welfare activities

11 out of 12 mineral-rich states already covered

ENVIRONMENT-FRIENDLY MINING

Star Rating of mines introduced to implement Sustainable Development Framework (SDF)

Abandoned Mines Initiative taken up to assess and restore abandoned mines

“A New India of the dreams of
its Yuva Shakti is taking shape. A New India that fulfils
aspirations of its Nari Shakti is taking shape. A New India about
giving opportunities to the poor is taking shape.”

- HON'BLE PRIME MINISTER SHRI NARENDRA MODI



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