



सत्यमेव जयते

Group-3 Resources Vision (2019-2024)

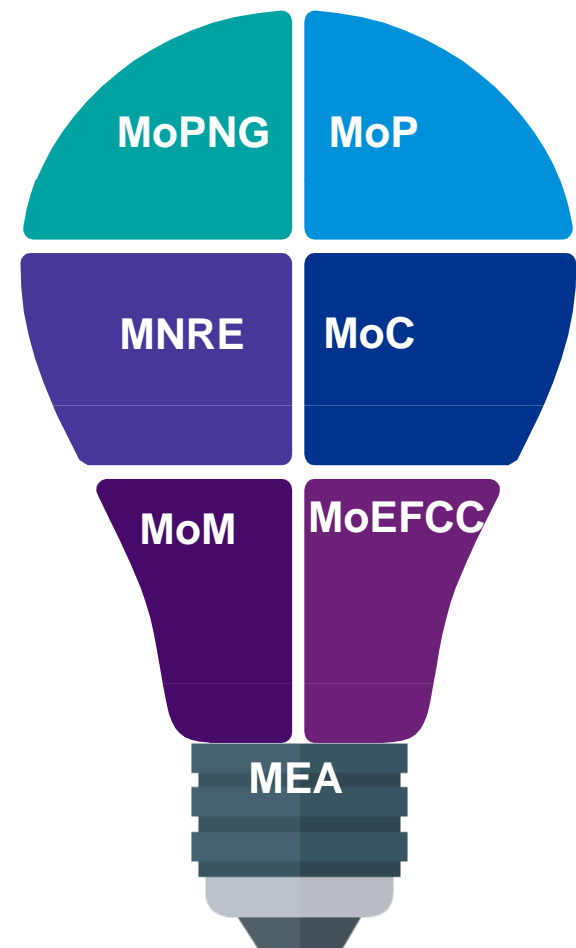
Presentation before the Union
Council of Ministers

Dr. M. M. Kutty, Convener & Secretary,
Ministry of Petroleum and Natural Gas

January 03, 2020

Approach followed for developing the Resources Vision

Ministries of Resources Group



Multiple meetings of SGoS 03 to discuss the 'Resources Vision'



- Large number of internal meetings held within Ministries
- Assistant Secretaries participated in Internal and SGoS meetings



More than six brainstorming workshops/ discussions with >300 participation from various stakeholders

Resources Vision 2024

**A sustainable, self
reliant, competitive,
efficient and
technologically
advanced
resources economy**



Key challenges and strategies to mitigate the challenges

Challenges

Strategies

Carbon Intensity

- Aggressive alternate energy deployment
- Elimination of first mile road connectivity challenges
- Recycling

Import dependence

- Revitalization of upstream activities
- Augmentation of solar & wind power manufacturing ecosystem

Risks to investment

- Integrated planning and accelerated approval
- Streamlining of dispute resolution mechanism
- Robust and enforceable contracts

Monopoly structures

- Markets & competition
- Associated regulatory reforms

Inadequate Innovation

- Adoption of frontier technologies
- Promotion of relevant start ups in core technologies

Resources Economy by 2024



356 GW ➔ **553 GW**
Total Installed Capacity

1376 BU ➔ **1867 BU**
Energy generation (in billion units)



77 GW ➔ **225 GW**
RE Installed Capacity

10% ➔ **24%**
Energy Mix (Generation)



67 MMtoe ➔ **~95 MMtoe**
Oil & Gas Production

249 MMTPA ➔ **299 MMTPA**
Refining Capacity



730 MMT ➔ **~1149 MMT**
Coal Production

150 MMT ➔ **440 MMT**
Allocation of blocks for commercial Mining



616 MMT ➔ **1232 MMT**
Mineral Production

Copper ore and concentrate: **96%** ➔ **75%**
Manganese ore: **50%** ➔ **25%**
Reduction in imports

Performance with respect to Key Parameters: India vs World

Sl. No.	Indicators	India	World
1	Exploration- finding cost of oil for barrel oil equivalent (boe) (rolling average for FY16, 17, 18)	\$3.02(ONGC)	\$2.25 ENI, \$2.36 Chevron, \$4.95 BP, \$7.14 ExxonMobil, \$8.55 Shell
2	Nelson Complexity Index -Refinery	6.5 to 13.7	7 to 14.1
3	Pipeline Utilization	87.9% (36 pipelines of IOCL)	71% (average of best 28 performers)
4	Per capita consumption of Polymers/Petrochemicals (in kg)	12	36 (USA – 90)
5	Ease of Doing Business – Getting Electricity	22 nd position	USA 64 th position (among 190 countries)
6	Aggregate technical and commercial losses (2014)	19.3%	8.2% (USA 5.9%)
7	Per Capital Electricity Consumption	1,181 KWH	2,674 KWH
8	Renewable Energy Generation as of 2018 (excluding Hydropower)	4 th rank (78 GW)	Japan - 64 GW, USA -180 GW (Total -1,246 GW)
9	Recycling of metals – Aluminium packaged	25%	75% (world), almost 100% (Europe)
10	Forest Area (in 2016)	23.83% (increasing) - 24.6% (Forest & Tree Cover – 2019)	30.72% (decreasing)

Key initiatives / strategies identified by the SGoS

Petroleum & Natural Gas

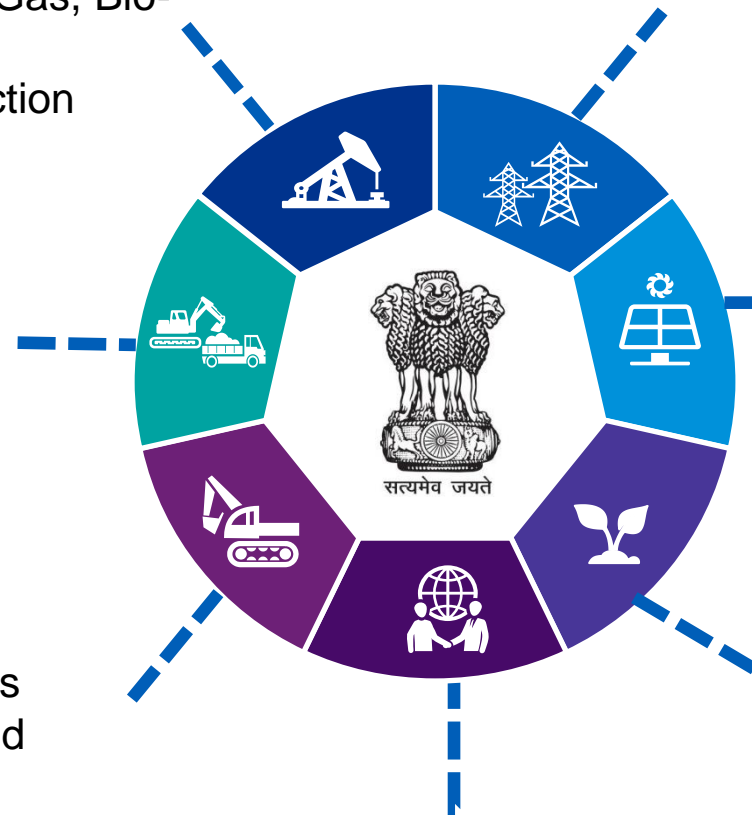
- Further push towards gas based economy
- Universal access to clean fuel (LPG, Gas, Bio-Fuels)
- Increase exploration, oil & gas production

Coal

- Expediting production from awarded mines
- Reduction of imports
- Value addition by coal gasification

Mines

- Recycling of metal scraps/used metals
- Integrated licenses with pre embedded clearances
- Incentivizing exploration through policy mechanism



Power

- Clean and sustainable generation and Grid integration for RE scale up
- DISCOM revitalization
- Reduce energy intensity

New & Renewable Energy

- 30 GW of combined capacity of solar cell and module manufacturing
- PM KUSUM scheme for farmers
- Mission Hydrogen

Environment, Forest & Climate Change

- Combat climate change
- Clean Air and Clean Water
- Expedite EC/FC/CRZ clearances

MEA

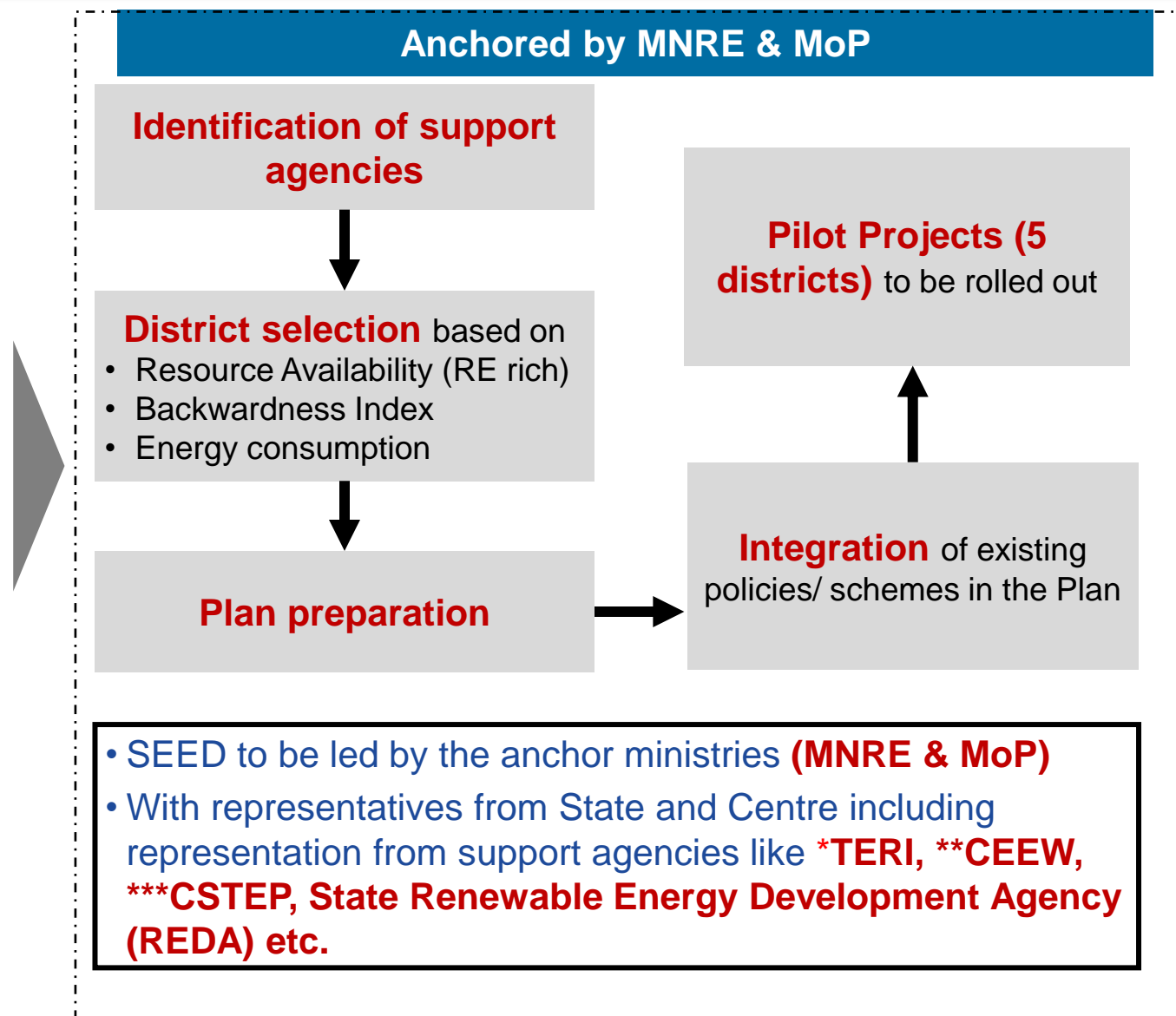
- Support for enhancing global footprint of Indian energy companies
- Diversification of sources for Oil & Gas, coal & strategic minerals

Integrated Resource Initiatives- Sustainable Energy Development

SEED

Sustainable Energy *for* Every District

- Potential mapping of **~50** districts in Phase 1
- Integrated plan for districts to incorporate:
 - **Sustainable resource/ energy utilization goals** focusing on local resource availability
 - Sustainable energy plan for **identified districts** based on broad guidelines
 - **Assistance to entrepreneurs** for technologies suited for the region(Waste to Wealth, Solar, Small Hydro, etc)
 - Integrated **skills development** program
- **Finance access** based on pre-set approval criteria
- **Pilot projects** to validate concept before large scale roll out





पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय
MINISTRY OF
PETROLEUM AND NATURAL GAS

Ministry of Petroleum & Natural Gas

Vision 2024

To provide **universal access** to **affordable**, **clean** and **reliable** energy, enhance **domestic production** of crude oil and natural gas, increase **efficiency of operation**, substantially augment hydrocarbon **infrastructure** to address India's **energy security** and sustainability needs

Transformative ideas for implementation in 100 days (1/2)

Monitoring of implementation of CCEA decisions regarding recommendations of the committee headed by VC, NITI Aayog

- Out of 17 major recommendations of the Committee, 16 recommendations implemented.
- The entire regime of exploration and production stands substantially liberalised

Award of New Exploration Blocks

- Government has awarded the 39 blocks under Open Acreage Licensing policy (OALP) Bid Round II and III and IV.
- Total 77,500 sq km awarded under OALP regime during 2019

Enhancing oil and gas recovery from existing nomination fields

- ONGC and OIL have issued Notice Inviting Offer (NIO) for bidding out 66 small and marginal fields.
- Bids online submission by January, 2020 by prospective bidders.

Transformative ideas for implementation in 100 days (2/2)

Popularisation of 5 kg LPG cylinders

- 14.72 lakhs 5 kg refills sold in 100 days
- As on 31.12.2019, the total sale of 5 kg refills is 33.39 lakhs

Monitoring of capacity addition for ethanol production for ethanol blending programme

- For the Ethanol Supply Year 2018-19, 189 crore litres of ethanol blended as against 67.4 crore litres in 2014-15
- Under Interest Subvention Scheme, 426 applications received, 328 proposals approved in principle, with potential to produce more than 530 crore litres of Ethanol
- Policy for fixation of price including from sugar and sugar syrup for Ethanol Supply Year 2018-19 approved by the CCEA
- Long term procurement policy of Ethanol notified

Monitoring of work on City Gas Distribution (CGD) Network

- Commencement of work of 10th CGD Bidding round launched on 26.8.2019
- Online monitoring portal developed and PNGRB monitoring the progress of CGD work

8 crore connections under Ujjwala

- LPG connections under PMUY has reached the target of 8 crore on 07th Sep 2019, **about 8 months ahead of target**

Overarching goals of Oil and Gas Sector

- 1 Enhance production of oil and gas and attract investment**
- 2 Shifting towards gas based economy**
- 3 Provide universal access to clean fuel and scale up biofuels production**
- 4 Strengthening energy security also through International Cooperation**

Key Goal of Oil & Gas Sector – Attract investment, enhance production

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Increase domestic oil and gas production	Increase in production of Oil & Gas (liberalized E&P regime, increased exploration, privatisation, JV model, technical services model etc)	67.08 to 94.59 MToE Oil & Gas production
	Accelerate award of new exploration acreages (under Open Acreage Licensing Policy)	2,50,000 SKM
	Development of non-monetized discoveries (Joint Ventures-57, ONGC-41, OIL-3)	101 Discoveries
Attract investments	Driving Hydrocarbon infrastructure – Upstream investments, Pipelines, CGD, LNG terminals, Refining etc. (56 Billion USD in E&P, 66 billion USD in Gas and Pipelines, 20 billion USD in Refining)	About 130 Billion US Dollars (about Rs 9.3 lakh crore) during the five-year period

Key Goal of Oil & Gas Sector - Provide universal access to clean fuel

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Scale up bio-fuels production and waste to wealth creation	Invest into 2G ethanol capacity (12 plants being set up)	Rs 13,955 crore
	Expedite implementation of SATAT initiative	5,000 Letter of Intents for CBG plants
Improve access to clean fuel	Scale up marketing network (existing ROs 65,202)	More than 78,000 ROs advertised
	Ensure availability of BS-VI compliant fuel	100% States/UTs (w.e.f 1 st April, 2020)
Develop India into a refining hub	Increase the refining capacity	249.4 to 299.15 MMTPA
	Boost ethanol procurement for blending	450 crore litre by 2021-22 for 10% blending

Key Goal of Oil & Gas Sector - Shifting towards a gas based economy

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Expand natural gas grid	Expedite completion of National Gas Grid and CGD projects (expeditious execution of ongoing projects)	16,232 to 26,924 km Gas pipelines
	Rationalization of pipeline tariff (finalise policy by Petroleum and Natural Gas Regulatory Board)	Implementation by 2020
Boost natural gas consumption	Undertake new CGD Bid Round to cover additional districts (by Petroleum and Natural Gas Regulatory Board)	2 more rounds By 2022
	Expand access to PNG and CNG (by executing CGD network)	50 lakhs to 1.5 crore (No. of PNG Connections) 1750 to 5000 (No of CNG stations)
Create competitive and transparent gas markets	Set-up gas trading hub (de-allocation of all gas allocation other than CGD, urea and LPG, Cabinet Note under finalization)	Implementation by 2021
	Establish a transport system operator, to begin with as subsidiary and an independent body after about 3 years (CEE recommended, Cabinet Note under finalization)	Implementation by 2021

Key Goal of O&G Sector – Strengthen energy security also through International cooperation

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Expand India's overseas equity oil & gas portfolio	Increase CAPEX in overseas assets (either through internal resources or external borrowings by Oil and Gas Companies)	INR 61,059 crore over 2019-2024
	Addition to overseas equity oil and gas assets (from existing assets and acquisition of fresh assets)	101.34 MMTonE over 2019-2024
Diversify overseas oil & gas supply sources	Addition of new nations to the supplying portfolio (potential countries - Russia, Mozambique, Brazil, Gabon, Norway, Guyana, Angola etc)	4 new nations By 2024

Important KPIs of Oil and Gas Sector

S.No	Parameter	Unit	Target Value				
			2019-20	2020-21	2021-22	2022-23	2023-24
1.	Natural gas production	BCM	34.55	39.32	46.92	54.53	55.68
2.	Crude oil production	MMT	35.04	35.79	38.23	38.61	38.91
3.	Investment in 2G Ethanol Capacity	INR crore	777	3,066	4,332	3,695	2,085
4.	Addition in refining capacity	MMTPA	0.35	0	14.4	10.5	24.5
5.	LPG Coverage for BPL	%	96	98	100	-	-
6.	New fuel retail outlets	Nos.	2,550	2,850	2,800	2,750	3,050
7.	New CNG stations to be added (by CPSEs)	No. of Station	550	600	650	700	750
8.	New domestic PNG connections to be added (by CPSEs)	No. of Connections (in lakhs)	18.5	19	20	21	21.50
9.	Additional gas pipelines	km	941	2,312	2,483	1,800	3,156
10.	CAPEX (Overseas Assets)	INR crore	11,502	12,353	13,264	12,601	11,339



सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF POWER

Ministry of Power Vision 2024

A financially viable and environmentally sustainable power sector furthering energy security and providing reliable 24x7 quality power

Transformative ideas for implementation in 100 days

Revision of Tariff Policy

- Draft Tariff Policy 2019 submitted for Cabinet approval

Payment Security mechanism for power transactions

- Order issued on 28th June 2019 on opening and maintaining of adequate LC for payment security under PPA by Distribution Licensees
- Implemented from **1st August 2019**

Comprehensive Distribution Sector Scheme

- The Committee to formulate the scheme has already been constituted
- Preliminary deliberations have been made on the contours of the scheme
- The scheme is under formulation

Overarching goals of Power Sector

- 1 Clean and Sustainable generation**
- 2 Adequate & Efficient transmission system**
- 3 Reduce Energy Intensity**
- 4 Revitalization of DISCOMs**
- 5 Efficient Energy Markets**
- 6 Move towards Light Touch Regulation**

Key Goal of Power Sector - Clean and sustainable generation

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Enhance share of Renewable Energy	Institute Renewable Generation Obligations (RGO) targets (Tariff policy approval, amendment to Electricity Act)	RGO policy by July 2020
	Bundle RE with conventional power (tender issued by NTPC)	Implementation by March 2020
Make generation flexible	Encourage Hydropower	45 GW to 57 GW Installed Hydro Capacity
	Improve technical minimum limits. 60% of thermal fleet to operate at 55% of technical minimum load	60% by FY 2024
Improve water use efficiency	Explore technologies to reduce water consumption in thermal power plants (North Karampura and Patrattu under implementation, LARA Stage II & Stage III and Gadarwara identified)	10 by FY 2024 No. of units using Air Cooled Condensers
Promote usage of agro-residue pellets	Develop policy to increase co-firing with agro-residue pellets. (Already tested in Dadri Thermal Power Station)	6 by FY 2024 No. of plants for co-firing

Key Goals of Power Sector

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Adequate and efficient transmission system		
Robust transmission network to limit congestion	Plan and build transmission infrastructure in RE rich areas (Length of transmission lines to be added)	32,000 circuit km by FY 2024
Rationalize transmission charges	Remove transmission pricing inefficiencies (Committee constituted, report received, consultation with CERC and State Governments)	Policy to be formalized by June 2020
Reducing energy intensity		
Improve energy efficiency in buildings and municipalities	Optimize cooling related energy consumption (Standards and Labelling Programme)	80 Billion Units Reduction over BAU scenario
	Adoption and implementation of Energy Conservation Building Code by Urban Local Bodies (ULBs)	50 Number of ULBs
Enhance energy efficiency in energy intensive industries	Widen and deepen Perform, Achieve and Trade (PAT) scheme (new sectors like glass, ceramic, chemicals etc.)	550 No. of Designated Consumers
	Facilitate adoption of energy efficient processes through pilot projects for SMEs	30 No. of pilot projects

Key Goal of Power Sector - DISCOM revitalization

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Introduce consumer choice	Separate Carriage and Content (Amend Electricity Act)	Implementation by March 2021
Address AT&C loss and cost – revenue gaps in retail tariffs	Move towards timely cost reflective tariffs (tariff policy approval, implementation through State Electricity Commissions)	Implementation to start in FY 2020
	Implement DBT for subsidy disbursement (Tariff policy approval, consultation, implementation by State Governments)	Implementation to start in FY 2021
Address metering issues	Ensure 100% feeder, transformer and consumer metering (consult States, scheme finalisation, Cabinet approval)	Implementation to start in FY 2020
	Smart pre-paid metering in three years with machine-based energy audits (Tariff policy, finalize scheme, Cabinet approval)	Implementation by FY 2023
Strengthen institutional mechanisms and processes	Establish model Standards of Performance (draft finalized, public consultation by March, 2020)	Implementation by FY 2020
	Link Central Sector Distribution scheme with institutional reforms (Expert Committee constituted, concept paper developed, consultation with States)	Implementation by FY 2020

Key Goals of Power Sector

Efficient energy markets

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Deepen electricity market	Deepening of spot markets (Draft regulation published for consultation)	From 4% to 25% % share
Enhance share of market traded energy	Redesign PPA framework – Merit Order (Committee constituted)	Implementation by December 2020
	Improve liquidity by enabling increased participation of DISCOMs & GENCOs (draft regulation made by CERC, comments called for)	Implementation in 2020

Move towards Light Touch Regulation

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Minimize regulatory burden	Standardized and time bound regulatory processes (Tariff policy, APTEL directions to regulatory commissions)	Implementation by March 2021

Important KPIs of Power Sector

S.No	Parameter	Unit	Target Value (cumulative)				
			2019-20	2020-21	2021-22	2022-23	2023-24
1.	Capacity Addition for Hydro Electric Plants (including Pumped Storage Plants)	GW	46.6	47.4	50.2	52.2	57.3
2.	Improve technical minimum limits to 55% (for thermal plants)	% of fleet capacity	20%	30%	40%	50%	60%
3.	Use of Air Cooled Condensers in water scarce regions in power units	No.	2	4	6	8	10
4.	Length of transmission line to be added in RE rich areas	circuit km	2,000	5,000	16,000	24,000	32,000
5.	%age of consumers metered	%	90%	100%	100%	100%	100%
6.	Deepening of spot markets	% share in power market	4%	8%	10%	15%	25%
7.	Widening and deepening of PAT scheme	No. of Designated Consumers	110	220	330	440	550
8.	Incorporation of Energy Conservation Building Code (ECBC) in bye-laws of Urban Local bodies	No. of ULBs	5	10	20	35	50
9.	Facilitate adoption of energy efficient technologies through pilot/ demonstration projects in SMEs	No. of pilot projects	0	5	10	20	30



सत्यमेव जयते

Ministry of New and Renewable Energy
Government of India

Ministry of New and Renewable Energy

Vision 2024

To **enhance the share of** renewable energy in the energy mix of the country for ensuring **energy security, socio-economic growth and improved quality of life** in an equitable, environmentally sustainable and self-reliant manner

Transformative ideas for implementation in 100 days

Launch of PM-KUSUM

- **Scheme launched on 21st Aug 2019** (rates for procurement of pumps have since been communicated to States)

Launch of Solar rooftop Phase-II

- **Scheme launched on 21st Aug 2019** (quantity in terms of mega watts has since been communicated to States)

Finalization of first RE Park

- First RE park of **4,000 MW in Dholera, Gujarat** announced, ready for tender in 2 phases of 2 GW each

Bidding of 10 GW of solar & 2.4 GW of wind capacity

- Tenders for **10.45 GW of solar & 3.0 GW** of wind capacity released

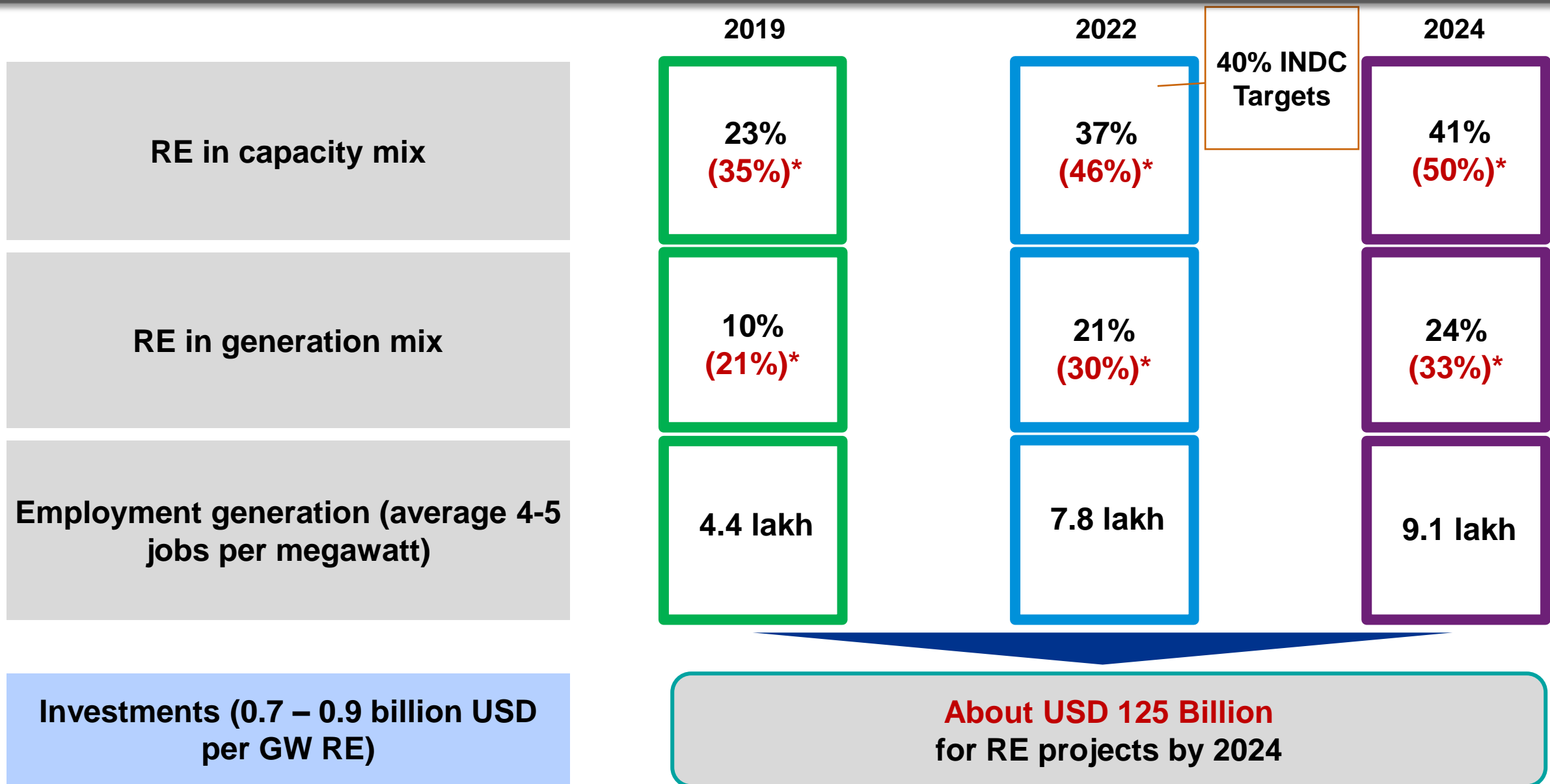
Ranking of States on Roof top Attractiveness

- Index released on **21st August 2019**

Scheme for solar induction cooking

- **In-principle approval** from Dept. of Expenditure received

Renewable Energy (RE) Scenario



**Including large hydro*

Overarching Goals

- 1 Increase RE share in energy mix to 225 GW by 2024**
- 2 Reduce Import dependence**
- 3 Enhance quality of life of farmers**
- 4 Promote distributed generation**
- 5 Hydrogen Mission and Increase India's RE influence globally**

Increase RE share in energy mix to 225 GW by 2024

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Tying up land and transmission	Develop 30 GW Ultra Mega Power Parks including in Border Areas with dedicated transmission (setup SPVs by Central PSUs with State Govt entities, acquire land by SPVs)	By December 2022
New avenues for RE generation	Tender for 3-5 GW of off-shore wind	1 GW in 2020, 2021 3 GW in 2022-24
Provide easy finance	RE to be separate category from power for lending purpose (taken up with RBI and D/o Financial Services)	March 2020
	Expand capital base of IREDA (enhance equity by about Rs 450 crore)	July 2020

Reduce import dependence

What (Strategy)

How (Initiatives)

When (Timelines/Targets)

Creation of additional solar manufacturing ecosystem

10 GW of Solar Cell Manufacturing (manufacturing linked tender, conducive tariff and non-tariff barriers)

By 2024

20 GW Solar Module manufacturing (manufacturing linked tender, conducive tariff and non-tariff barriers)

By 2024

Promoting domestic production by mandating domestic products in specific schemes (like KUSUM, Solar rooftop projects etc)

Order issued

Enhance quality of life of farmers

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Enhance energy independence & income of farmers	Provide about 23 lakh solar pumps to farmers (30% grant each by Gol and States, 30% loan, 10% farmer contribution)	2019-20 to 2023-24*
	Solarize 15 lakh grid-connected pumps for additional income generation	2019-20 to 2023-24*
	Small size solar power plants of total 15,000 MW on barren land (100% funding by farmers, sell power to DISCOMs)	2019-20 to 2023-24*
Use of new RE Products & Technologies	Technology transfer for solar drying, cooling, chilling and heating (technology developed by National Institute of Solar Energy (NISE), seminar / workshop with stakeholders)	March 2020
	Promote solar powered cook stoves (to begin with Aspirational Districts, finalise scheme, EFC appraisal and Cabinet approval)	From March 2020

* Details of KPI indicated in slide #35

Promote distributed generation

What (Strategy)

**Promote
distributed
generation/
Rooftop Solar**

How (Initiatives)

Rooftop on central government / central government institution buildings (making mandatory, Cabinet Note under preparation)

Use of excess lands on **railway stations, airports, warehouses and stadiums etc.** (under RESCO* model, service provider to bring capital, consultation with stakeholder Ministries)

When (Timelines/Targets)

By March 2022

By March 2023

* RESCO – Renewable Energy Service Company

Hydrogen Mission and Increase India's RE influence globally

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Hydrogen Mission	Research in materials and processes for production, storage and use of hydrogen as a fuel	Start in 2020
	Demonstration of applications of hydrogen for power generation and transport sector	By 2021
Information Exchange Portal	Launch IRIX- Integrated portal for international idea exchange	Launched October, 2019
One Sun-One Grid connectivity with Middle East and South East Asia	Start feasibility studies (consider engaging with World Bank)	By December 2020
	Enter into cooperation agreements	By December 2021
Enhance influence of ISA	Increase membership to 150 countries	By December 2022

Important KPIs

	Parameter	Unit	Target Value				
			2019-20	2020-21	2021-22	2022-23	2023-24
1.	Bids to be called	MW	30,000	25,000	25,000	25,000	--
2.	Off-shore Wind Bids	MW	1,000	1,000	1,000	1,000	1,000
3.	Cell manufacturing capacity	MW	2,500	--	2,500	--	--
4.	Module manufacturing capacity	MW	2,500	2,500	2,500	2,500	--
5.	Off grid solar pumps	lakhs	1.75	5.25	5.25	5.25	5.25
6.	Solarization of grid pumps	lakhs	1	3	3	3	5
7.	Small power plants on fallow land	MW	1,000	3,000	3,000	3,000	5,000
8.	Ultra-Mega RE park projects	MW	2,000	10,000	10,000	8,000	--

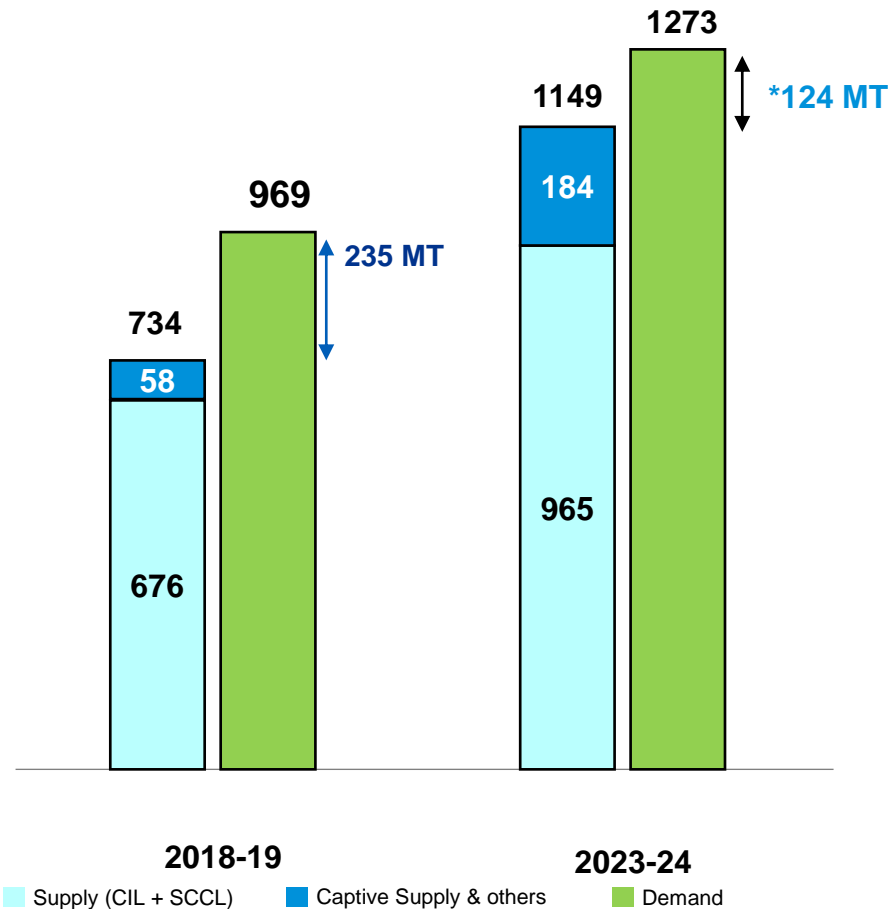
Ministry of Coal Vision 2024

**Modern, sustainable and competitive coal sector
enabling accelerated coal production for energy
security and economic growth**

100-day Goals of Ministry of Coal

	Targets	Achievements
Enhance coal handling efficiency through alternate transport methods	Development of state-of-the-art evacuation infrastructure for all 39 large mines (4 MTPA+);	Secured approval for projects (with CAPEX of Rs 18,000 cr) from company Boards; construction started in 8 projects.
Expediting & Operationalizing Coal Washeries	6 Coking coal & 4 Non-coking coal washeries - Timelines framed	Coking coal – 3 will be completed by Mar, 2020, balance 3 by 2022; Non coking coal – all 4 to be completed by 2021
Completion of Coal Handling Plants (CHPs)	4 Coal Handling Plants (CHPs) under monitoring – Gevra, Kusmunda, Madhuban, Maheshpur	2 are functional (Gevra , Kusmunda), balance 2 to be functional by Mar 2021
Award of mines as per commercial mining policy	Identification of mines - 11 large/ medium sized mines with combined PRC of ~190 MTPA completed; preparation of bid documents on	In readiness to auction 74 mines with Peak Capacity of ~300 MTPA; bid process to be launched in January, 2020
Implementation of 'sale of excess coal' policy	Allocation of captive mines with provision for sale of excess coal (25%); RFP issued on 3 rd August 2019	Allocated 13 mines - 5 through auction and 8 through allotment

Indian coal sector is poised for substantial import reduction



*in total imports, 110 MT is non-substitutable import

Vision Goals

Reduce Demand Supply Imbalance



Accelerate Exploration



Improve Evacuation



Promote Ease of Doing Business



Upgrade technology and modernize



Undertake CSR responsibility



Key Goals of Coal Sector

What (Strategy)	How (Initiatives)	When (Timelines/Targets) (Mar 2019 to Mar 2024)
Reduce Demand Supply Imbalance	Attract Investment in Coal production – (promote commercial mining, no end-use restriction, bid documents for revenue sharing regime ready)	RFP by Feb 2020 (37 blocks to begin with, total 200+ blocks)
	Expedite production from allocated blocks (hand-holding and monitoring by PMU, bid for PMU already floated)	Production increase from 58 to 184 MMT by private sector
Accelerate Exploration	Offer partially explored blocks through PL-cum-ML** regime instead of bidding out only fully explored blocks (bid documents ready)	By Jan, 2020 (1,000 sq. km/year against current 250 sq. km/year)
	Expedite Regional exploration - CMPDIL* to take up a large programme (huge hike proposed in budget for upgrading coal-bearing areas, large area for exploration)	2525 sq. km (by 2024) (about 500 sq. km/year instead of current 125 sq. km/year)

Key Goals of Coal Sector

What (Strategy)	How (Initiatives)	When (Timelines/Targets) (Mar 2019 to Mar 2024)
Ease of Doing Business	Re-engineer Mining Plan- Simplify Structure & process	Guidelines issued in Dec. 2019
	Multiple Amendments in the MMDR* / CMSP** Acts – (allow FDI and non-coal mining companies, removing redundant/repetitive clauses, etc)	Cabinet note under preparation
	Composite EC –to have in-built provision for 40% expansion with respect to quantity	Clarification issued by MoEF&CC in Sep, 2019
	Restored/ reclaimed land of CIL to be accepted for Compensatory Afforestation	Circular issued by MoEF&CC in Oct, 2019
	Introduce Online application & approval for Mining Plan – Integrate with environmental clearance (integrate with PARIVESH portal of MoEF&CC)	By March 2020

*MMDR – Mines and Minerals (Development and Regulation) Act

**CMSP – Coal Mines (Special Provisions) Act

Key Goals of Coal Sector

What (Strategy)	How (Initiatives)	When (Timelines/Targets) (Mar 2019 to Mar 2024)
Technology Upgradation & Modernization	Value addition of coal / award of coal blocks for coal gasification <ul style="list-style-type: none"> Extraction of CBM through competitively selected partners Underground Coal Gasification Pilot study at NLCIL* Surface Coal Gasification project at Dankuni under BOO model Policy formulation for technology neutral coal gasification 	<ul style="list-style-type: none"> Invite bids in Jan, 2020 Tender opening in Jan, 2020 Tender by Mar, 2020 July, 2020
	Mechanize coal transportation within large mines (build state of art evacuation infrastructure at a cost of about Rs 18,500 crore)	Implementation – Mar. 2024 From present 33% share to 93%
Social & Environmental Responsibility	Utilise mine-water in meeting water demand of nearby habitations and create irrigation potential (creation of infrastructure for pumping out, setting up distribution channels)	Potable water supply to ~45 lakh people (~15 lpcd) 3+ lakh acres irrigable land
	Improve public perception of coal mining via Coal Mine Tourism and Bio recovery of Mined-out areas	Promote 10 mines (Open cast and UG mines) 23,500 Ha to 31,500 Ha & 2 crore trees by 2024

*NLCIL - Neyveli Lignite Corporation India Ltd

Important KPIs of Coal Sector

S.No	Parameter	Unit	Target Value (per year)				
			2019-20	2020-21	2021-22	2022-23	2023-24
1.	Coal Production	Million Tonnes	810	875	964	1050	1149
2	Allocation of fully and partially explored coal blocks	No. of blocks	64	53	36	43	39
3.	Expediting regional exploration	Area in sq. km	125	400	800	800	400
4.	Expediting detailed exploration	Area in sq. km	230	1200	1400	1400	700
5.	Mine water for community use	Lakh kilo Litres	2,400	2,900	3,500	4,000	4,300
6.	Area irrigable by utilizing mine water	Acres	180,000	220,000	260,000	300,000	320,000



सत्यमेव जयते
Ministry of Mines
Government of India

Ministry of Mines Vision 2024

To double the production of major minerals in next 5 years and reduce import dependency, by allocating and regulating minerals in transparent and sustainable manner.

Overarching goals of Mines Sector

1 Incentivizing exploration also through private sector participation

2 Recycling of metal scraps viz. Aluminum, Copper etc.

3 Integrated licenses with pre embedded clearances

4 To double the production of major minerals in the country

Key Goals: Incentivising exploration of mineral blocks

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Exploration reports	Increase the number of auctionable reports o enhance auction of mineral blocks	34 to 115 Number of auctionable reports
NMET expenditure	Increase National Mineral Exploration Trust (NMET) expenditure on baseline data acquisition, green field exploration etc.	INR 80 Cr to INR 300 Cr NMET Expenditure
Facilitation of private participation in exploration	Revise schedule of charges of NMET to increase private sector participation (Technical Committee constituted, Report received in Ministry of Mines)	Implementation by December, 2020

Recycling of Metal Scraps in Scientific Manner

Formulate National Non-ferrous Metal Recycling Policy	Put Draft Policy for public consultation	March, 2020
	Submission of Cabinet Note	July, 2020
	Issue of Policy	September, 2020

Key Goal: Auction of mineral blocks with pre-embedded statutory clearances

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Auction of virgin areas for RP* cum PL** cum ML*** on revenue share basis for base metal and deep-seated minerals	Pre-embedded in-principle statutory clearances for grant of mining lease (State Govt to get prior clearances before auction and transfer EC & FC clearances to successful bidders)	Implementation by December, 2020
	Align the Acts/Rules with NMP#. Decision on recommendations of the Committee under NITI Aayog for reforms in mining (examination in Ministry, Cabinet approval)	Implementation by August, 2020
Ensuring sustaining of production of mines whose leases expiring in March 2020	Fresh auction of 46 mines – mines auctioned - 6, Ongoing NIT – 20, Reserved for PSUs – 2, Under process – 18 (38 iron ore / manganese, 5 limestone and 3 chromite mines)	March 2020
	Coordinate with States and Central Govt departments to facilitate expeditious EC and FC and other clearances to commence early production. EC guidelines issued in November. Approval of Ministry of Law for revised FC guidelines received.	March 2020
	Finalise contingency plan to meet the shortfall during transition. Consultation with M/o Steel, State Govts and Private sector going on.	Jan 2020
	Ordinance route under process to legally support seamless transfer to new lessees	Jan 2020

Key goal: To double the production of major minerals

Mining sector growing at CAGR of 6% at present, production needs to **grow at CAGR* of 15%**

S.No	Parameter (Production of minerals)	Target Value (Million tonnes)				
		2019-20	2020-21	2021-22	2022-23	2023-24
1.	Iron Ore	227	229	264	303	349
2.	Limestone	435	501	576	662	761
3.	Chromite	4.6	5.3	6.0	6.9	8.0
4.	Manganese Ore	3.2	3.7	4.3	4.9	5.7
5.	Lead & Zinc	1.02	1.20	1.40	1.60	1.80
6.	Bauxite	27.2	31.2	35.9	41.3	47.5
7.	Copper Ore	4.7	5.4	6.2	7.2	8.3

*CAGR – Compounded Annual Growth Rate



Ministry of Environment, Forest and Climate Change Vision 2024

To transform into **development partner** for achievement
of sustainable and responsible growth

Transformative ideas for implementation in 100 days (1/2)

Initiate action in 28 cities out of 102 under National Clean Air Programme

- City specific action plans finalized for **93/102 cities**
- 28 Cities prioritised and 43 other cities also targeted

Jal Abhayaanya Programme for Rejuvenation of Himalayan Springs

- Source wise water data and digital elevation has been compiled for **7 / 12** Himalayan states
- Work awarded to **11 partner** states in 11 districts to develop spring inventory
- Data for **512 springs** in Uttarakhand has been collected and geo-tagged

Action plan for 100 beaches of India for Blue Flag Beach Certification

- **7** tenders finalized and awarded
- **10 beaches** are ready to achieve Blue Flag Certification by the end of FY 2020
- Action Plan for 100 beaches prepared

Transformative ideas for implementation in 100 days (2/2)

Reduce time taken for grant of EC to two digits

- Time taken to reduce EC will be brought down to 95 days in 2021-22

Streamlining of various clearances

- States have been on boarded in PARIVESH portal. The portal reflects updated status.
- Paperless processing of all clearance proposals.

Restoration and rejuvenation of at least 100 major lakes across the country

- Wetland health card and management plans for 100 lakes / wetlands prepared
- Concept of wetland mitras introduced in 50 wetlands

Programme to double the number of trees planted

- Increase the annual plantation to 253 crore saplings by 2024 with per annum increase of 50 crore

Goals of MoEF&CC

- 1 Provide Clean Air and Combat Climate Change**
- 2 Enabler of Sustainable Business**
- 3 Conservation of Forests and Wildlife**
- 4 Sustainable Management of Catchment Areas, Coastal Zones**

Goals: Provide Clean Air & Combat Climate Change

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Provide Clean Air		
Prevent, control & abate air pollution	Reduce Particulate Matter-PM2.5 and PM10 (implement National Clean Air Programme for 102 cities – measures to prevent, control and abatement of air pollution)	Reduce PM2.5 & PM10 levels by 30% by 2024
	Expansion of air quality monitoring network	From 779 to 1500 manual stations and 167 to 400 CAAQMS*
	Prepare and implement Action Plan to contain stubble burning to minimize air pollution	6 month – M/o EF&CC and M/o A&FW
Combat Climate Change		
Reduce GHG emission intensity of GDP	Implement Missions under National Action Plan on Climate Change to fulfil NDC commitments under Paris Agreement Ensure 40% share of power generation mix from non-fossil sources (Enhance share of solar / wind / renewable energy)	Reduce emission intensity of GDP by 29% by 2024 from 2005 levels
Create additional carbon sink	Increase tree cover outside forest (plantation in private land, formulate new policy for plantation outside forest area)	Addition of 1 Billion tonne of CO ₂ equivalent by 2024 from 2015 level

*CAAQMS – Continuous Ambient Air Quality Monitoring Station

Goal: Enabler of Sustainable Business

What (Strategy)

**Expeditious
grant of forest
and
environmental
clearances**

How (Initiatives)

- Clearance process to be paperless (States onboarded in PARIVESH portal)
- EC / FC and CRZ clearances to be brought on the same portal
- Coastal Zone Management Plan of all coastal States / UTs approved under 2011 CRZ Notification
- New streamlined and simplified CRZ Regulations notified to speed-up coastal development and tourism
- Several Notifications issued simplifying FC
- Central Government fixed 60 days time for granting FC
- **Timely FC is a big challenge also in view of delays at State level**
- **Strong need to further simplify / streamline FC process in consultation with States to reduce time taken for FC**

Reduce time taken for EC to double-digit level (also fix time limits for States, further delegation of powers to States, central monitoring by MoEF&CC)

When (Timelines/Targets)

Implementation has already begun

By July, 2020

115 days to **90 days by 2022-23**

Goal: Conservation of Forests and Wildlife

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
National Forest Policy	Finalise National Forest Policy (draft policy prepared, consultation with State Governments and other stake holders done, placed before Cabinet for consideration)	By March 2020
Conserve/protect endangered species of wild animals	Launch projects on selected endangered species for development wildlife habitats (special projects to be launched on the lines of Project Tiger)	Identify 21 species March, 2020
	Establish a new world class Natural History Museum in Delhi (land available, design finalized, Cabinet note circulated)	By 2023
	Upgrade Central Zoo to international standards (transformation and management of Delhi Zoo, project is being prepared)	By 2022
Catalyse Ecotourism	Launch and implement Ecotourism Policy in the forests and wildlife areas of the country (Draft policy prepared / circulated, consultation with State Governments)	Policy by February, 2020

Goals: Sustainable Management of Catchment Areas, Coastal Zones

What (Strategy)	How (Initiatives)	When (Timelines/Targets)
Introduce treatment of Catchment Area	Catchment Area Treatment (CAT) of 13 major river systems (DPRs being prepared for 13 rivers, plantation-cum-watershed policy to be followed)	CAT Plan by 31st March, 2020 Implementation over a 10-year period and 5 by 31/3/2024
Sustainable management of Coastal areas	Implementation of Integrated Coastal Zone Management Projects (World Bank assisted project Rs 2,500 crore . Activities installation of STPs, mangrove plantation, coastal erosion protection measures, improving drainage system, formation of self-help groups etc., to conserve Ecosystems, and enhance livelihood security of coastal communities)	Roll out in April 2021

Important KPIs of MoEFCC

S.No	Parameter	Unit	Target Value				
			2019-20	2020-21	2021-22	2022-23	2023-24
1.	National Clean Air Programme (2017 as the base year)	PM2.5& PM10 (µg/m3)	0-5%	5-10%	11-15%	16-22%	23-30%
2.	Implementation of catchment area treatment plan	%age of area of CATP	10%	10%	15%	15%	10%
3.	Reduce average number of days for issue of EC to double digit by 2022	days	Amendment of EIA Notification	100	95	90	90
4.	Target of Recycling/ processing of plastic waste	Million MT	5.62	6.77	8.00	9.45	11.00
5.	Utilisation of fly ash	%	85%	100%	100%	100%	100%
6.	Recycling and processing of substantial quantum of e-waste generated in an environmentally sound manner in the country by 2024 (as indicated in the EPR Plan)	% quantity of waste	30%	40%	50%	60%	70%
7.	Blue Flag Beach certification	No. of beaches per year	10	20	20	25	25
8.	Restoration & rejuvenation of Wetlands/Lakes	ha	1.5 lakh	2.0 lakh	2.5 lakh	3.0 lakh	3.5 lakh



सत्यमेव जयते

Ministry of External Affairs
Government of India

Ministry of External Affairs

Vision 2024

Contributing to national development goals and India's energy security by identifying opportunities for our business, industry, institutions & organisations and also facilitate their access to resources and knowledge including new and emerging technologies

Objectives – to assist in

- 1 Facilitating diversification of sources for oil & gas, coal, lithium and strategic minerals**
- 2 Enhancing the global footprint of our energy companies through facilitating acquisition of overseas oil & gas assets**
- 3 Enhancing India's international presence in new and renewable energy including through initiatives like International Solar Alliance**
- 4 Facilitating India's project and consultancy exports in the resources and energy sector**

Action Plan

- 1 Work on completion of energy projects in our region – Nepal, Bhutan and Bangladesh**
- 2 Secure resources, materials and equipment required for Andaman and Nicobar Islands from Indonesia**
- 3 Executing solar energy projects under our LoC's of US \$ 1.6 billion**
- 4 Encourage diaspora to become investment and technology partners of India**

The Action Plan of the Resources Group will play a major role in achieving the vision of a 5 trillion US Dollar economy by 2024

Thank You