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URJA VIKAS NIGAM LIMITED

Comprehensive Legal and Feasibility Report on Agriphotovoltaics in Madhya Pradesh

iDeck
25 Years of Ideas That Build Nations

Commissioned by
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D.o No : 93/ACS/NRE/2026
Date : 05/06/2026

मध्य प्रदेश शासन
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Government of Madhya Pradesh
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FOREWORD

Madhya Pradesh has emerged as one of India's leading states in advancing renewable energy and promoting sustainable development pathways. As the country accelerates its transition towards clean energy while safeguarding agricultural productivity and rural livelihoods, Agriphotovoltaics (AgriPV) presents a promising and innovative solution. By enabling the simultaneous use of land for agriculture and solar energy generation, AgriPV offers a unique opportunity to enhance land-use efficiency, strengthen energy security, support climate resilience, and create additional income streams for farmers.

The State of Madhya Pradesh, with its vast agricultural landscape, favourable solar potential, and proactive renewable energy policies, is well positioned to become a frontrunner in the adoption of AgriPV systems. The Government of Madhya Pradesh remains committed to promoting sustainable and farmer-centric energy solutions that contribute to economic growth, environmental protection, and rural prosperity.

In this context, the Comprehensive Legal and Feasibility Report on Agriphotovoltaics in Madhya Pradesh assumes significant importance. The report, prepared under the Indo-German Cooperation on Agrivoltaics (IGCA) supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, provides a detailed assessment of the legal, regulatory, institutional, and policy ecosystem governing AgriPV projects in Madhya Pradesh. It also examines the feasibility of implementing AgriPV systems under various models, while identifying key barriers, approvals, and enabling mechanisms required for scaling up deployment.

The report highlights the growing relevance of AgriPV within India's renewable energy transition and underscores the need for coordinated action across energy and agriculture sectors. It presents valuable insights into existing central and state-level legislations, institutional frameworks, land-use considerations, taxation aspects, and implementation pathways relevant to AgriPV systems in Madhya Pradesh. Importantly, the report also provides practical recommendations and a way forward for developing a supportive regulatory framework that can facilitate wider adoption of AgriPV in the State.

I appreciate the efforts of GIZ India and Infrastructure Development Corporation (Karnataka) Limited (iDeCK), along with all experts and stakeholders who contributed to this study. The Indo-German partnership exemplified through this initiative reflects the collaborative spirit that will drive Madhya Pradesh's clean energy transition

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PREFACE

The transition towards sustainable energy systems requires innovative approaches that address the interconnected challenges of energy security, agricultural productivity, and climate resilience. Agriphotovoltaics (AgriPV), which enables the simultaneous use of land for agriculture and solar power generation, represents one such emerging solution with significant potential for states like Madhya Pradesh. With its strong agricultural economy and abundant solar resources, Madhya Pradesh is well placed to explore and scale integrated energy-agriculture models that can support both rural livelihoods and clean energy goals.

Madhya Pradesh Urja Vikas Nigam Limited (MPUVNL), as the State's nodal agency for renewable energy development, has been actively working towards promoting decentralized and innovative renewable energy solutions across the State. In this context, the *Comprehensive Legal and Feasibility Report on Agriphotovoltaics in Madhya Pradesh* has been developed under the Indo-German Cooperation on Agrivoltaics (IGCA), supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, to assess the enabling ecosystem for AgriPV deployment in Madhya Pradesh.

The report presents a structured assessment of the institutional, legal, regulatory, and policy framework relevant to AgriPV projects in the State. It examines critical aspects such as land-use regulations, electricity sector provisions, permitting requirements, taxation implications, and implementation models, while also analysing practical challenges associated with deployment. The study further highlights the importance of coordinated institutional mechanisms and regulatory clarity to facilitate seamless implementation of AgriPV systems.
Importantly, the report also outlines actionable recommendations and strategic pathways for strengthening the regulatory and policy ecosystem required to enable the effective and large-scale deployment of AgriPV systems across the State.

I appreciate the efforts of GIZ and iDeCK in preparing this comprehensive study. I hope this publication will serve as a valuable resource for policymakers, regulators, developers, researchers, and practitioners engaged in advancing sustainable energy and agriculture solutions, and will support the development of a robust AgriPV ecosystem in Madhya Pradesh.

(Amanbir Singh Bains)
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TABLE OF CONTENTS

Table of Contents **1**
List of Tables **2**
Abbreviations **3**
Executive Summary **5**

1. CONTEXT SETTING **7**
1.1. Understanding Concept of Agriphotovoltaics 7
1.2. Scope and objectives of the study 10

2. INSTITUTIONAL FRAMEWORK ON AGRI-PV **12**
2.1. Mapping institutional set-up at Centre and State 12

3. ASSESSMENT OF LEGAL AND REGULATORY FRAMEWORK ON SOLAR POWER SECTOR **17**
3.1. Assessment of Legislations and Regulations at Centre 17
3.2. Assessment of Legislations and Regulations at State 26

4. ASSESSMENT OF OTHER RELATED LEGAL FRAMEWORK ON AGRI-PV **30**
4.1. Madhya Pradesh Land laws and Agri-PV Projects 30
4.2. Taxation Laws and Agri-PV Projects 34
4.3. Enabling framework for business facilitation in MP 38

5. POLICIES ON AGRIVOLTAICS AND RENEWABLE ENERGY, FOCUSSING ON VNM **39**
5.1. Concept of virtual net metering 39
5.2. Relevant legal and regulatory frameworks for VNM 39

6. FEASIBILITY OF INSTALLING ARIVOLTAICS PLANT UNDER RESCO MODEL **41**
6.1. RESCO Model 41
6.2. Relevant legal and regulatory frameworks 41

7. PERMITS AND LICENSES FOR AGRI-PV PROJECT **44**
7.1. Permits and licenses 44

8. LEGAL BARRIERS FOR AGRI-PV PROJECT **50**
8.1. Legal Barriers 50

9. Key Recommendations and Way Forward **53**

Annexure I 55
Annexure II 56
Annexure III 57
References 62

LIST OF TABLE

Table 1: Business models of Agri-PV system....10
Table 2: Key roles and responsibilities of institutions at Centre....13
Table 3: Key roles and responsibilities of institutions at State....15
Table 4: Key provisions of Electricity Act, 2003 and its applicability in the context of Agri-PV....17
Table 5: Various Components under PM-KUSUM....22
Table 6:Other Schemes and Programes to promote solar generation....24
Table 7: Provisions under Decentralised Renewable Energy Systems Policy, 2016....27
Table 8: Incentives and benefits under MP Renewable Energy Policy 2025....29
Table 9 : Provisions under Madhya Pradesh Land Revenue Code 1959....30
Table 10: Provisions under Madhya Pradesh Ceiling on Agricultural Holdings Act, 1960....33
Table 11: Ceiling on land ownership under MP Ceiling on Agricultural Holdings Act, 1960....33
Table 12: Provisions under Income Tax Act, 1961....35
Table 13: Implementing models and tax implications....36
Table 14: Provisions under Goods and Service Tax Act, 2017....37
Table 15: List of permits and licenses....40
Table 16: Key Features of Virtual Net Metering (VNM)....41
Table 17: RESCO model Core stakeholder structure....41
Table 18: Key Provisions under MNRE operational guidelines (2024–27)....42
Table 19: State Specific Regulations for RESCO model....43
Table 20: RESCO key enablers and challengers....44

ABBREVIATIONS

Agri-PV	Agriphotovoltaics or Agrivoltaics
AIF	Agriculture Infrastructure Fund
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CTU	Central Transmission Utility
CFA	Central Financial Assistance
CPCB	Central Pollution Control Board
DARE	Department of Agricultural Research and Education
DISCOM	Distribution Company
EPC	Engineering, Procurement and Construction
FPO	Farmer Producer Organizations
FLS	Feeder Level Solarization
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GW	Gigawatt
GST	Goods and Service Tax
IGEF	Indo-German Energy Forum
GNM	Group Net Metering
IPS	Individual Pump Solarization
IREDA	Indian Renewable Energy Development Agency
MNRE	Ministry of New & Renewable Energy
MoP	Ministry of Power
MoAFW	Ministry of Agriculture & Farmers Welfare
MP	Madhya Pradesh
MPERC	Madhya Pradesh Electricity Regulatory Commissions
MPPMCL	MP Power Management Company Ltd
MPUVNL	Madhya Pradesh Urja Vikas Nigam Ltd
MPPTCL	MP Power Transmission Company Ltd
MW	Megawatt
NLDC	National Load Dispatch Centres
NSM	National Solar Mission
PV	Photovoltaic
PPA	Power Purchase Agreement
PM-KUSUM	Pradhan Mantri KisAN Urja Suraksha evam Utthaan Mahabhiyan
PM-KMY	Pradhan Mantri Kisan MaanDhan Yojana
PM FBY	Pradhan Mantri Kisan Bima Yojana
PM-KISAN	Pradhan Mantri Kisan Samman Nidhi
RLDC	Regional Load Dispatch Centres
RESCO	Renewable Energy Service Company
RECs	Renewable Energy Certificates
RPO	Renewable Purchase Obligations
SERCs	State Electricity Regulatory Commissions
SDO	Sub-Divisional Officer
SECI	Solar Energy Corporation of India
SPV	Special Purpose Vehicle

VNM	Virtual Net Metering
VGF	Viability Gap Funding
WUA	Water User associations

EXECUTIVE SUMMARY

The growing global demand for sustainable and clean energy has positioned solar power as a central component of the renewable energy transition. However, with increasing land constraints, there is a need for innovative models that optimize land use while enabling energy generation. Agriphotovoltaics (Agri-PV) - the integration of solar photovoltaic systems with agricultural activities - offers a sustainable dual-use solution by allowing simultaneous food production and renewable energy generation. Emerging as a promising alternative in India, Agri-PV aligns with national goals of clean energy expansion and rural development. In this context, the report provides an overview of the existing legal and policy framework governing Agri-PV in India, while examining key challenges and regulatory gaps affecting its implementation and growth.

Chapter 1 introduces the concept of Agri-PV, which integrates solar power generation with agricultural activities on the same land to enhance productivity and sustainability. It underscores the current absence of standardized definitions or guidelines for Agri-PV in India and emphasizes the need for a clear national framework tailored to local agricultural and climatic conditions. The chapter also draws on international practices from countries such as Germany, France, and Italy, where definitions prioritize agriculture as the primary land use and incorporate parameters such as solar capacity limits, minimum agricultural area, permissible yield loss, structure height, and crop or land restrictions. The chapter also introduces the different types of Agri-PV systems, the key benefits and challenges and various commonly adopted business models to implement Agri-PV project.

Chapter 2 outlines the institutional framework governing Agri-PV projects, which stands at the intersection of the energy and agriculture sectors. The chapter identifies multiple institutions at the central and state levels to facilitate effective policy development and implementation. It maps the key agencies and their respective roles across both sectors to establish a clear understanding of the institutional ecosystem relevant to Agri-PV development.

Chapter 3 outlines the legal and regulatory framework governing the solar power sector in India, emphasizing that electricity is a subject under the Concurrent List, enabling both Central and State Governments to legislate on it. It highlights the key provisions under the Electricity Act, 2003, which serves as the central legislation providing the overarching framework for electricity governance, policy, and regulation, from the Agri-PV context. The chapter further discusses key national initiatives, particularly the PM-KUSUM Scheme, which serves as the fundamental policy instrument for promoting and regulating Agri-PV projects and other schemes incentivizing agriculture activities and promoting solar power generation to assess the existing policy ecosystem. It also reviews the policy landscape in Madhya Pradesh, noting that the MP Renewable Energy Policy 2025 actively encourages the use of agricultural land for solar installations without compromising agricultural or horticultural productivity, thereby supporting the growth of Agri-PV in the state.

Chapter 4 examines the broader legal and policy framework relevant to Agri-PV projects beyond the energy sector, focusing on critical areas such as land use, land conversion and taxation. It highlights that, alongside renewable energy regulations, these allied domains significantly influence the legality, feasibility, structuring, and implementation of Agri-PV initiatives. The chapter outlines key legislations governing land conversion, land revenue, and taxation, analyzing their implications for Agri-PV deployment. It emphasizes the need for greater legal clarity and alignment between energy and land use regulations to facilitate smooth adoption and scalability of Agri-PV projects in India.

Chapter 5 and 6 examines the feasibility of installing Agri-PV plant with the provision of virtual Net Metering and under RESCO model respectively from the legal perspective and give understanding about the legal and policy framework in this regard.

The implementation of Agri-PV projects in Madhya Pradesh involves navigating a multi-layered approval process under both central and state legal frameworks. In the absence of a dedicated policy or regulatory framework for Agri-PV, the approvals and permits applicable to conventional solar projects such as approval for grid connectivity, laying down transmission line etc. are presently followed. Given that Agri-PV projects combine renewable energy generation with agricultural land use, they are additionally governed by land and environmental regulations. Key requirements in this regard include obtaining land diversion approval under the Madhya Pradesh Land Revenue Code, as well as securing environmental and local authority clearances.

Chapter 7 lists our various permits and approvals specific to Agri-PV projects.

Chapter 8 examines the legal and regulatory challenges affecting the implementation of Agri-PV projects in Madhya Pradesh. It highlights that while Agri-PV offers dual advantages of renewable energy generation and agricultural continuity, the existing regulatory framework has not yet evolved to address its hybrid nature. While at the central level, key issues relates to taxation ambiguities, at the state level, challenges arise from land diversion procedures, dual use land classification, mechanism for tariff determination etc. Collectively, these gaps increase procedural complexity and uncertainty for stakeholders, underscoring the need for a dedicated and streamlined regulatory approach to facilitate wider adoption of Agri-PV projects.

Chapter 9 which is a concluding chapter provides recommendation based on the assessment of legal and regulatory ecosystem of Agri-PV and suggests way forward.

1. CONTEXT SETTING

1.1. UNDERSTANDING CONCEPT OF AGRIPHOTOVOLTAICS

1.1.1. WHAT IS AGRIPHOTOVOLTAICS/AGRIVOLTAICS

As the global demand for sustainable and clean energy continues to grow, solar power has positioned itself as one of the most promising and widely adopted renewable energy sources. While traditional land-based solar photovoltaic (PV) plants have proven to be effective in generating electricity, given the finite nature of the land, the need for exploring new and innovative way of generating energy using solar with optimum land utilization has gained importance. This has led to various innovative methods of solar power generation such as Floating PV, Canal Top PV, Rail/Road Integrated PV and Building Integrated PV /Urban PV. One such innovative approach is Agriphotovoltaics also known as Agrivoltaics (Referred in this report as "Agri-PV") that involves the co-location of solar photovoltaic panels with agricultural activities on the same area of land to maximize productivity and sustainability. This is achieved by installing solar photovoltaic panels above or alongside crops in a way that allows sunlight to be shared between food production and electricity generation and farmers can continue cultivating crops while earning additional income from solar energy.

Beyond the broad definition of "simultaneous use of land for agriculture and solar PV power generation," there are no standards and definitions for agrivoltaics in India. Considering global perspectives and local needs, Agri-PV is defined in the document published by Centre of Excellence Agri-PV in India, New Delhi as follows;

A few of the countries like Germany[1], France[2], Italy[3], etc. that have adopted a definitions give emphasize on the primary use of land for agriculture purpose and secondary for electricity production through their definitions. The definition and standards adopted by most of these courtiers ensures that the use of land dedicated to agriculture is not adversely affected due to Agri-PV installation. Further thereto, the definitions and standards of Agri-PV are arrived by most of the countries considering other parameters including but not limited to solar capacity (Min and Max), minimum compulsory area under agriculture, maximum allowed yield loss, height of the structure, crops that are restricted, land restricted etc. The standards adopted in Germany specifies that the reduction in cultivable area should not exceed 5% for overhead PV systems and 10% for interspace PV systems. Similarly, guidelines issued by France classifies and evaluates agrivoltaic projects based on three principal criteria: support to agricultural production, impact on productivity, and effect on farm income[4].

As such though various countries have defined Agri-PV in different ways, the underlying concept remains the same, i.e to optimize the land use by generating electricity and food together.

"The simultaneous production of electricity and crop on the same piece of cultivable land, ensuring the efficient dual use of cultivable land."

[1] Defines Agrivoltaics as the combined use of one and the same land area for agricultural production as the primary use, and for electricity production by means of a PV system as a secondary use.

[2] Defines Agrivoltaics as a PV systems installed on agricultural land that provide multiple benefits without significantly reducing agricultural yield or income

[3] Defines Agrivoltaics as a hybrid systems for agricultural and energy production, that do not adversely affect the use of land dedicated to agriculture.

[4] Source: Agrivoltaics in India, challenges and opportunities of India, IISD Report

1.1.2. TYPE OF AGRI-PV SYSTEM

Diverse climate, agricultural practices, and land use patterns in India necessitate a customized approach for implementing Agri-PV systems. A clear classification of Agri-PV types helps the concerned stakeholders in selecting the most suitable systems for different regions. Classification of Agri-PV systems are preliminarily based on the installation type, panel arrangement (i.e panels installed at elevation, interspersed between crops, integrated into greenhouses crops etc. as shown in the picture below which may be placed horizontally, tilted or having dynamic effect depending on the agricultural activity/type of crop and climate) and interaction level.

Elevated panels for crops

Panels interspersed between crops rows

Panels integrated into greenhouses crops rows

1.1.3. BENEFITS AND CHALLENGES FOR IMPLEMENTATION OF AGRI-PV PROJECTS

The integration of agriculture activity and energy production offers several advantages that contribute to sustainable development. This system of co-existence of agriculture and power generation has many challenges. Few of the key benefits and the challenges in this regard are captured in the Table below;

Benefits

1. **Land-use efficiency:** By combining solar energy production with agricultural practices, agrivoltaics maximizes land productivity
2. Farmer income diversification: Offers economic advantage by diversifying income stream i.e income through agriculture activity and sale of electricity
3. Environmental sustainability: Contributes to environmental sustainability by promoting renewable energy production and reducing greenhouse gas emissions
4. Sustainable energy: Help mitigate climate change and reduce dependence on nonrenewable resources and thereby supports renewable targets without displacing farmland.

Challenges

1. Crop compatibility: Not all crops grow well under shaded conditions.
2. High initial cost: AgriPV Structures are likely to be more expensive than ground-mounted solar.
3. Policy/regulation issues: Lack of clear guidelines, land-use policies, and subsidies specific to agrivoltaics may lead to ambiguity and delay in project approvals.
4. Bankability: Banks and investors may view AgriPV as a higher-risk sector due to limited track record.

1.1.4. OWNERSHIP OF AGRI-PV SYSTEM

Depending on the adopted business models, the implementation of the Agrivoltaic project may take different forms. Few of such general business models prevalent in this regard are discussed below;

Farmer owned Model

Individual farmers. independently invest and own both land and Agrivoltaics plants on their own land. Financing is secured through a combination of loans, equity and grant, either from financial institutions, government schemes, or private investors. Revenue is generated through the sale of electricity to distribution companies and through the sale of agricultural produce.

Lease based solar developer model

Solar developers/companies lease or rent portions of farmland from farmers to install and manage Agrivoltaics plants. Developer will own the Agrivoltaics plant and generates revenue from sale of electricity. Revenue to the farmer from lease rent and through sale of agricultural produce (Land ownership remains with farmers). This model suits in the areas where optimizing land use is crucial.

Community owned Model

A group of farmers or Farmer Producer Organizations (FPOs) collectively installs and owns Agrivoltaics plants on the land aggregated from such group of farmers (members of the FPO). The FPO manages the project, including securing finance, overseeing installation, and managing operations. Revenue generated from electricity sales and agricultural produce is shared among participating farmers, as per predefined profit-sharing models.

Joint Venture Model

Both farmer and Developer partner with each other to put the land on optimum utilization. The Developer manages Agri-PV plant operation and investment, while the farmer continues undertaking agriculture activities. Profit generated from the operation of Agri-PV plant and from agriculture activities are shared between the developer and farmer as per pre-agreed percentage of sharing, creating mutual benefits for both the Parties.

DISCOM owned Model

Electricity distribution companies take the initiative to install and operate Agrivoltaics plants by leasing land from farmers. The DISCOMs are responsible for financing, installing, and managing the Agrivoltaics plants. Farmers receive lease rent and holds control over the cultivation and sale of agricultural produce.

Table 1: Business models of Agri-PV system

Business Models	Ownership		Financing for AgriPV	Revenue		
	Land Ownership	AgriPV ownership		Agriculture produce	Lease Rent	Energy Production
Farmer owned model	Farmer	Farmer	Farmer	Farmer	NA	Farmer
Lease based developer model	Farmer	Developer	Developer	Farmer	Farmer	Developer
Community Owned Model	FPO	FPO	FPO	FPO	NA	FPO
Joint Venture Model	Farmer/shared ownership	Farmer/shared ownership	Developer	Shared by Farmer & Developer	NA	Shared by Farmer & Developer
DISCOM Owned model	Farmer	DISCOM	DISCOM	Farmer	Farmer	DISCOM

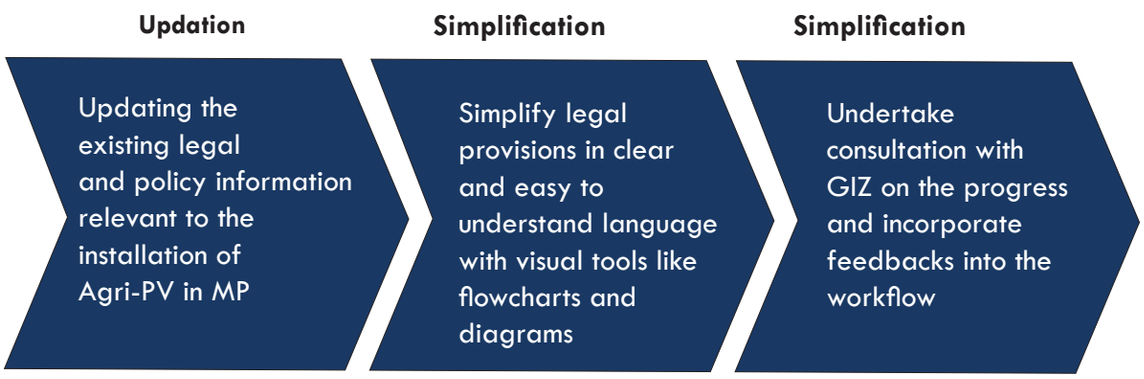
1.2 SCOPE AND OBJECTIVES OF THE STUDY

Government of India had set an ambitious target of achieving 100 GW of solar capacity in the year 2022. Of this targeted capacity of 100 GW, about 40 GW is expected to be achieved from solar rooftop installations and the remaining 60 GW is targeted to be from utility-scale ground-mounted PV. Considering the pressing need to optimize limited land resources, Agri-PV installations are increasingly recognized as a viable alternative to utility-scale ground-mounted PV projects for meeting renewable energy targets.

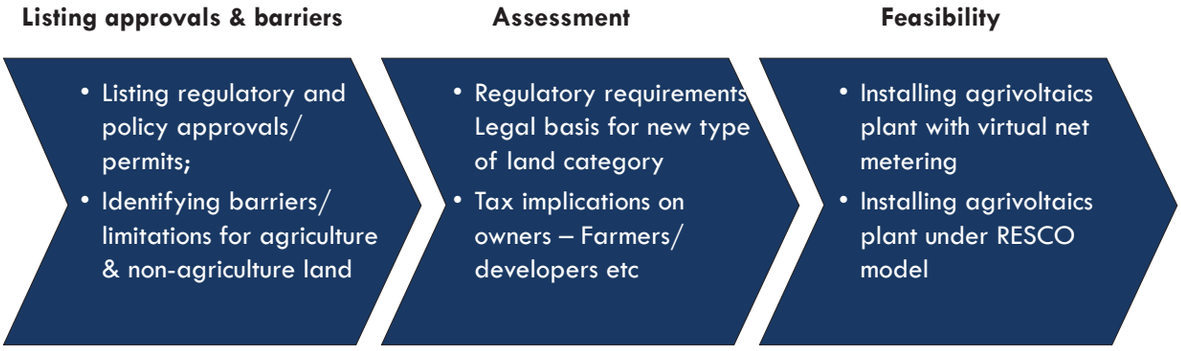
Indo-German Energy Forum ("IGEF") which is a part of the German development agency GIZ contributed in the ongoing effort of Government of India to bring in energy transition in India in relation to Agri-PV projects. As part of this IGEF has published a report viz. **"Legal aspects of Agriphotovoltaics in India"** advising on specific queries relating to solar power projects and Agri-PV projects in India from legal and regulatory perspective. The report covers the study of legal and regulatory framework for about 11 State of India including State of Madhya Pradesh.

The report "**Legal aspects of Agriphotovoltaics in India**" was prepared and published in March 2022. Considering the recent development in legal and regulatory framework of Renewable Energy, the need for updating the said Publication and undertake feasibility from the legal perspective was felt and in this regard Infrastructure Development (Corporation) Karnataka Ltd. was appointed to undertake following broad scope, divided in two parts.

Part 1 – Review & Update of "Legal Aspects of Agrivoltaics in India" report specific to MP



Part 2 - Legal and Policy Feasibility Study and Recommendation– in the context of State of MP



This report comprises the legal and regulatory framework for installation of Agri-PV projects in the State of MP in a simple and easy to understand structure, while assessing the regulatory requirement, legal challenges and barriers, approvals and permits in the context of implementation of Agri-PV.

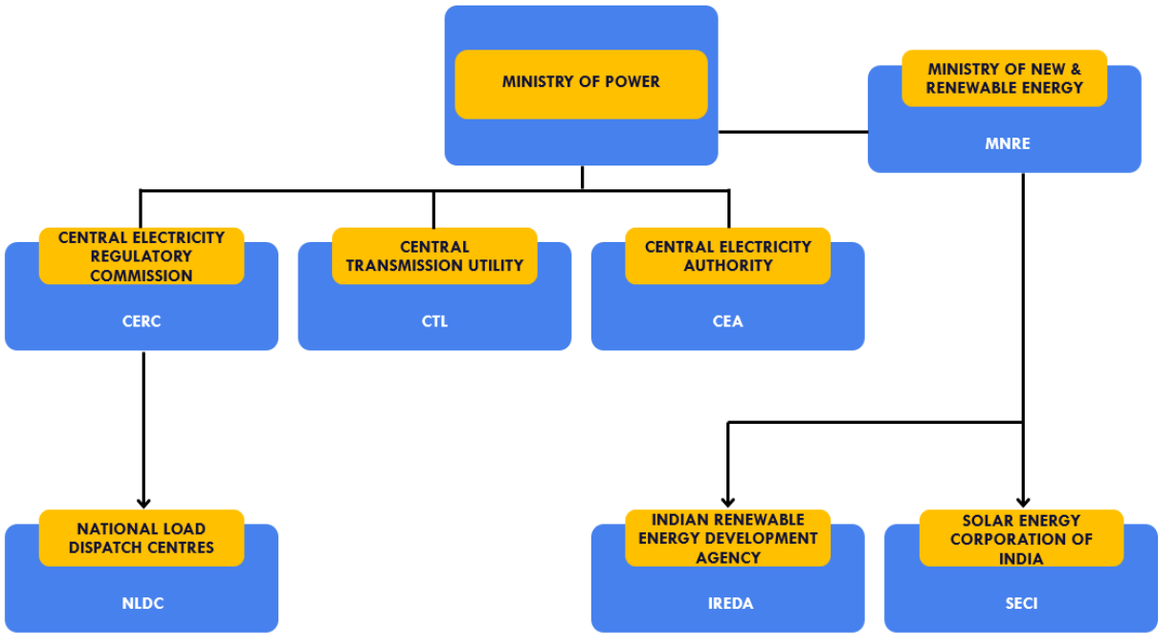
2. INSTITUTIONAL FRAMEWORK ON AGRI-PV

2.1 MAPPING INSTITUTIONAL SET-UP AT CENTRE AND STATE

Agrivoltaics integrate solar energy generation with agricultural land use, so the Agri-PV projects stands at the interface of two sectors — energy and agriculture. As such the governance of Agri-PV primarily falls within the broader framework established for the development of renewable energy on one hand and secondarily under agriculture on the other hand. Accordingly, the institutional architecture that regulates both renewable energy and the agriculture land use extends to the Agri-PV sector.

Considering above, the development of Agri-PV requires close coordination between multiple institutions at the central and state levels. This section provides the institutional framework for both renewable energy sector and agriculture sector[1] in order to identify and understand the key agencies and their respective roles in matters relating to Agri-PV both at Centre and State.

Institutional Set-up on Energy at Centre



[5] Only the Institutional framework relevant from implementation of Agri-PV projects points of view are captured in the report.

Institutional Set-up on Agriculture at Centre

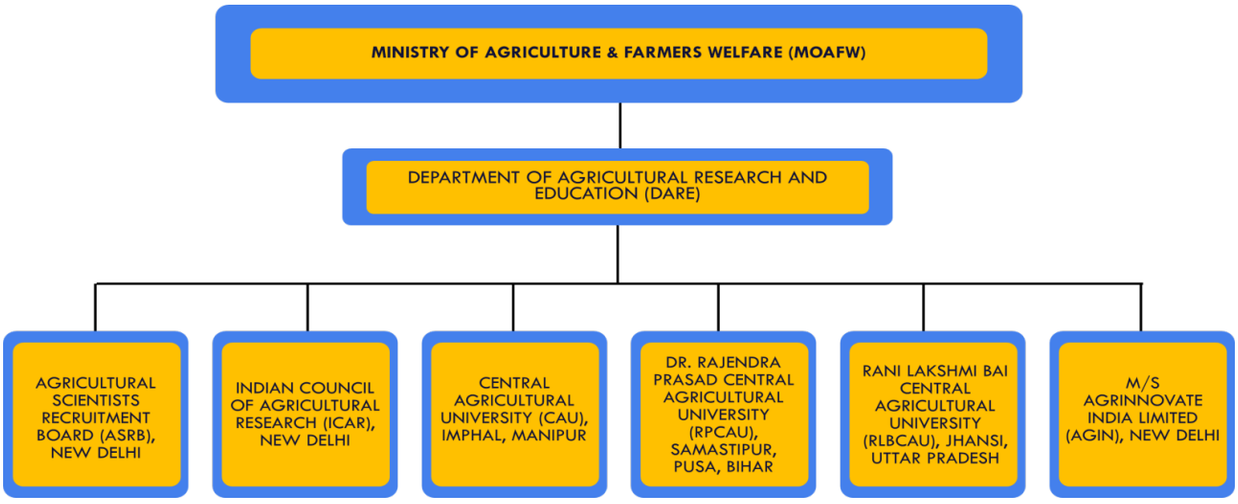


Table 2: Key roles and responsibilities of institutions at Centre

Institution	Key Roles and Responsibilities
Ministry of Power	• Ministry of Power is responsible for the development of energy sector in India and is entrusted with administration of Electricity Act
Ministry of New & Renewable Energy (MNRE)	• Nodal ministry of the GoI for all matters relating to new and renewable energy including Agri-PV. • Responsible to co-ordinate with State nodal agencies on new and renewable energy sector related matters. • Responsible for policy formulation in the matter relating to Renewable Energy – Issued guidelines and schemes such as PM-KUSUM, Grid Connected rooftop solar Programme, Development of Solar Parks and Ultra Mega Solar Power Projects etc. • Notifies standards and quality control for solar modules/equipment. • Facilitates research, design, development, manufacturing, and deployment of renewable energy systems and devices • Identifies priority areas for renewable energy deployment in line with national energy security and self-reliance goals. • Formulates strategies to promote the use of indigenously developed and manufactured renewable energy technologies.
Central Electricity Regulatory Commission (CERC)	• Constituted under Section 76 of the Electricity Act. • Determines tariff of generating companies engaged in generation and selling of electricity in more than one state. • Regulates inter-state transmission of electricity, and specifies grid code and grid standards, amongst others. • Regulates tariffs of central generating stations (like NTPC, NHPC) and inter-state transmission of electricity. • Regulates inter-state electricity trading and issues trading licenses. • Decides open access rules at inter-state level, frames regulations for power markets (e.g., power exchanges). Adjudicates disputes between generating companies and transmission licensees in inter-state matters.

Solar Energy Corporation of India (SECI)	• Central implementing / auctioning agency. • Power trader for many central tenders. • Implements/coordinates central tenders and PM-KUSUM competitive bids (SECI is often the implementing agency for PM-KUSUM components). • Developers interact with SECI for bid/award.
Central Electricity Authority (CEA)	• Advises GoI on the National Electricity Policy • Prepares short-term and long-term plans for the development of the electricity system. • Coordinates planning agencies to ensure optimal use of resources in line with national economic interests. • Provide Technical standards & codes for generation, transmission, and distribution of electricity. • Issues grid connectivity standards for solar PV (including hybrid/Agri-PV plants).
Central Transmission Utility (CTU): **(Power Grid Corporation/ Central Transmission Utility of India Limited)**	• Handles transmission of electricity through inter-state transmission system • Responsible for planning and coordination of matters relating to inter-state transmission system, state transmission utilities, central and state governments, and other stakeholders.
National Load Dispatch Centres (NLDC):	• Ensures optimum scheduling and dispatch of electricity among the regional load dispatch centres.
Regional Load Dispatch Centres (RLDC):	• Responsible for dispatch of electricity within regions and monitoring grid operations. • The directions given by RLDCs are binding on the transmission licensees, generating companies, generating stations and sub-stations and other person connected with the operation of the power system.
Indian Renewable Energy Development Agency (IREDA)	• IREDA, a Navaratna company under the administrative control of MNRE is a Public Financial Institution engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy and energy efficiency/conservation
Ministry of Agriculture & Farmers Welfare (MoAFW)	• Prepare Agriculture policy (including policies on land use and crop) • Provide Farmer support & subsidies.
Department of Agricultural Research and Education (DARE)	• Coordinates and promotes agricultural research and education in the country • Nodal agency for international cooperation in agricultural research and education in India • Six premier agricultural organizations of the country comes under the administrative control of this Department viz. (i) Agricultural Scientists Recruitment Board (ASRB), New Delhi, (ii) Indian Council of Agricultural Research (ICAR), New Delhi, (iii) Central Agricultural University (CAU), Imphal, Manipur, (iv) Dr. Rajendra Prasad Central Agricultural University (RPCAU), Samastipur, Pusa, Bihar, (v) Rani Lakshmi Bai Central Agricultural University (RLBCAU), Jhansi, Uttar Pradesh, (vi) M/s Agrinnovate India Limited (AGIN), New Delhi
Indian Council of Agricultural Research	• Premier research organization responsible for coordinating, guiding, and managing research and education in agriculture throughout the country.

Institutional Set-up on Energy at State

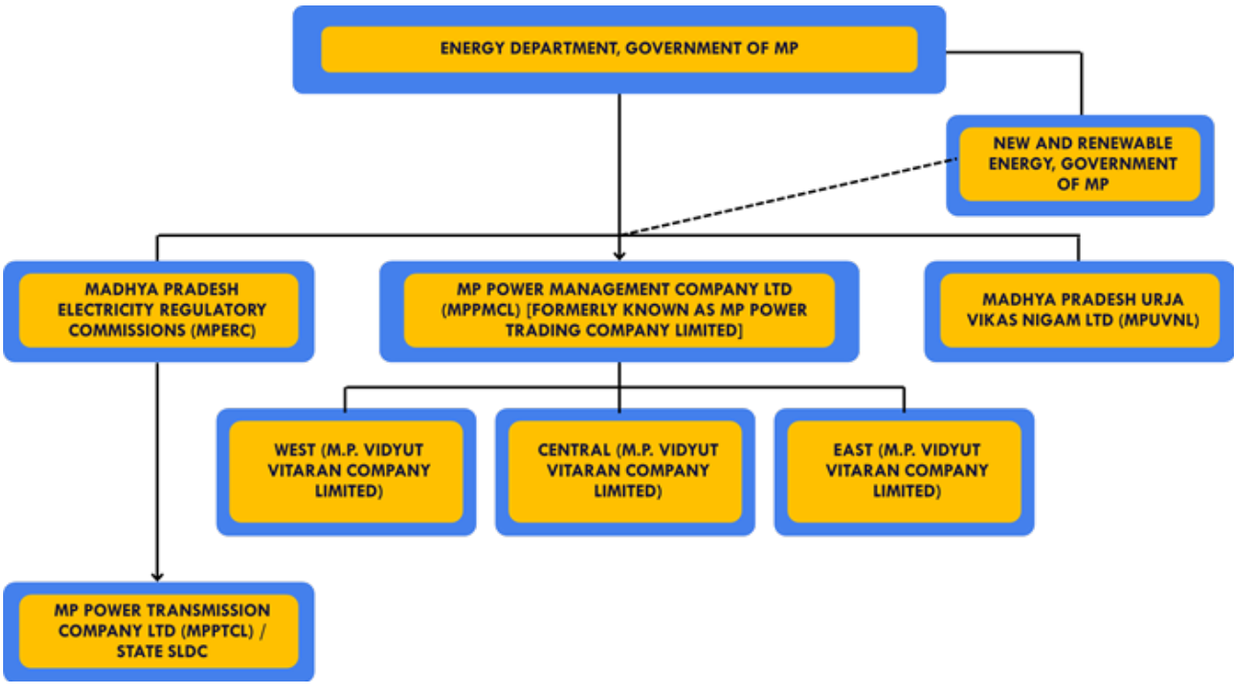


Table 3: Key roles and responsibilities of institutions at State

Institution	Key roles and responsiblities
Energy Department, Government of MP	Formulates power-related policies, exercises administrative control, and ensures the efficient distribution of electricity. Promotes conventional energy sources
New and Renewable Energy, Government of MP	Responsible for all the matters connected with implementation of solar power based projects developed in the State of MP It is the nodal agency for renewable energy policy implementation, attracting investment, promoting the manufacturing of renewable energy equipment, and developing and deploying renewable energy projects to achieve its energy goals.
Madhya Pradesh Electricity Regulatory Commissions (MPERC)	Constituted under Section 82 of the Electricity Act Determines tariff for generation, supply, transmission and wheeling of electricity within the state, Regulates purchase and procurement process of electricity by distribution licensees, including price at which the electricity is to be procured from generating companies or other sources through power purchase agreements for distribution and supply of electricity within the state Facilitates intra-state transmission and wheeling of electricity
MP Power Management Company Ltd (MPPMCL) **[Formerly known as MP Power Trading Company Limited]**	Serves as the holding company for all three state distribution companies (DISCOMS). Responsible to manage the procurement and sale of power for the state (procures power on behalf of the three DISCOMs).

Madhya Pradesh Urja Vikas Nigam Ltd (MPUVNL)	Nodal agency for implementing various programs and policies for the renewable energy sector including policies and schemes on Agri-PV. Responsible to promote and create awareness about the uses of RE including solar/Agri-PV and energy efficient products based various technologies among the public. Responsible to promote policies and programs necessary for popularizing the applications of various new and renewable energy technologies in the State. Implementing agency for PM-KUSUM / feeder solarisation schemes in the State.
MP Power Transmission Company Ltd (MPPTCL) / State SLDC	Manages power transmission and load dispatch across the state.
DISCOMS segregated zonal wise for East, West and Central regions (M.P. Vidyut Vitaran Company Limited)	Responsible for distribution of power to consumers through a comprehensive distribution network, in their respective zone. Enforce MPERC regulations on grid integration, net metering, and energy accounting. Executes PPAs with farmers/developers under PM-KUSUM and state schemes. Handle billing, payments, and compliance for distributed solar/Agri-PV generation.
Chief Electrical Inspector	Responsible to ensure adhere to the prescribed safety standards and safe operation of power projects. Grants approvals for drawings and designs of the project during the construction phase Grants a charging/energizing certificate to the developer upon installation of system.
Revenue Department	Implementation of various provisions of M.P. Land Revenue Code 1959 Act. – Regulates land conversion permissions Implement land reforms to safeguard the interest to weaker and most downtrodden sections of the people Implementation of various schemes for strengthening the revenue administration.
Department of Farmer Welfare and Agriculture Development	The focus of the Department is to increase the production and productivity of agricultural crops in the State, land and water management, expansion of minor irrigation program and to increase the income of farmers by practicing developed agricultural techniques to the fields.

3. ASSESSMENT OF LEGAL AND REGULATORY FRAMEWORK ON SOLAR POWER SECTOR

The subject of "Electricity" is provided under the Concurrent List of the Constitution of India (Entry 38, List III, Schedule VII). This enables both the Central Government and the State Governments to exercise legislative and regulatory powers over matters relating to electricity.

At the central level, the Electricity Act, 2003 establishes the overarching framework for the governance of electricity, laying down the fundamental principles, objectives, and regulatory mechanisms for the sector. States, in turn, are empowered to legislate and formulate policies and guidelines on electricity within their jurisdiction. However, such state-level legislations and policies are required to remain consistent with the framework prescribed under the Electricity Act, 2003, thereby ensuring uniformity and coherence in the governance of the electricity sector across the country.

3.1. ASSESSMENT OF LEGISLATIONS AND REGULATIONS AT CENTRE

3.1.1. ELECTRICITY ACT 2003

Electricity Act, 2003 is the principal law that governs the generation, transmission, and distribution of electricity in India. The Act is supplemented by rules, regulations, and policies issued by the Ministry of Power ("MoP"), Ministry of New and Renewable Energy ("MNRE"), the Central Electricity Regulatory Commission (CERC), and State Electricity Regulatory Commissions (SERCs), including the Madhya Pradesh Electricity Regulatory Commission (MPERC). Key provisions in the Electricity Act relevant from governance of renewable energy sector and its applicability in the context of Agri-PV projects are discussed in the table below;

Table 4: Key provisions of Electricity Act, 2003 and its applicability in the context of Agri-PV

Coverage	Relevant Section	Description	Applicability for Agri-PV Projects
Generation of electricity is a de-licensed activity	Section 7 & Section 10	Generating companies can establish and operate power plants without license.	• This enables private players such as individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organizations (FPO)/ Water User associations (WUA)/ Government agricultural institute or other agriculture related institutions as well as Developers to set up Agri-PV plants without a license, subject to compliance of technical standards relating to construction of electrical plant, electric lines and connectivity with the grid prescribed by Central Electricity Authority.

De-licenses the decentralized generation and distribution of electricity in notified rural area	Proviso to Section 14	No license required for decentralized generation and distribution in the notified rural areas.	• This clause exempts local generation and distribution of electricity in rural areas (notified by the State Government) from the usual licensing requirement under the Electricity Act. As such promotes decentralized renewable energy generation and distribution, including electricity from solar and hybrid systems — such as those used in Agri-PV projects • Where so notified by the State, this clause enables distribution or selling of the power generated from Agri-PV plant locally (within the village or group of villages so notified) without the cumbersome process of obtaining a power distribution licence. This makes community-based Agri-PV projects legally and administratively feasible. • Eg. An individual farmer in a notified rural area installs 500 kW of Agri-PV and supplies power to local cold storage, irrigation pumps, or nearby houses. No distribution licence is required — only compliance with safety and technical norms under as specified by CEA would be required.
Captive & Decentralized Generation	Section 9	Allows any person to construct, maintain, or operate a captive generating plant.	• The captive generation provision allows farmers, FPOs, etc., to legally set up Agri-PV systems for their own use, - reducing electricity costs, improving land utilization, and promoting decentralized renewable energy in agriculture.
Open Access	Section 42	Provides for open access to transmission and distribution networks.	• Enables solar developers to sell power directly to consumers - Agri-PV project developers can sell electricity directly to industrial, commercial, or institutional consumers using the open access network, instead of relying solely on DISCOMs. • This improves financial viability of the Agri-PV Project by allowing better tariffs than conventional feed-in options.

Trading of Renewable Energy	Section 66	Supports trading of Renewable Energy Certificates (RECs) for surplus Agri-PV energy and thereby promotes the development of a power market.	• Enables solar energy trading via Renewable Energy Certificates (RECs). • This clause enables Agri-PV projects to earn additional revenue. Every unit of green power generated through Agri-PV plant earns RECs, which is could be traded under this clause to enhance and improve project returns. • Even a small sized Agri-PV projects connected to the grid can participate indirectly in the renewable energy market, linking rural producers with national buyers obligated to meet Renewable Purchase Obligations
Solar-friendly tariff regulations	Section 61(h)	Obligates CERC to promote cogeneration and generation from renewable energy sources.	• Since Agri-PV uses solar photovoltaic technology, it falls directly under the category of renewable energy generation that regulators are legally bound to promote under this Clause. • This Clause has resulted in regulations providing preferential tariffs, to promote solar and other renewable projects. • The CERC's guiding role encourages states to develop supportive policies and incentives for Agri-PV as part of their renewable energy promotion strategies.
Determination of Tariff	Section 86(1)(a)	Provides for determination of tariff for generation and supply of electricity by the SERCs within the state, and thereby empowers state-level tariff setting for solar PPAs by SERCs.	• This Section along with Section 61(h) above, enables CERC/ MPERC to frame preferential tariff regulations for solar projects, making Agri-PV projects financially viable for farmers and developers.
Renewable Purchase Obligations (RPOs)	Section 86(1)(e)	Requires SERCs to specify a percentage of total consumption of electricity to be procured from renewable sources (including solar).	• This provision act as a Core driver for state-level solar deployment mandating DISCOMs to purchase a portion of power from renewable sources such as solar power. • Agri-PV power thus qualifies to meet these RPO targets, ensuring a stable market for its electricity output.

Grid Connectivity & Standards	Section 73 & 177	Central Electricity Authority (CEA) is empowered to specify technical standards for construction of electricity plants, electricity lines, grid connectivity, metering and safety of power systems.	• Agri-PV systems, often feed power into the distribution grid or agricultural feeders. CEA's standards ensure that such grid connections are safe, stable, and compliant with national technical norms. • CEA norms ensure that the grid remains stable and protected even with the injection of intermittent solar power from multiple small-scale Agri-PV systems in rural areas. • The CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007 lay down standards for grid connectivity which essentially regulate technical standards and conditions for electricity generating systems for integration into the grid. Additionally, CEA has also framed regulations pertaining to the following matters: • Grid standards for operation and maintenance of transmission lines; • Measures relating to safety and electricity supply; • Technical standards for construction of electrical plants and lines; • Safety requirements for construction, operation and maintenance of electrical plants and lines; • Technical standards and other requirements for installation and operation of electricity meters.
Role of Regulatory Commissions	Section 79 and 86	The clauses Empowers CERC and SERC to regulate matters relating to power sector.	• Empowers CERC and SERC to regulate tariff for generation, transmission, and trading of electricity from renewable projects (including large solar) respectively for interstate and intra-state.

Agrivoltaics is still a nascent practice with evolving technology, designs, and standards in India. It is still limited to a handful of pilots and has not yet reached a commercial scale. However, as is discussed in the table above, the Electricity Act, 2003, and associated regulations support Agri-PV projects in India.

3.1.2 GOVERNMENT SCHEMES AND GUIDELINES ON DEVELOPMENT OF SOLAR POWER

Over the years, the Government of India has been actively promoting development of solar power in the country through various policy interventions and schemes. The flagship initiatives in this regard includes the National Solar Mission, and the Pradhan Mantri KUSUM Scheme, PM Surya Ghar: Muft Bijli Yojana. These schemes provide financial incentives, subsidies, and viability gap funding to promote solar projects. Together, these schemes and guidelines also aims at delivering clean energy, improve farmer incomes, strengthen rural

infrastructure, and advance India's renewable energy targets in a sustainable manner. Though these schemes are not specifically designed for Agri-PV Projects, a few of these schemes especially the PM KUSUM Scheme (Component A) can be leveraged to encourage Agri-PV adoption enabling farmers to generate solar power on their farmland while continuing crop cultivation.

The salient feature of few of the central schemes / incentive programmes that are contributing the growth of solar sector are discussed below;

3.1.2.1. NATIONAL SOLAR MISSION (NSM)

The **Jawaharlal Nehru National Solar Mission (NSM)**, launched on 11 January 2010 and later rechristened as the National Solar Mission, is a flagship initiative of the Government of India aimed at positioning the country as a global leader in solar energy. Initially targeting 20 GW of solar capacity by 2022, the goal was significantly revised in 2015 to 100 GW, comprising 40 GW from rooftop solar and 60 GW from large- and medium-scale grid-connected projects. The Mission envisages a phased approach for implementation through a combination of policy, regulatory, and institutional measures. Its execution is spearheaded by the Solar Energy Corporation of India Limited (SECI), a public sector enterprise under the MNRE, which has been specifically mandated to implement solar projects and drive achievement of the Mission's ambitious targets.

The Mission envisages a **three-phase implementation approach**:

1. **Phase I (2010–2013):** Focused on laying the policy and regulatory foundation, creating awareness, piloting solar technologies, and initiating the first batch of grid-connected projects and rooftop schemes.
2. **Phase II (2013–2017):** Emphasized scaling up through policy incentives, viability gap funding, bundling mechanisms, and competitive bidding to attract private sector investment.
3. **Phase III (2017–2022):** Aimed at achieving grid parity, widespread rooftop adoption, integration of solar with agricultural and rural applications, and large-scale deployment of solar parks.

Beyond capacity addition, the NSM also emphasises research and development, domestic manufacturing of solar cells and modules, human resource development, and international collaboration. The Mission has contributed significantly to bringing down solar tariffs in India, making solar one of the most cost-competitive sources of energy.

3.1.2.2 PRADHAN MANTRI KISAN URJA SURAKSHA EVAM UTTHAAN MAHABHIYAN

The MNRE has been administrating the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) scheme. The Scheme was launched in 2019 by the Government of India consists of three components. The PM-KUSUM scheme primarily aims to promote decentralized solar power generation by offering financial incentives to farmers for setting up solar power plants on their land. However, though this scheme is not explicitly designed for Agri-PV, the features of the scheme offers opportunities to promote dual-use land practices, enabling farmers to generate solar power alongside crop cultivation. However, unlike Agri-PV projects which focuses on the simultaneous use of land for both solar energy generation and agriculture, the PM KUSUM Scheme is focused only on the energy generation and as such do not require installation of solar panels on the fertile land parcels. The solar project under the Scheme thus may be implemented on the barren or uncultivable land, thereby promoting renewable energy generation without disrupting agricultural activities on productive farmland.

The regulatory and policy framework for Agri-PV solar project sector in India is largely derived from the PM KUSUM Scheme. It may be noted that as on date PM KUSUM Scheme as part of Component A (discussed in this section) envisages and provides for only Grid Connected Solar Power Plants of up to 2 MW (AC) capacity.

Agri-PV however naturally fits into the existing PM KUSUM scheme, especially under Component A as installation

of solar panels on any type of land including cultivable land is possible under the scheme. Various components of PM-KUSUM and the salient features thereof are explained in the table below;

Table 5: Various Components under PM-KUSUM

Components	Target	Financial Incentives from Centre and State	Details
Component A:	10,000 MW of solar capacity through installation of small Solar Power Plants of individual plants of capacity upto 2 MW.	• It has a mix of Feed in Tariff and generation-based incentive as follows: • The solar power generated is purchased by DISCOMs at a feed-in-tariff determined by SERC. • DISCOM is eligible to get Performance Based Incentive @ INR 0.40 per unit purchased or INR 6.6 lakh per MW of capacity installed, whichever is less, for a period of five years from the Commercial Operation Date (COD).	The Agri-PV systems of capacity from 500 kW to 2 MW can be setup by individual farmers/ group of farmers/cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA). Where the equity for the Agri-PV system cannot be arranged, the said entities can opt for its development through a third party developers or even the local DISCOM.
Component B:	Installation of 20 lakh standalone Solar Powered Agriculture Pumps.	• Upfront capital support in the form of grant is provided as detailed below; • 30% and 40% of the benchmark cost or the tender cost, whichever is lower, is given as financial assistance by Centre and the State respectively for the stand-alone solar Agriculture pump and the remaining 40% is to be borne by the farmer. • The farmer can also avail the bank loan, in such a manner that only an initial 10% of the cost is borne by the farmer and remaining up to 30% of the cost is taken as loan.	Individual farmers from remote, tribal areas or the areas without grid connectivity can install standalone solar pumps upto the capacity of 7.5 HP for de-dieselization of the agriculture sector.

Component C:	Solarisation of 15 Lakh Grid-connected Agriculture Pumps.	• This has two categories viz., Individual pump solarisation (IPS) and Feeder level solarisation (FLS). Both are supported by upfront capital support from central and state government as detailed below; • In case of Individual pump solarisation, 30% of the benchmark cost or the tender cost, whichever is lower, is given as financial assistance each by Centre and the State for the solar PV component and the remaining 40% is to be borne by the farmer • In case of Feeder Level Solarisation, centre gives 30% of the cost of installation of solar power plant (up to INR 1.05 Cr/ MW) as financial assistance.	Similar like standalone systems under component B, IPS under component C improves the business case for farmers who intend to benefit from net metering and farming. In case of FLS system, the Agri-PV system deployment can be possible only if the land being used for FLS (by the DISCOMS/Developers) is an agriculture land.

Under the PM-KUSUM scheme, states decides the pre-fixed levelized tariff for solar plants, and projects are allocated through reverse tariff bidding. SERCs of various states have notified a single tariff for their state, typically arrived at using the levelized cost calculation method.. This pre-fixed tariff act as a celling tariff for the competitive bidding for all the projects covered under PM-KUSUM A scheme.

However, this state level uniform tariff approach taken under PM-KUSUM scheme may not be suitable for Agri-PV projects, considering that such tariff determination does not consider higher capital costs and land values. Considering factors like capital cost and land value for fixing of tariff in case of Agri-PV systems become very critical as the Agri-PV plants require elevated structures and are often located on productive or peri-urban farmland making such projects capital intensive compared to ground mounted solar plants in remote rural areas. The ground-mounted solar plants are typically installed on barren, low-cost land, as such making them commercially viable under the same tariff. As such, Agri-PV projects face a competitive disadvantage within the current single ceiling tariff framework as it puts both agrivoltaics in a peri-urban area and a ground-mounted solar plant in a remote rural area under the same tariff regime.

This situation underscores the need for differentiated or supportive tariff mechanisms that recognize Agri-PV's dual benefits of renewable energy generation and agricultural productivity. Such mechanisms could be developed through a dedicated scheme specifically designed to promote Agri-PV projects, drawing inspiration from the structure and implementation framework of the PM-KUSUM scheme, but tailored to address the unique technical and economic characteristics of Agri-PV systems.

3.1.2.3. OTHER SCHEMES AND PROGRAMS

While the PM-KUSUM Scheme directly aligns with the concept of Agri-PV by promoting the integration of solar energy generation with agricultural activities, several other Government of India initiatives also focus on accelerating solar energy deployment. However, these schemes offer limited direct opportunities for Agri-PV applications. Nonetheless, understanding these broader solar promotion programs provides valuable context for assessing the policy ecosystem and identifying potential linkages and synergies that could support the future scaling up of Agri-PV in the country.

Table 6:Other Schemes and Programes to promote solar generation

Scheme / Programme	Purpose / Features	Key benefits and other observations
Pradhan Mantri Krishi Sinchayee Yojana: Per Drop More Crop	• The scheme's primary objective is to improve use of water effectively and efficiently in the agricultural activities through various interventions,	• Financial Assistance @ 55% for Small & Marginal farmers and @ 45% for other farmers is provided by the Government for installation of Micro Irrigation under the Scheme. In addition, some States provide additional incentives/top up subsidy for encouraging farmers to adopt Micro Irrigation. • Agrivoltaics can be incorporated with the scheme to achieve multiple benefits of energy generation, improvement in crop yield and water conservation.
Agriculture Infrastructure Fund	• The primary aim of the scheme is to create and enlarge agricultural facilities through improving the value-addition or value-chain to ensure the better returns for the farmers. • To support and provide medium to longterm debt financing for the investment in viable projects or value-added projects for the post-harvesting management infrastructure and community farming capital.	• The scheme aims to create the investment of approximately ₹1 lakh crore (around $13 billion) for the creation of modern agricultural infrastructure and assets. • The scheme was implemented through a combination of interest subvention and credit guarantee in which the government will provide 3% interest subvention and up to ₹2 crores credit guarantees for each project • Recently August 2024, the government has expanded the scope of this fund to make it more attractive, as part of its objective to strengthen farm-related infrastructure facilities in India. One of the steps taken in this regard is to allow the convergence of PM-KUSUM Component A with Agriculture Infrastructure Fund for farmers/ group of farmers/Farmer Producer Organisation/ cooperatives/Panchayats. • Agrivoltaics systems can be considered as part of the community farming asset especially in case of small and marginal farmers, as it provides the community level integration of solar PV with agricultural activities.

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	• PM-KISAN is a central sector scheme launched on 24th February 2019 to supplement financial needs of land holding farmers, subject to exclusions.	• Under the scheme, financial benefit of Rs. 6000/- per year is transferred in three equal four-monthly installments into the bank accounts of farmers' families across the country, through Direct Benefit Transfer (DBT) mode • Eligibility under the scheme depends on being a *landholding farmer* with recorded agricultural land in revenue records. If for Agri-PV purpose, the land is converted to non-agricultural use, there is a risk of farmer losing eligibility, if the land so diverted is the only agriculture land in the name of such farmer. This issue also holds good for schemes such as PM-KMY (Pradhan Mantri Kisan MaanDhan Yojana- Farmer Pension Scheme), PM FBY (Pradhan Mantri Fasal Bima Yojana – Crop Insurance), Soil Health Card (Fertilizer Subsidies), Credit Schemes (NABARD, Agri Loans etc.).
PM Surya Ghar: Muft Bijli Yojana	• The objective is to increase the share of solar rooftop capacity and empower residential households to generate their own electricity • Rooftop solar scheme aims to empower ~1 crore residential households to generate electricity; • Offers subsidy with free power up to 300 units/month and special "Model Solar Village" initiative.	• Provides fixed one-time subsidy; • Scheme outlay ₹75,021 crore for implementation. • Includes component "Model Solar Village": one solarized village per district gets special grant support.
Grid Connected Rooftop Solar Programme	• Initiated by MNRE to achieve a cumulative installed capacity of 40,000 MW from Grid Connected Rooftop Solar projects. • Programe is designed to promote the adoption of solar power in residential, commercial, and industrial sectors by incentivizing the installation of solar panels on rooftops. • This scheme allows consumers to generate their own electricity, feed excess power back into the grid, and potentially reduce their electricity bills	• Provides Central Financial Assistance (CFA) or subsidy. • For example, CFA up to • 40% for systems up to 3 kW; • 20% for systems between 3-10 kW. • For group housing societies, common facilities etc.

Solar Park Scheme	• A solar park is large chunk of land developed with common infrastructure facilities like transmission infrastructure, road, water, drainage, communication network etc. with all statutory clearances. Thus, the solar project developers can set up solar projects hassle-free. • The scheme was rolled out by MNRE to support the States/UTs in setting up solar parks at various locations • Proposed to set up at least 25 Solar Parks and Ultra Mega Solar Power Projects targeting 20,000 MW of solar power installed capacity within a span of 5 years starting from 2014-15. - The capacity of the Scheme was enhanced from 20,000 MW to 40,000 MW on 21-03-2017. These parks are proposed to be set up by 2025-26.	• The CFA up to Rs. 25 lakh per solar park is given for preparation of Detailed Project Report (DPR). • CFA of up to Rs. 20 lakh per MW or 30% of the project cost, including Grid-connectivity cost, whichever is lower, is also provided on achieving the milestones prescribed in the scheme.
Off-grid / Decentralized Solar Applications	• Scheme envisages areas without reliable grid connection: solar pumps, home electrification, solar lighting etc. • This is initiated as part of the National Solar Mission with primary focus to provide energy access solutions in the rural and remote areas. • During Phase-I and Phase-II of the programme main thrust was given on solar lighting, solar water pumps for irrigation and drinking water facilities, solar study lamps for students and mini/ micro-grids. • Phase III targeted to create 118 MWp equivalent solar power capacity by 31.03.2020 through off grid solar PV applications, with improved technology and cost reduction through innovative procurement mechanisms.	• CFA for solar street lights and solar power plants will be 30% of the benchmark cost of the system or the tender cost, whichever is lower (North Eastern States and few other norther states and A&N Islands gets CFA of 90%). • For Solar Study Lamps CFA of 85% of the lamp cost will be provided and balance 15% of the lamp cost will be borne by beneficiary student.

3.2 ASSESSMENT OF LEGISLATIONS AND REGULATIONS AT STATE

The evolution of solar policy in Madhya Pradesh reflects a progressive shift from project facilitation to an integrated renewable energy framework. The State's first solar policy (2012–2014) focused on attracting investment through land facilitation and competitive bidding, which enabled the development of large solar parks2. In 2016, the Rooftop Solar Policy introduced net-metering and subsidies to promote decentralised solar adoption. Subsequent revisions around 2017 supported ultra-mega projects such as the Rewa Solar Park, setting benchmarks for low-cost solar tariffs. Between 2019 and 2020, policy attention expanded to floating solar, hybrids, and open-access projects. From 2021 onwards, the focus broadened to manufacturing support, agricultural feeder solarisation, and alignment with national renewable targets. The Renewable Energy Policy 2025 consolidated these initiatives, setting ambitious targets of achieving 50% renewable energy share by

[6] The policy for Implementation of Solar power based project 2012 in this regard is given in detail as Annexure I.

2030, while offering fiscal incentives, promoting hybrid parks, rooftop adoption, and green city development.

The existing policies of Madhya Pradesh in detail is discussed below;

3.2.1 DECENTRALISED RENEWABLE ENERGY SYSTEMS POLICY, 2016

The Decentralised Renewable Energy Systems Policy, 2016 was introduced by the Government of Madhya Pradesh to promote small-scale decentralized renewable energy generation closer to the point of consumption. The policy aimed to diversify the state's energy mix by encouraging growth of decentralized RE system, reduce dependence on conventional source of energy, develop sustainable energy solution for future and encourage participatory models that allow households, institutions, and industries to benefit from renewable energy directly. The 2016 policy shifted focus from large, centralised solar parks (2012 policy) to consumer-driven, distributed generation, making renewable energy more accessible and participatory across Madhya Pradesh.

The Policy amongst other is also applicable to small scale Agri-PV plants (capacity upto 2 MW) which are inherently decentralized, with solar panels installed directly on the cultivable land, often supplying electricity for irrigation, farm operations, and nearby rural consumption. Agri-PV plants which allows farmers to simultaneously cultivate crops on their farmland and to generate solar power, providing dual revenue streams is consistent with the policy's broad objective of achieving sustainable energy solution for future. The financial incentives provided under the policy could be extended to Agri-PV, including subsidies for elevated solar panels, dual-use land designs, and integration with irrigation pumps or cold storage units.

Table 7: Provisions under Decentralised Renewable Energy Systems Policy, 2016

Scope and Coverage	Capacity limit	Incentives & Exemptions
• The key objective of this policy is to reduce dependence on conventional sources of energy by encouraging decentralized RE Systems and thereby help reducing carbon emissions and assist the State in achievement of its RPO • Allows net-metering for consumers to feed surplus energy to the grid. • Categories governed under the Regulation includes both (i) Grid connected RE system i.e systems on net metered basis, Gross metering with wheeling and banking and for consumption within Premises with no export of power and (ii) Off grid RE system	• The maximum capacity for the individual decentralized RE Systems is limited as 2 MW. • The maximum permissible cumulative capacity of all Net Metered RE systems, connected to a particular distribution transformer of the licensee's grid, shall be equal to the rated capacity of the said distribution transformer, subject to MPERC (Grid Connected Net Metering) Regulations, 2015 i.e till the cumulative capacity (in MW) does not exceed the target capacity of 10 MW.	• Electricity duty exemption given to the producer of RE, RE Beneficiary, Consumer, Licensee for supply/sale/consumption of RE for the energy produced from the RE system installed under this policy for a period of 10 years from the date of commencement of supply by energy. While the RE Beneficiary connected at LT level were given lifetime exemption from the energy duty. • VAT/Entry tax exemption on renewable equipment. • Property tax exemption for rooftop solar installations. • RE Systems are exempted from cross-subsidy charges (subject to MPERC norms). • State grant of four percent (4%) in terms of energy injected on the wheeling charges

3.2.2. SURYAMITRA AGRICULTURE FEEDER SCHEME

The Surya Mitra Agriculture Feeder Scheme (also referred to as Surya Mitra Krishi Feeder Yojana) is a flagship initiative of the Government of Madhya Pradesh aimed at promoting solar power for agriculture. The scheme focuses on solarising agricultural feeders and substations to provide farmers with reliable, daytime electricity for irrigation, while also enabling them to become producers and sellers of electricity. It aligns with the broader

goals of renewable energy expansion, reduction of subsidy burden on the state, improved feeder efficiency, and farmer income diversification. The scheme is designed on a Public–Private–Farmer partnership model, with long-term PPAs ensuring investment security and income certainty.

Under the scheme the famer can establish Solar plants at the feeder / substation level, directly linked to agricultural pumps. It aims to cover 1,900 substations in MP, with potential to develop 14,300 MW solar capacity. This schemes provides for execution of a 25 years Power Purchase Agreement (PPA) between the developer (farmer / company) and the Distribution Licensee with a fixed, levelized tariff through transparent bidding. The Distribution licensee has to ensure evacuation and payment obligation. Some of the key financial support and incentives provided under the schemes include:

- 3% interest subvention under Agriculture Infrastructure Fund (AIF) for up to seven years.
- Access to state/central subsidies, viability gap funding, or other incentives notified from time to time.
- Option for farmers to lease land for solar plants, ensuring additional rental income.
- Participation is allowed for small farmers, local investors, cooperatives, and other categories
- Under "self-development" mode with simplified eligibility norms. Also companies / developers
- Under "developer mode" through competitive bidding, subject to financial criteria.

3.2.3. MP RENEWABLE ENERGY POLICY 2025

This policy was formulated in April 2025 repealing earlier existing policy viz. Madhya Pradesh Renewable Energy Policy 2022[3]. This policy sets a clear capacity and investment milestones while offering a robust incentives framework. Though the policy does not define the concept of Agri-PV projects, it does recognize the concept. The incentives and benefits under the policy are explicitly extended to the Agri-PV Projects take up in the State. While incentivizing the RE technology based projects, the policy also promotes green industrial and urban zones and thereby encourages promotion of cleaner and greener power generation through renewable energy sources. The salient features of the policy are discussed below;

3.2.3.1 APPLICABILITY OF THE POLICY:

Policy is applicable to all registered RE technology based projects including grid /off grid Agri-PV Projects of capacity equal to or more than 500 kW. However, the policy is not applicable for decentralized RE system with respect to which the MP Decentralized RE System 2016 shall apply4. Thus the Agri-PV projects with capacity more than 2 MW can avail benefits provided under the policy.

3.2.3.2 TARGETS SET UNDER THE POLICY

Targets under MP Renewable Energy Policy 2025

Targeted Areas	Target Financial Years	
	2030	2035
Additional RE capacity	22,000 MW	36,000 MW
Additional Energy Storage Capacity	6,000 MW	12,000 MW
New Jobs	50,000	85,000

3.2.3.3. INCENTIVES AND BENEFITS UNDER VARIOUS CATEGORIES

A. Incentives for RE Developers

The policy provides various incentives to RE developers and thus encourages private sector investment in the Renewable Energy sector. These incentives in a way also contribute in encouraging the developers

[7] Refer Section 19.1 of the MP Renewable Energy Policy 2025

[8] MP Decentralized RE System 2016, is applicable to all RE Beneficiaries, in whose Premises off–grid or grid connected RE Systems are installed, up to capacity of 2 MW of RE system. Considering the same, 2025 policy would not be applicable for decentralized RE system of capacity lessor than 2 MW.

to take up Agri-PV Projects and make them more viable.

Table 8: Incentives and benefits under MP Renewable Energy Policy 2025

Areas of incentive	Quantum of Incentives
Electricity Duty	100% exemption upto 10 years from Commercial Operation Date
Energy Development Cess	100% exemption on power supplied by RE project for 10 years from CoD
Stamp Duty	50% reimbursement on purchase of private land for the Project
Concession on Government Land	50% rebate on circle rate on the Government Land used for project purpose
Wheeling Charges	50% waiver for 5 years from CoD or as approved by MPERC from time to time
Carbon Credit	As per the guidelines issued by concerned authority from time to time or as arranged between developers and procurer/user

The policy also provides additional incentives for production of Green Hydrogen, RE sourced energy storage projects, biofuel projects. The details of the same is given in Annexure II.

B. Initiatives for green transformation

To increase the green footprints in overall energy mix, especially in the concentrated hubs, the policy requires taking certain initiatives such as

a. using commercially available technology like pumped hydro storage, battery energy storage solutions etc. for development of energy storage capacity;
b. developing RE projects for other States having complementary power demand, by utilizing inter-regional renewable energy potential
c. Implementing of rooftop solar projects through innovative models customized to different segments of consumers
d. Introducing schemes for solarisation of agricultural pumps and thereby reduce the financial loss to government due to cross-subsidy
e. Encouraging of RE based mini-grid and micro grid projects
f. Development of model solar villages/cities on principle of net zero carbon;
g. Transformation of government offices as “Harit Karyalaya” with zero carbon.

As part of these initiatives, the policy also emphasizes on solarisation of sub-stations with predominate agricultural feeders to encourage harmony between nature and agriculture. Further the policy encourages use of agricultural land for installation of soar projects without sacrificing agricultural/horticultural production by focusing on Agri-PV. This policy thus enables state government to initiate programmes and schemes to encourage Agri-PV projects in the State and to regulate various issues such as determination of tariff, challenges to overcome land use change etc.

4. ASSESSMENT OF OTHER RELATED LEGAL FRAMEWORK ON AGRI-PV

In addition to the regulations specific to the energy sector, and solar energy in particular, Agri-PV projects are also subject to a broader legal and policy framework. This encompasses allied domains such as land use and taxation, which play a critical role in shaping the implementation and feasibility of such projects. This section outlines the key legislations governing these areas and examines their implications for the deployment of Agri-PV initiatives.

4.1. MADHYA PRADESH LAND LAWS AND AGRI-PV PROJECTS

The Constitution of India, under the Seventh Schedule, allocates legislative competence between the Union and the States. Matters listed in Part II (State List) fall exclusively within the jurisdiction of State Legislatures and include agriculture, land, land revenue (assessment, collection, maintenance of records, surveys, and alienation), as well as taxation on agricultural income and on lands and buildings. Consequently, each state enacts its own laws governing land use and ownership. This has resulted in divergent legislative approaches across states—for instance, restrictions on transfer of agricultural land to non-domiciled persons, prohibitions on leasing, and varying ceilings on landholding.

The land use regulations in State of Madhya Pradesh is governed under two key legislations as discussed below;

4.1.1. MADHYA PRADESH LAND REVENUE CODE, 1959

As a rule, utilisation of agricultural land for what is considered a non-agricultural purpose requires prior approval. In most States 'agriculture' is defined and non-agriculture is construed accordingly. The term "Agriculture" is defined under Madhya Pradesh Land Revenue Code, 1959 as follows;

> *"agriculture" includes—*
>
> *(i) the raising of annual or periodical crops including betel leaves(Pan) and water nuts (singhara) and garden produce; (ii) horticulture; (iii) the planting and upkeep of orchards; and (iv) the reserving of land for fodder, grazing or thatching grass; (v) the use of land for poultry, fisheries or animal husbandry in an area situated more than five km away from the periphery of urban areas;"*

The term "agriculture" thus be construed in the light of above definition in State of MP. Therefore, any purpose that does not fall in the boarder definition of 'agriculture', ends up being classified as non-agricultural.

In State of MP, The Land Revenue Code governs diversion of agricultural land to other uses. This Act has underwent a major amendment in the year 2018 [Madhya Pradesh Land Revenue Code (Amendment) Act, 2018 (Act No. 23 of 2018)], wherein Section 171 and 172, which prescribed the procedure relating to diversion of agricultural land to non-agricultural uses by application for permission from Sub-Divisional Officer ("**SDO**") was deleted. At present the law in this regard is governed under Section 58 and 59 of the said Code as given in the table below.

Table 9 : Provisions under Madhya Pradesh Land Revenue Code 1959

Relevant Section	Description	Applicability for Agri-PV Projects
Section 58 - Liability relating to payment of land revenue	• All land, to whatever purpose applied and wherever situated is liable to the payment of land revenue to the State, • Exceptions: When such land is exempted fully or partially by or under the Code or special grant of or contract with the State Government or under the provisions of any law or rule for the time being in force	All land are subject to payment of land revenue unless the same is exempted under any provisions of law. As such land used for Agri-PV is subjected to payment of land revenue.

Section 58-A: Land exempted from payment of land revenue	• Land revenue in respect of the following category of land is not applicable • Any holding upto two hectares used exclusively for the purpose of agriculture • Land used for non-agriculture purpose as notified by the State Government	• The state government is given the power to exempt the land used for non-agriculture purpose from payment of land revenue. • This enabling provision may thus be used, if any special provisions with regard to land used for Agri-PV purpose in terms of payment of land revenue is required to be provided.

Section 59 – Assessment of land revenue according to purpose for which it is used	• The assessment of land revenue shall be determined based on the purposes for which it is used and shall be paid at the rate as prescribed. The uses in this regard provided under the section is listed below;
	  • For the purpose of agriculture including any improvement made thereon
	  • For the purpose of dwelling house
	  • For educational purpose
	  • For commercial purpose
	  • For industrial purpose including the purpose of mines and minerals
	  • For the purpose other than those specified above as notified by the State Government
	• Any land assessed for use of any one purpose when diverted for any other purpose, be liable to assessment at the rates prescribed for the purpose to which it was so diverted.
	• Further, such land shall also be liable to the payment of premium on such diversion at such rates as may be prescribed.
	• On diversion of a land for any purpose other than the purpose for which it is to be used, the bhooswami (landowner) shall assess/reassess the land revenue under this provision and compute the premium and shall deposit the amount so computed in the prescribed manner.
	• The written intimation about such diversion of land along with the receipt of the deposit shall be given to the Sub-Divisional Officer, thereupon the land shall be deemed to have been diverted from the date of such intimation.
	• On receipt of such intimation, the SDO shall make enquiry about the correctness of the computation of land revenue and premium by the landowner and shall communicate either confirming the correctness or informing the correct amount to be paid in 60 days of receipt of such intimation by the landowner.
	• The landowner is required to divert land for only such purpose as is permissible under the law governing the use of land for the time being in force.
		• Where the land used for agriculture purpose is to be utilized for installation of Agri-PV projects, which is commercial in nature, the diversion of the same for such purpose along with the payment of reassessed revenue and premium would required to be made as provided in this section.

Section 59-A – Effective date of Assessment	• The alteration or assessment shall take effect from the date on which the diversion was made.	• The alteration or assessment shall take effect from the date on which the diversion for Agri-PV purpose was made.
Section 168 - Lease	• The bhumiswami (landowners) are not allowed to lease any agricultural land comprised in their holding for more than one year during any consecutive period of three years	• This section restricts farmers from leasing their agriculture land for more than one year during any consecutive period of 3 years. Thus if any developer desire to take any agriculture land on lease for implementing Agri-PV projects, the same will require to be diverted to non-agricultural land as per the procedure laid down in the code to enable leasing such land for longer period.

4.1.1.1. ASSESSMENT OF MP LAND REVENUE CODE 1959 FROM AGRI-PV PERSPECTIVE

As such with deletion of certain sections like Section 171 and 172 from the Code, the diversion of land for non-agricultural use in State of MP no longer necessitates prior approval of the revenue authorities. Instead, compliance is ensured through reassessment of land revenue and levy of premium under Section 59 of the Code. However, diversion of land shall be for the permitted purposes under the law governing use of land in force.

Given the above context, under the Madhya Pradesh Land Revenue Code, 1959, the question of whether land conversion is required for implementing Agri-PV projects warrants careful examination. In Agri-PV systems, the land continues to be utilized for agricultural cultivation, while simultaneously being used for solar energy generation. This dual-use nature creates a grey area under the existing legal framework, as the Code does not explicitly address situations where both agricultural and non-agricultural activities coexist on the same parcel of land. Currently, the Code remains silent on such mixed land use, leading to ambiguity regarding the necessity of land use conversion for Agri-PV projects.

In the absence of clear clarity on the subject, at the present conditions, the land used for Agri-PV would require to be treated as non-agriculture purpose, as the same is not covered within the definition of "Agriculture" under the code. Accordingly, the provisions relating to diversion, premium, and higher revenue would apply for the land used for Agri-PV projects. Moreover, since there is a restriction on leasing of agriculture land under Section 168, diversion of land for non-agriculture purpose is inevitable for taking any land on lease for Agri-PV purpose.

4.1.2. MP CEILING ON AGRICULTURAL HOLDINGS ACT, 1960

This Act fixes a statutory ceiling on the extent of agricultural land a person or family can hold and provides for redistribution of surplus land. Its objective is to fix a statutory limit on agricultural land holdings, prevent concentration of land ownership, and redistribute surplus land for social equity. For this purpose, land is classified into three categories under the Act namely: (i) irrigated land capable of yielding two crops annually; (ii) irrigated land capable of yielding one crop annually; and (iii) dry land.

Table 10: Provisions under Madhya Pradesh Ceiling on Agricultural Holdings Act, 1960

Relevant Section	Description
Ceiling on Land Holdings (Section 3- 7)	• Defines the extent of ceiling area/ Maximum landholding permitted to be held, based on irrigated / unirrigated / dry land; (double-cropped vs. single-cropped). • Based on the family unit (landholder + spouse + minor children) for the ceiling on the holding is calculated. • Land in excess of the ceiling prescribed under the Act is deemed surplus.
Declaration & Determination (Section 8-11)	• Landholders must declare their holdings. • Competent authority inquires and determines surplus land beyond the ceiling.
Vesting of Surplus Land (Section 12)	• Surplus land automatically vests in the State Government free from all encumbrances. • Such land is used for distribution among landless agricultural labourers and small farmers.
Agricultural Use Requirement	• Land covered under the Act must be used for agriculture. • Any diversion to non-agricultural use (e.g., industry, energy) requires compliance with other laws (e.g., MPLRC Section 59).
Compensation (Section 13-15)	• Provide for payment of compensation to the landowner whose surplus land is acquired.
Exemptions (Section 16 & Schedule)	• Certain institutions - government farms, cooperative societies, agricultural universities/research institutions - may hold land beyond the ceiling.
Transfer Restrictions (Section 19)	• Any transfer, partition, or benami transaction intended to evade ceiling limits is void.
Bar on Future Accumulation (Section 20)	• Prohibits acquiring land through gift, lease, or otherwise, if it results in holdings above the ceiling.
Penalties (Section 21)	• Penal provisions for misrepresentation or concealment in declarations.

The maximum extent of agriculture land that can be held by a person or family which is provided under Section 7 of the Act is given in the table below.

Table 11: Ceiling on land ownership under MP Ceiling on Agricultural Holdings Act, 1960

Description	Type of land	Land ceiling
Where the holder is not a member of a family.	(1) land capable of yielding two crops and receiving assured irrigation or assured private irrigation for both the crops;	10 acres.
	(2) land capable of yielding one crop and receiving assured irrigation or assured private irrigation for the crop;	15 acres.
	(3) dry land.	30 acres.
Where the holder is a member of a family of five members or less.	(1) land capable of yielding two crops and receiving assured irrigation or assured private irrigation for both the crops;	18 acres.
	(2) land capable of yielding one crop and receiving assured irrigation or assured private irrigation for the crop;	27 acres.
	(3) dry land.	54 acres.

Where the holder is a member of a family of more than five members.	(1) land capable of yielding two crops and receiving assured irrigation or assured private irrigation for both the crops;	18 acres plus 3 acres for each member in excess of five subject to the maximum of 36 acres.
	(2) land capable of yielding one crop and receiving assured irrigation or assured private irrigation for the crop;	27 acres plus 4.50 acres for each member in excess of five subject to the maximum of 54 acres.
	(3) dry land.	54 acres plus 9 acres for each member in excess of five subject to the maximum of 108 acres:

4.1.2.1. ASSESSMENT OF AGRICULTURAL HOLDINGS ACT, 1960 FROM AGRI-PV PERSPECTIVE

The Act thus limits holding of agricultural land exceeding the prescribed limits allowed under the Act. Now where a person intends to lease his agriculture land to any Agri-PV developer, conversion of such land to non-agriculture purpose would be mandatory considering that leasing of agriculture land is not allowed under the Land Revenue Code. Now in the context of Ceiling on Agricultural Holdings Act, 1960, the land so leased for non-agriculture purpose will not be considered for calculating the ceiling limit, as the same is no longer an agriculture land. However, considering the fact that in the case of Agri-PV, the land is also put to agricultural activities along with energy production, there arises a question as to whether such land will be considered as agriculture land for the purpose of calculating the ceiling limit under the Agricultural Holdings Act, 1960.

By way of illustration, suppose a person/farmer is holding maximum agriculture land allowed to be held under Ceiling on Agricultural Holdings Act, 1960 and decides to lease entire land to an Agri-PV developer. In this case as per the Land Revenue Code, the land to be leased will require land use change to non-agriculture purpose prior to such leasing, as Land Revenue Code does not permit leasing of agricultural land. In this scenario a question arises as to whether such land held by him would be considered for calculating the ceiling limit under the Agricultural Holdings Act, 1960, considering that the farmer would continue agriculture activity on such leased land. At present there is no legal clarity in the context of Agri-PV. Non-considering of the leased land for calculating the ceiling limit in the present scenario is likely to defeat the objective of Ceiling on Agricultural Holdings Act, 1960, which is to prevent concentration of land ownership.

4.2 TAXATION LAWS AND AGRI-PV PROJECTS

Agricultural activities, under taxation laws in India, are generally viewed through a more lenient lens, often enjoying exemptions or preferential treatment. This implies that the land for agricultural use if diverted for non-agricultural activities, would lose number of benefits that were considered as customarily available to agricultural activities. The taxation landscape for Agri-PV projects remains complex since such projects are at the intersection of agriculture (normally enjoying tax concessions and subsidies) and renewable energy infrastructure (treated as a commercial activity under taxation laws). The taxation matters in India are governed under Income Tax Act, 1961 and Central Goods and Service Tax (GST) Act, 2017.

4.2.1 INCOME TAX ACT, 1961

Income tax is levied by the Central Government at the national level. The Act differentiates between agricultural income and non-agricultural income for taxation purposes. The relevant provisions in this regard and its

implications on implementation of Agri-PV projects under different project structuring are discussed below;

Table 12: Provisions under Income Tax Act, 1961

Relevant Section	Description
Section 10(1)	• This provision exempts "Agricultural income" from liability under Income Tax Act. • The Term "Agricultural income" is defined under Section 2(1A) of the Income Tax Act.

Section 2(1A) of Income Tax Act – Agricultural Income	• For context, "agricultural income" has been defined to mean:
	  • Any rent or revenue derived from land which is situated in India and is used for agricultural purposes;
	  • Any income derived from such land by agricultural operations including processing of the agricultural produce, raised or received as rent-in kind, so as to render it fit for market, or sale of such produce; and
	  • Any income attributable to a building used for agricultural purposes.

Depreciation (Section 32)	• Solar PV equipment installed for Agri-PV can be depreciated under plant & machinery provisions; accelerated depreciation may apply to commercial solar installations. • Solar power plants are eligible for accelerated depreciation (40%) under Section 32 of the IT Act, incentivizing capital investment.

Capital Gain
(Section 2(14)(iii)
And
Section 54B)
	• Section 2 (14)(iii) carves out "agricultural land" as a capital asset and exempts it from levy of capital gains on the sale/transfer of agricultural land. However, the agricultural land to be considered for this purpose is only limited mostly to the rural agricultural land considering that land in the jurisdiction of a municipality (whether known as a municipality, municipal corporation, notified area committee, town area committee, town committee, or by any other name) or a cantonment board and which has a population more than ten thousand do not cover to be exempted under the Act from payment of capital gain;
	• Section 54B certain exemptions from payment of capital gain for transfer of agricultural land.
	• As per Section 54B, if agricultural land is sold by a taxpayer and the taxpayer thereafter within a period of 2 years acquires another agricultural land, he is exempted from payment of capital gains tax. However this is subject to the meeting following conditions;
	  • asset should be held by an individual or a Hindu undivided family;
	  • asset being transferred should be agricultural land; and
	  • agricultural land should be used by the individual or his parents for agricultural purpose at least for a period of two years immediately preceding the date of transfer.
	• Thus, once the land in question is converted to non-agricultural land the above exemption will not be available.

4.2.1.1 . KEY OBSERVATIONS BASED ON THE ASSESSMENT OF INCOME TAX ACT 1961:

The Agricultural income is exempted from the payment of the income tax under the Act. However, where the farmer earns revenue through sale of electricity from Agri-PV project such revenue would be regarded as business income and subject to income taxation under the Income Tax Act. Thus, by implementing the Agri-PV projects, the purpose of the land gets changed from agricultural usage to hybrid use of agricultural activity and energy production attracting tax under the income tax Act.

The treatment given to the income derived from the different transactions relating to Agri-PV projects for income tax purpose under the Act and the tax implications in this regard under different scenario's are discussed below;

Table 13: Implementing models and tax implications

Implementing Model	Description	Treatment for tax purpose
Land Leasing Model	The entire land parcel is leased by the farmer to the developer on lease rent basis for implementation of Agri-PV projects	• The income received as lease rent by the farmer would be treated as taxable income under the Act and the farmer would require to bear the income tax. • The agriculture revenue of the Developer would be considered as "Agriculture Income" under the Act and the same would be exempted from income tax. • Income generated by the Developer from energy production is subject to tax.
Leasing for construction and operation of solar panel –	Where the farmer leases the land to the developer only for construction and operation of solar plant while retaining the right to do agriculture activity.	• The lease rent collected by the farmer from the Developer is subject to tax • Farmer can claim income tax exemption for the revenue received from agricultural activities on the land. • The income generated by the Developer from energy production is subjected to income tax.
Revenue sharing model	Where the farmer and the developer agrees to share revenues from agricultural activity and the solar energy production	• Agricultural income generated under this model is exempted from payment of income tax • For the income generated from energy production, both the developer and the farmer will require to bear income tax on their respective share.
Farmer Collaboration model	Where the farmers joint together and form cooperative to undertake the Agri-PV Projects	• The agricultural income of each farmer will be exempted from tax • The income generated by each farmer from energy production is subjected to income tax to be borne by respective farmer.
Farmer-Developer Collaboration model	Where the farmers joint together and form cooperative to undertake the Agri-PV Projects	• The agricultural income of each farmer and/or developer will be exempted from tax • The income generated by each farmer and/or developer from energy production is subjected to income tax to be borne by the said farmers/ developer.

*Note: For the developer to claim any exemption under the Act for agricultural income, the developer must have been referred as the "lessee" in the revenue records.

4.2.2 CENTRAL GOODS AND SERVICE TAX (GST) ACT, 2017

Any lease, tenancy, easement, and license to occupy land are treated as supply of services under GST Act and is subject to 18% tax. However, in so far as services relating to agriculture are concerned, certain services are currently listed to be as chargeable to 'nil' tax[5], these include services relating to

agricultural operations directly related to production of any agricultural produce including cultivation, harvesting, threshing, plant protection or testing;

1. supply of farm labour;
2. processes carried out at an agricultural farm including tending, pruning, cutting, harvesting, drying, cleaning, trimming, sun drying, fumigating, curing, sorting, grading, cooling or bulk packaging and such like operations which do not alter the essential characteristics of agricultural produce but make it only marketable for the primary market
3. renting or leasing of agro machinery or vacant land with or without a structure incidental to its use and
4. agricultural extension services.

Thus, for now services not directly undertaken by a farmer are liable for a nil tax. However, this means that if a service that doesn't qualify, such as leasing for Agri-PV or utilising labour services for the same it will attract tax. Few other provisions applicable wrt Agri-PV is given in the table below;

Table 14: Provisions under Goods and Service Tax Act, 2017

Scenario	GST Treatment
Sale of electricity to DISCOM	• No GST applicable on the sale of electricity provided by utilities or power companies to consumers, whether they are businesses or residential entities. • Sale of the final electricity to DISCOMs is exempt but the components and services used to set up the renewable energy plant are subject to GST.
Applicability of GST rates on Solar PV Power Projects	• Project components: As of 25th September 2025, the GST on renewable energy devices like solar cells and modules was cut from 12% to 5%.6 • Installation services: For engineering, procurement, and construction (EPC) contracts related to setting up renewable energy systems, there is a bifurcated tax structure. • Goods component like Solar Equipment, and modules: 70% of the contract value is deemed as the supply of goods and is taxed at 5% GST7. • Service component: The remaining 30% of the contract value is deemed as the supply of services and is taxed at 18% GST8
Installation / EPC Services	• Provision of EPC (Engineering, Procurement, Construction) services may attract 18% GST, but input tax credit may be claimed by commercial developers.9 • Commercial developers and farmers can claim input tax credit on the GST paid for these services, provided the input services are used in furtherance of taxable business activity and not blocked under Section 17(5) of the CGST Act.
Professional, technical, and business services10	• Consultancy services are generally classified under Heading 9983 of the Service Accounting Code (SAC), which covers "Other professional, technical, and business services." • Services under this heading attract an 18% GST rate
Agricultural Activity	• Pure agricultural income and sale of primary produce remain exempt from GST.
Agri-PV Hybrid Models	• GST applies on the solar component but not on agricultural produce, necessitating clear invoicing.

[9] Notification No. 12/2017- Central Tax (Rate) dated 28th June, 2017
[10] This is based on the recommendations of the 56th Meeting of the GST Council held at New Delhi in September 2025.
[11] Circular No. 163/19/2021-GST dated 6.10.2021 issued by GoI, MoF.
[12] Circular No. 163/19/2021-GST dated 6.10.2021 issued by GoI, MoF.
[13] Notification No. 11/2017–Central Tax (Rate) dated 28 June 2017, entry 3(ii)
[14] Notification No. 11/2017–Central Tax (Rate) dated 28 June 2017.

4.3. ENABLING FRAMEWORK FOR BUSINESS FACILITATION IN MP

4.3.1. MP INVESTMENT FACILITATION ACT, 2008

The Act was enacted to facilitate investment in industrial and other projects. It provides a simplified regulatory framework by reducing procedural requirements and rationalizing documentation requirement and thereby provides an investor friendly environment in the State of Madhya Pradesh. The key goals of the Act are to create a system to help new projects to get necessary clearances, permissions, etc., faster and easily. The Act gives institutional backing to a single-window secretariat (through MP Industrial Development Corporation, a government undertaking under the Department of Industrial Policy and Investment Promotion, Government of Madhya Pradesh [DIPIP]), which investors can approach for approvals, certificates, etc. This facilitates one point submission of applications for multiple approvals, the concept of a "Combined Application Form" (or "Dynamic Common Application Form" / "CAF"). Through this approach a multiple permissions or approvals needed for setting up are collected via one form or portal and thereby reduces duplication and processing delays.

The Act and related rules impose time limits for various approvals / clearances. If an authority fails to process within a specified time, either the application is deemed approved or there is escalation/grievance remedy. Further once a project is set up, the investor can seek help via the single window for any issues in implementation.

Applicability of this platform for agriprojects, for procuring permits/approvals from relevant departments (agriculture, food processing, environment, water, etc.) needs to be examined, as the concept in still in nascent stage.

4.3.2 MP INVESTMENT PROMOTION (ONLINE DYNAMIC COMBINED APPLICATION FORM AND TIME LIMIT FOR PROCESSING OF APPLICATIONS) RULES, 2018

The Rules envisages formation of an online unified / combined application form that dynamically adapts (i.e. shows only relevant fields / departments) based on the investor's project parameters (sector, size, location, type). Investors shall submit a single application form through the designated portal for multiple clearances and approvals across departments. This reduces duplication of submissions and streamlines the interface. The Rules prescribe maximum time limits within which the concerned departments / authorities must process the applications submitted via the CAF / combined form. If a department fails to act within the prescribed time limit, remedies such as deemed approval, or escalation / grievance redressal procedures, may come into play (depending on the nature of the approval). Thus the Rules facilitate coordination among multiple government departments such that all necessary permissions, clearances or approvals are processed via the single window system. Rules cover various services and clearances relevant to industrial & investment projects (e.g. land allotment, building permissions, power, environment, licenses).

The system is designed to allow investors to track the status of their application in real time via dashboards or enquiry modules. This transparency helps reduce opacity and uncertainty, and allows follow-ups or reminders.

5. POLICIES ON AGRIVOLTAICS AND RENEWABLE ENERGY, FOCUSING ON COMPATIBILITY WITH VNM

5.1 CONCEPT OF VIRTUAL NET METERING

Net metering is a customarily used energy accounting mechanism in connection with solar PV system. Under this arrangement, consumers who install solar PV on their premises have their energy bill offset against the solar power generation. However, from consumer point of view, it only appeals to a small size of consumers who have high-tariffs, adequate space for installing solar PV system and a sufficient load at a single location. This mechanism is not effective in the situations where the consumer has both financial capacity and a large space for installing solar PV, but do not have corresponding sanctioned load capacity, forcing the Consumers to install Solar PV systems of lower capacity leading to sub-optimal usage of available space and loss of benefit from potential economies of scale. Virtual Net Metering (VNM) evolved as an innovative solution to this challenge.

VNM arrangement allows multiple consumers operating within the same license area to establish a collective physical RE plant. While Net metering works with metering at two points—a bi-directional energy meter which records both import and export of energy and a generation meter that accounts the solar generation, in the VNM the billing software is used to allocate credits to linked accounts to help address the challenges associated with net metering. VNM allows customers with on-site generation to allocate their excess energy to other sites that they own. As such the benefit under VNM is extended to multiple consumers or connections who may not have the physical space or suitable land to install solar panels individually.

VNM offers two significant advantages. First, it enables consumers to benefit from economies of scale. Second, it circumvents the physical space limitations faced by individual consumers by allowing the plant to be situated independently off their premises and enjoy the advantages of net metering. The electricity generated in this arrangement is injected into the grid, and the number of units are distributed among consumers in proportion to their capital contribution to the project. Finally, each consumer can offset the allocated units against their metered consumption. If solar energy generation is higher than the total consumption, "netting" of the allocated units is conducted as per state metering regulations and their amendments.

How VNM works for Agri-PV plant

Virtual Net Metering (VNM) allows an Agri-PV plant installed by multiple farmers (The farmers who may cultivate under the panels or belong to a nearby areas) in one location to virtually distribute the energy it generates to multiple farmers for their electricity consumptions (like farmers' pumps, homes, cooperatives, or agri-processing units) — even though they are at different physical locations. Each beneficiary (farmers owning the land/investing in Agri-PV) gets credits on their electricity bills based on their share or contracted capacity even though the solar system is not located at their individual farm.

5.2 RELEVANT LEGAL AND REGULATORY FRAMEWORKS FOR VNM

The fundamental legal basis for adopting VNM stems from the Electricity Act, 2003, and subordinate regulations. Section 42(1) & (2) of the Electricity Act empowers SERC to promote renewable energy generation and set up mechanisms like open access and net metering. VNM is an extension of the net metering concept recognized under the Act — allowing virtual, rather than physical, allocation of generated power. However, at the state level, **MPERC (Grid Interactive Renewable Energy Systems and Related Matters) Regulations, 2024** introduces VNM formally. It provide a legal basis for VNM arrangements as one of the permitted arrangements, enabling multiple consumers within the same licence area to benefit from a common renewable energy installation. Relevant provisions specific to VNM under the said Regulations are discussed in the table below;

Table 15: Key Features of Virtual Net Metering (VNM)

Key Regulations	Provisions
Definition Clause –2 (dd)	VNM is defined under the Regulation as an arrangement under which the renewable energy generating system is not necessarily located on the premises of the consumer, and the generated electricity is accounted for the purpose of billing and credited to one or more consumer accounts of the participating consumers located within the same Distribution Licensee's area of supply on mutually agreed terms.
Scope and Application clause (Regulation 3)	Applicability of the Regulation extends to Virtual Net Metering Arrangements among other metering arrangements.
General Conditions of Virtual Net Metering Arrangement (Regulation 4)	VNM arrangement shall meet the general conditions provided under Regulation 4, few key conditions in this regard are given below; • The Regulation emphasizes the distribution licensee to permit any type metering on a non-discrimination and transformer-wise first-come, first-serve basis and as such places VNM under the same general conditions framework as net-metering and group net-metering. • The Regulations allows eligible consumers of all categories to install renewable energy generating systems under the virtual net metering arrangement up to a capacity of 100 kW. • Requires the licensee and the applicant/beneficiaries to have a written agreement agreeing on the Installed capacity of the system, List of beneficiary consumers, Share of allocation and method of billing and adjustment. • The prosumer having net metering or gross metering arrangement is not entitled for gross metering and VNM arrangement. • The minimum size of the RE Generating system that can be set up under VNM arrangement is 1 (one) kW. • The capacity of the RE generating system to be installed shall not exceed the sum Contract Demands (in case of demand based tariff) or sanctioned loads (in case of sanctioned load based tariff) of the parent consumer or the participating consumers/connections put together. • The eligible parent consumer/prosumers under VNM arrangement under the Regulation shall not be entitled to avail the facility of open access under MPERC (Terms and conditions for Intra-state open access in MP) Regulations (Revision I) 2021 and subsequent amendment thereto.
Processing of Application (Regulation 6)	• Regulation 6 envisage process relating to sanction/rejection of application to connect RE generating system to the distribution system of the licensee for approval of VNM connection, and the conditions relating thereto.
Energy accounting and settlement under the VNM (Regulation 8D)	• Provides a structured methodology for measuring, recording, allocating, and reconciling the energy generated from a shared renewable energy system. • It ensures that the total electricity exported to the grid from the generating plant is accurately measured and appropriately allocated among multiple participating consumers based on a predetermined ratio.

Thus the MPERC Regulations provide a legal basis for Virtual Net Metering arrangements as one of the permitted arrangements, enabling multiple consumers within the same license area to benefit from a common renewable energy installation.

6.1 FEASIBILITY OF INSTALLING AGRIVOLTAICS PLANT UNDER RESCO MODEL

6.1 RESCO MODEL

The Renewable Energy Service Company (RESCO) model represents a developer-owned, operated, and maintained approach for solar and Agri-PV systems. In this model, a third-party developer, known as the RESCO shall invests, install, and manage the solar plant, while the farmer or landowner continues agricultural activity and benefits from the electricity generated or energy credits. This model eliminates upfront investment barriers for farmers or institutions, enabling solar adoption without capital expenditure. The electricity generated is sold through a long-term PPA or allocated via VNM. The Core stakeholder structure is as under:

Table 16: RESCO model Core stakeholder structure

RESCO Core Structure	
Stakeholder	**Role and Responsibility**
RESCO developer	Finances, installs, operates, and maintains the solar plant; retains ownership during contract period.
Farmer / landowner	Provides land on lease or revenue-sharing basis while continuing agricultural activities under and around solar panels.
DISCOM / consumers	Purchases power or receives credits through Net or Virtual Net Metering arrangements.
Aggregator / FPO / EPC	Coordinates implementation among multiple farmers or beneficiary groups.

The RESCO model is particularly suited for Agri-PV systems, which often face higher capital costs and design complexity. By shifting financial and operational responsibilities to the RESCO, farmers benefit from clean energy access and land-use diversification while retaining agricultural income.

6.2 RELEVANT LEGAL AND REGULATORY FRAMEWORKS

The feasibility of implementing Agri-PV projects under the RESCO model is supported by central and state-level regulations that legally enable third-party ownership, power sale through PPAs, and the use of net/virtual metering mechanisms.

6.2.1 CENTRAL FRAMEWORK: MNRE GUIDELINES UNDER PM SURYA GHAR – MUFT BIJLI YOJANA

MNRE has issued operational guidelines (2024–27) for PM Surya Ghar: Muft Bijli Yojana - RESCO and Utility-Led Aggregation (ULA) models to complement consumer-led (CAPEX) deployment. The key provisions under this is as under:

Table 17: Key Provisions under MNRE operational guidelines (2024–27)

Components	Details
Payment Security Mechanism	• ₹100 crore corpus managed by the National Programme Implementing Agency to ensure timely payments to RESCOs and safeguard consumers.
Central Financial Assistance (CFA)	• Applicable to grid-connected systems up to 3 kW per household, with Group or Virtual Net Metering permitted if approved by the DISCOM.

Implementation Process	• RESCOs to register on the National Portal and provide a ₹25 lakh bank guarantee. However, waived for PSUs. • Mandatory five-year maintenance period by RESCO. • Tripartite Agreements allowed between consumer, DISCOM, and RESCO for billing and payment
Interest and Payment Terms	• Delayed payments attract interest at SBI 1-year MCLR + 5% (first month), increasing by 0.5% monthly (capped at 3%).

Although currently focused on rooftop systems, the institutional and financial design, especially the Payment Security Mechanism, it offers a replicable structure for upcoming Agri-PV policies, ensuring investor confidence and DISCOM accountability.

6.2.2. MADHYA PRADESH STATE SPECIFIC FRAMEWORK

The **Madhya Pradesh Energy Department** and **MP Electricity Regulatory Commission** have established an enabling ecosystem for RESCO-based solar deployment through dedicated policy and regulatory instruments. Some of the provisions introduced at the State level towards implementation of RESCO model is as under:

Table 18: State Specific Regulations for RESCO model

Components	Key Features
MP Renewable Energy Policy, 2025	• Promotes decentralized renewable energy systems. • Explicitly allows third-party (RESCO) installation and sale of power through PPA. • Shifts preference from CAPEX to RESCO for institutional and rooftop solar. • Aims for 100% green energy compliance in government departments by 2030.
MPERC (Grid-Interactive Renewable Energy Systems and Related Matters) Regulations, 2024 (Revision II)	• Provides regulatory framework for RESCO participation and metering. • Defines RESCO as an entity installing/operating RE systems on mutually agreed terms. • Reg. 14: Exemption from Banking, Wheeling, CSS & Additional Surcharge for Net/Gross metering. • Reg. 15: Group Net Metering (GNM) – same exemptions, with wheeling charges on participating connections only. • Reg. 16: VNM – partial exemptions; wheeling charges/losses apply as per voltage level.
Tariff Orders	• MPERC determines purchase tariffs for power and surplus energy from such systems.
Implementing Agency	• MPUVNL acts as nodal agency successfully deploying RESCO projects for government buildings using zero-investment consumer model.

Thus Agri-PV projects implemented under the RESCO model are supported by both central and state frameworks. The key enablers and challengers are the following:

Table 19: RESCO key enablers and challengers

Key Enablers	Challenges and Requirements
Clear regulatory basis for third-party ownership and PPA models.	Need for legal recognition of dual land-use to avoid conversion issues.
Flexible grid and metering options (Net, Group, Virtual).	Development of bankable PPA templates and credit risk safeguards.
Financial assurance via Payment Security Mechanism.	Adaptation of PSM-like mechanisms for Agri-PV projects.
Exemptions on wheeling, banking, and surcharge charges enhancing viability.	

By integrating the RESCO model into Agri-PV development, Madhya Pradesh can advance dual-use land strategies that combine sustainable farming and renewable energy generation, supporting both climate resilience and rural economic growth.

7. PERMITS AND LICENSES FOR AGRI-PV PROJECT

7.1. PERMITS AND LICENSES

Implementing an Agri-PV project in Madhya Pradesh requires navigating a layered set of approvals under both central and state-level legal frameworks. Since Agri-PV combines agricultural land use with renewable energy generation, it is regulated by laws governing land use, electricity, environment, and taxation, alongside the incentives available under the Madhya Pradesh Renewable Energy Policy 2025. However, Currently, there are no specific policies about setting up Agri-PV projects and therefore to establish an Agri-PV, similar permits and approvals will be required which generally are required to establish a conventional solar project.

At the central level, permissions largely relate to connectivity to the grid, power purchase agreements, and compliance with national renewable energy schemes and environmental laws. At the state level, the focus is on land diversion under the Madhya Pradesh Land Revenue Code, registration with the state nodal agency (MPUVN), and local clearances from municipal and pollution control authorities. In practice, developers must secure a sequence of permits - from land and revenue approvals to grid connectivity and environmental/ operational consents - before commissioning an Agri-PV plant.

This multi-tier approval framework ensures that projects maintain the delicate balance between preserving agricultural benefits for farmers and facilitating clean energy generation, while complying with statutory obligations at both levels of governance.

Any person intending to set up and operate a solar generation station, may do so without obtaining a license under the Electricity Act. Under the scheme of Electricity Act, all solar generation facilities need to com Any person intending to set up and operate a solar generation station, may do so without obtaining a license under the Electricity Act. Under the scheme of Electricity Act, all solar generation facilities need to comply with the technical standards for construction of electricity plants, electricity lines, grid connectivity, metering and safety of power systems as specified by the CEA under various regulations. ply with the technical standards for construction of electricity plants, electricity lines, grid connectivity, metering and safety of power systems as specified by the CEA under various regulations.

Table 20: List of permits and licenses

Consents and approvals	Issuing/sanctioning authority	Requirement
Approvals at central level – To be take prior to Construction Phase		
Forest Clearance under Forest (Conservation) Act, 1980	Madhya Pradesh Forest Department	Though the Agri-PV are intended to be established on agricultural land, however in the event, connecting overhead lines are passing through a forest area as notified under the Forest (Conservation) Act, 1980, then an application will have to be made to the forest department seeking permission for such right of way. This is as per Rule 6 of the Forest (Conservation) Rules, 2003 read with Section 2 of the Forest (Conservation) Act, 1980. Further, the respective State Government are also empowered to regulate the falling of trees on any forest land.

Consents and approvals	Issuing/sanctioning authority	Requirement
No-objection certificate for height clearance	Airports Authority of India	A no-objection certificate for height clearance must be obtained from the AAI, if the power project falls within a radius of up to 20 kilometres from the 'aerodrome reference point' of civil or defence aerodromes (a designated geographical reference point in an airport)[15]. However, if the height of the desired structure is below 150 meter above ground level, then NOC for height clearance from AAI is not required.
No-objection certificate	Ministry of Defence/ Ministry of New and Renewable Energy	If the power project is situated around Indian Airforce Aerodrome, then no-objection certificate would require to be obtained from Ministry of Defence
No-objection certificate	National Monuments Authority	In the event, project site is within 200 meters radius of protected area as declared under the Ancient Monuments and Archaeological Sites and Remains Act, 1958, then clearance of the National Monuments Authority would be required to be obtained.
Registration/ licence under Contract Labour (Regulation and Abolition) Act, 1970	Concerned licensing officer	• This Act is applicable to every establishment (include any place where any industry, trade, business, manufacture or occupation is carried on) in which twenty or more workmen are employed or were employed on any day of the preceding twelve months as contract labour. • Under sections 7 and 12 of the CLRA Act, a certificate of registration and license have to be obtained by the principal employer and the contractor. • In case works are contracted to a third party contractor, such contractor is required to obtain these approvals.
Other Labour law compliance	Concerned State/ Local Authorities	• All statutory and labour related compliances have to be adhered to while setting up the Agri-PV project, including registration under various labour laws (if applicable) like Employee's Provident Funds and Miscellaneous Provisions Act, 1952, Employees State Insurance Act, 1948, MP Shops and Establishment Act, 1958 etc. Further, depending on the number and nature of personnel engaged for setting up the Agri-PV Projects, compliances may be required under labour and social security legislations such as Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996, Minimum Wages Act, 1948, the Payment of Wages Act, 1936, the Payment of Bonus Act, 1965, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972[16].

[16] The Indian government is all set to amalgamate 29 existing labour laws into four distinct new labour codes, with the main objective of simplifying labour laws and the government's focus on "ease of doing business" in India. These (new) labour codes are grouped into four categories, namely, wages, social security, industrial relations and occupational safety, health and working conditions. With these labour codes coming into force, certain existing practices and methodologies will change, rules will be simplified and others removed, registrations will become mandatory but also simpler and penalties for non-compliances will increase.

Consents and approvals	Issuing/sanctioning authority	Requirement
Import export code	Controller of Imports and Exports, GoI	To import or export any equipment, the solar power producer must obtain an importer exporter code from the Ministry of Commerce and Industry, GoI, in accordance with the provisions of Foreign Trade (Development and Regulations) Act, 1992 in the event that any of the equipment, including spares, for the project is imported into India.
Approval for diesel generator set	Electrical Inspector	Required as per Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation
Approvals at State Level		
Change in land use permission	Sub-divisional officer	Under the MP Land Revenue Code, only a written intimation of diversion shall be given along with the receipt of the deposit of premium and reassessed land revenue as per the prescribed manner.
Consent for establishment and consent for operation	Madhya Pradesh Pollution Control Board	The Central Pollution Control Board (CPCB) has classified industries into four categories - red, orange, green and white. Industries undertaking "solar power generation through solar photovoltaic cell plant of all capacities" are categorized under "white category"2. Therefore, there is no requirement to obtain consent to establishment/consent for operation for Agri-PV project and only an intimation for setting up is required to be provided to the Madhya Pradesh Pollution Control Board.
Letter of Award	Issued by MPUVNL to the selected solar power developer	The bidder selected based on competitive bidding process, will be awarded letter of award by the entity inviting bid. If project is of small capacity, approval will be granted on pre-determined tariffs for such projects
Power Purchase Agreement	Concerned Distribution Company (DISCOM)/MPPMCL	Power Purchase Agreement will be entered between selected Agri-PV solar power developer and concerned DISCOM/ MPPMCL.
Land Lease Agreement	With the owner of the land on which Agri-PV plant is to be installed	Where the land for installing Agri-PV is taken on lease from the farmer by the Agri-PV solar power developer, such developer shall execute the Land Lease Agreement agreeing the terms and conditions for use of such land and the consideration/lease rent to be paid for such usage.

17 As per the directions dated March 7, 2016 bearing ref. no. B-29012/ESS(CPA)/2015-16 read with clarification letter dated January 18, 2017 bearing ref. no. B-29012/ESS/CPA/2016-17 issued by the CPCB. Also see notification issued by MPPCB on 10th December, 2021

Consents and approvals	Issuing/sanctioning authority	Requirement
Approval for power evacuation arrangements and grid connectivity and execution of connection agreement	• DISCOM for projects <33KV • **MPPTCL** for projects >33 kV • For large projects one must follow CEA / CERC connectivity regulations.	The developer is responsible for connecting the generating station to the nearest grid sub-station or inter-connection point with the grid i.e to lay a dedicated 11 kV or 33 kV, 66/11 kV or 110/11 kV, line from the generating station to sub-station, construction of bay and related switchgear at sub-station where the plant is connected to the grid and metering is done. In this regard, application is required to be made to the concerned agency for use of transmission system and once the application is accepted, a connection agreement is required to be executed. The Developer may get the transmission line constructed through DISCOM by paying the applicable cost and other charges. Solar power generator/developer will generally be responsible for maintaining this dedicated transmission line. In case more than one bidder are awarded projects to be connected to same Sub-station, they shall be permitted to co-ordinate with each other for setting up common transmission line for feeding to Sub-Station if they so desire and with the approval of DISCOM/MPPTCL.
Approval for transmission line – laying down the transmission line to transfer power from power plant to sub-station	MPPTCL/Energy Department	An authorization by the Appropriate Government under section 164 of the Electricity Act, authorising the right of way in respect of the overhead transmissions from power station to the receiving sub-station shall be obtained for the Project. As per Section 68 (1) of the Electricity Act, installation of overhead line requires prior approval of the appropriate government in accordance with the provisions of the sub-section (2) of Section 68 of the Electricity Act. As per sub-section (2) of the Section 68 of the Electricity Act, prior approval shall not be required in relation to (i) an electric line which has a nominal voltage not exceeding 11 KV and is used or intended to be used for supplying power to a single consumer or (ii) so much of an electric line as is or will be within the premises in the occupation or control of the person responsible for its installation or (iii) in such other cases, as maybe prescribed.
Approval of the design and specification of the electrical plant and equipment under the Electricity Act	Chief Electrical Inspector, Energy Department, GoM	Section 162 (1) of the Electricity Act and the Qualifications, Powers and Functions of Chief Electrical Inspector and Electrical Inspectors Rules, 2006, requires the Inspector to certify that any appliance or apparatus used for generation, transmission, transformation, conversion, distribution or use of energy meets the safety regulations prescribed under the Electricity Act. The approval of the Chief Electrical Inspector is necessary to certify the commissioning of a solar power project.

Consents and approvals	Issuing/sanctioning authority	Requirement
Approval for diesel generator set and Approval of Electrical Drawings Before the Commencement of Renewable Solar Power Plant	Electrical Inspector	Required as per Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010.
No objection certificate, compliance certificate and fire safety certificate	Relevant municipality in Madhya Pradesh based on location of the project	
Approval of Factory plan **Factory registration and license Approval for site and building plan (including clearance for fire safety standards and protection apparatus and system) and licensing and registration of power projects under the Factories Act, 1948**	Directorate of Industrial Health and Safety, Madhya Pradesh (depending on the location of the solar project)	Generating, transforming or transmitting power falls within the meaning of manufacturing process in the Factories Act and thus requires the solar generating unit to take these approvals and license and to ensure occupational health and safety of workers. The Factories Act defines a 'factory' to be any premises on which on any day in the previous 12 months, 10 or more workers are or were working and in which a manufacturing process is being carried on or is ordinarily carried on with the aid of power; or where at least 20 workers are or were working on any day in the preceding 12 months and on which a manufacturing process is being carried on or is ordinarily carried on without the aid of power.
Open Access Approval	Intra-state approval - Concerned DISCOM/ ESCOM in whose area of supply the consumer or generator is located. For open access involving inter-state open access - State Load Dispatch Center (SLDC) or State/ Central Transmission Utility, as may be applicable.	In terms of section 42 of the Electricity Act, electricity consumers by way of open access approval, have the right to procure power from the supplier of their choice, that is, other than the distribution licensee company who is authorized under the Electricity Act, to operate and maintain a distribution system for supplying electricity to the consumer in his area of supply. They can use the existing transmission and distribution infrastructure after paying appropriate charges determined by their respective State Electricity Regulatory Commissions.
Other state permissions (water use / irrigation NOC, forestry/ panchayat clearances if required)	Irrigation department, Gram Sabha / Panchayat and district administration	If project affects irrigation channels, canal land, village common land, or river-adjacent areas, additional NOCs from irrigation department, Gram Sabha / Panchayat and district administration may be needed.

Consents and approvals	Issuing/sanctioning authority	Requirement
Construction Permissions	Municipality / Nagar Palika / Gram Panchayat	• Secure building plan approval / construction permit for permanent structures (control rooms, fencing, substations). • Obtain No Objection Certificates (NOCs) for approach roads, water use, drainage, and right-of-way. • In rural areas, Gram Sabha consent may be required for use of common land.
Registration under Madhya Pradesh Shops and Establishments Act, 1958		• This Act applies to all shops, establishment and commercial establishments. • Every establishment from the date of commencing business is required to obtain registration under the Madhya Pradesh Shops and Establishments Act, 1958.

With an objective to attract investment, employment and ease of doing business in the State, Madhya Pradesh Government have launched Single Window Scheme (https://sws.invest.mp.gov.in/) to facilitate grant of certain approval to industries.

Depending upon the finalised model for implementation of solar project/ Agri-PV Projects, certain other approvals may also be required to be taken. Further, the nature and extent of below mentioned approvals required is contingent on the location and nature of solar project/ Agri-PV Project being implemented such as construction activities required to be undertaken.

8. LEGAL BARRIERS FOR AGRI-PV PROJECT

8.1 LEGAL BARRIERS

The implementation of Agri-PV projects in Madhya Pradesh is shaped by a complex mix of central and state-level legal requirements. While Agri-PV promises dual benefits—renewable power generation and continued agricultural use—the regulatory environment has not yet fully adapted to this hybrid model. At the central level, challenges arise from the dual classification of agricultural versus commercial income, GST applicability, and stringent grid and environmental regulations. At the state level, barriers stem from land diversion requirements under the Madhya Pradesh Land Revenue Code, overlapping approvals from multiple authorities, and gaps in operational guidelines under the MP Renewable Energy Policy 2025. Together, these legal hurdles slow adoption, increase transaction costs, and create uncertainty for farmers and developers seeking to scale Agri-PV in the state. In short, the main central barriers are around taxation, grid connectivity, and environmental/forest laws, while the state barriers revolve around land diversion under MPLRC, overlapping clearances, and incomplete operational guidance for Agri-PV.

Agri-PV projects faces legal and regulatory challenges at various stages during its life cycle. A few of such key barriers are discussed below;

8.1.1 COMMENCEMENT STAGE:

Land diversion: Unlike state of Rajasthan whose Energy Policy, 2019 encourages setting up of decentralised solar power project only on un-cultivable agriculture land, the state of MP has no such restrictions under their policy framework. Infact, the MP Energy policy 2025 encourages using of agricultural land for installation of Agri-PV Projects. MP Land Revenue Code, 1959, which governs land revenue matters in the State of MP however mandates change in land use status from "Agricultural" to "Non-Agricultural", where the agricultural land is used for non-agricultural purpose. Since Agri-PV allows the farmers to sell the power to DISCOMs, this transaction may be categorised as a commercial activity requiring such land use change. Although the procedure for land-use diversion has been simplified in 2018 in State of MP by adopting "deemed conversion" status upon deposit of required reassessed land revenue and premium under the said Code, it is still a critical step. Also considering the fact that Agri-PV projects are capital intensive compared to ground mounted/rooftop solar power projects, the requirement of such land use conversion discourages taking up Agri-PV projects. The regulatory requirement of land diversion as such in a way act as a legal barrier in taking up Agri-PV projects. Recognizing dual usage of land/mixed use of land and exempting need for a land-use diversion for Agri-PV projects will encourage farmers and developers to set up Agri-PV plants. A notification under Section 58 A exempting payment of land revenue for usage of agricultural land for Agri-PV projects may be considered in this regard. Alternatively, Agri-PV may be classified as an agricultural activity. This would allow agricultural communities to build revenue-generating Agri-PV projects while maintaining land ownership by establishing a unique category of Agri-PV land.

Ceiling of Agricultural land: The MP Ceiling on Agriculture Holdings Act limits the holding of agricultural land to the prescribed ceiling area permitted under its provisions. Accordingly, where a person intends to lease agricultural land to an Agri-PV developer, conversion of such land to non-agricultural use would be mandatory, since leasing of agricultural land is generally not permitted under the Land Revenue Code. From the perspective of the Madhya Pradesh Ceiling on Agricultural Holdings Act, 1960, land that has been converted for non-agricultural purposes is excluded from the computation of ceiling limits, as it no longer retains the character of agricultural land. However, in the case of Agri-PV projects, the land is used simultaneously for agricultural cultivation and solar energy generation. This gives rise to an important question: whether such land should continue to be classified as agricultural land for the purpose of ceiling calculations under the Agricultural Holdings Act, 1960. In the absence of clarity, the Act may be a barrier for the farmers to make an informed decision about leasing their agriculture land for Agri-PV projects.

8.1.2 PROJECT APPROVAL STAGE:

Tariff determination for Agri-PV: Presently there are no mechanism to determine tariffs for Agri-PV plants; With respect to ground mount solar projects, several state regulatory commissions including MP have derived tariffs

based on the petitions filed by their respective DISCOMs under KUSUM scheme component A (decentralized solar power plant) and component C (feeder level solarization).

However, given the fact that in such cases the determination of tariff does not take into account capital cost and land value, which in case of Agri-PV projects may be very high compared to conventional ground-mounted rooftop solar plants, the current uniform tariff structure under schemes such as PM-KUSUM may not be a scientific way of determining the tariff for the energy generated from Agri-PV projects. Considering this there is a need for a differentiated or supportive tariff mechanism—one that recognizes the dual benefits of Agri-PV in enabling renewable energy generation alongside continued agricultural production. The Government could consider formulating a dedicated scheme for Agri-PV, modeled on the PM-KUSUM framework, to provide preferential tariffs, capital subsidies, or viability gap funding. Such a targeted policy intervention would incentivize Agri-PV adoption, enhance farmer participation, and align renewable energy promotion with rural livelihood and land-use optimization objectives.

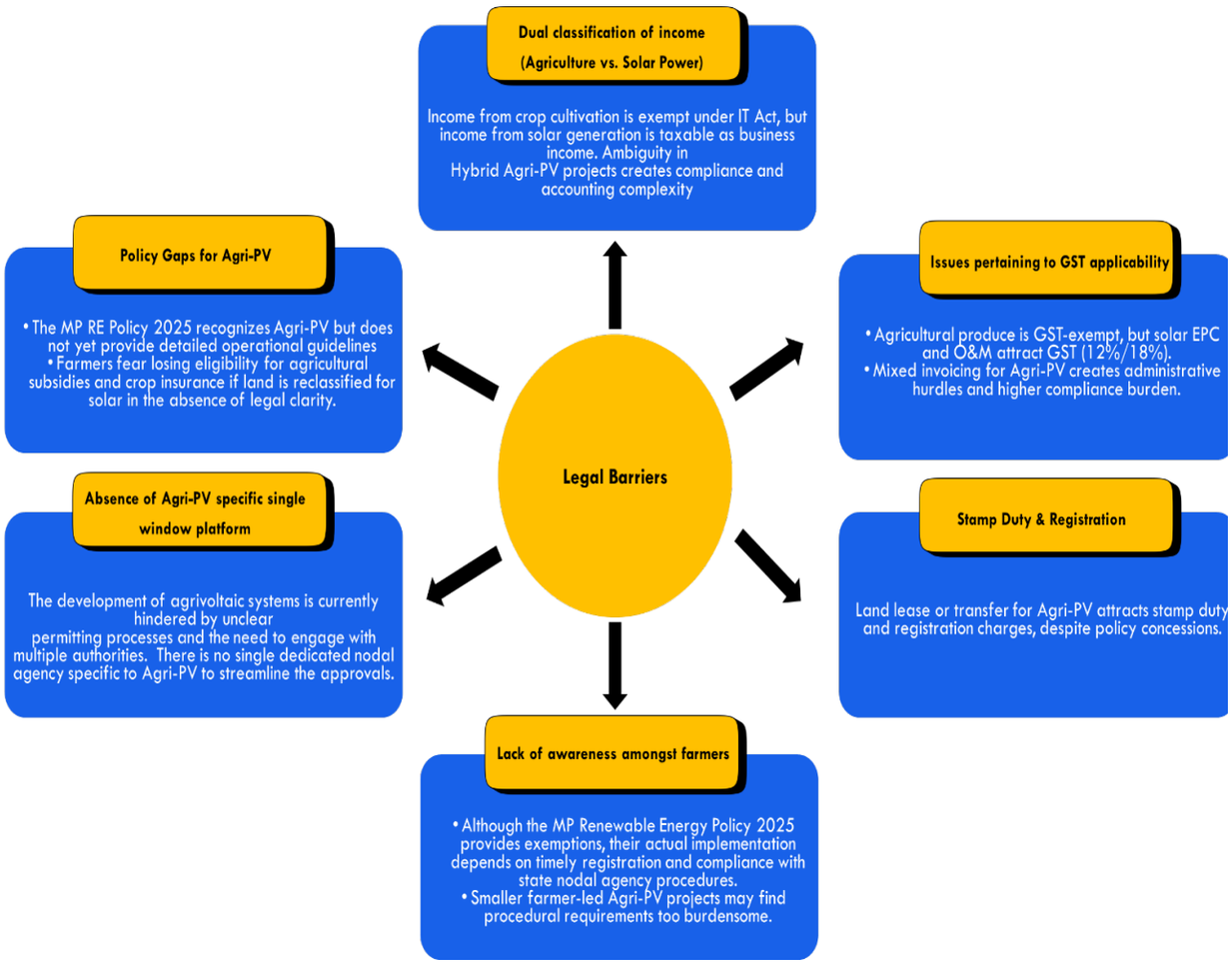
Ground water: Water is required both for construction of civil structure and for operation of the Agri-PV Projects to clean the panels. Using the ground water for these purpose are subject to taking approvals due to the stringent rules for usage of ground water as laid down by the national green tribunal. The model bill on Conservation, protection, regulation and Management of Ground Water, 2016 also does not support use of the ground water for infrastructure projects.

8.1.3 PROJECT EXECUTION STAGE:

Applicability of Income tax on revenue from Agri-PV Projects: The Agricultural income is exempted from the payment of the income tax under the Income Tax Act. However, by implementing the Agri-PV projects, the purpose of the land gets changed from agricultural usage to hybrid use of agricultural activity and energy production and the revenue there from would be regarded as business income, attracting tax under the income tax Act. The tax burden are likely to demotivate farmers to take up Agri-PV projects on their agriculture land. To promote the initial scale-up of agrivoltaics, this could be one of the barrier.

Risk of land reclassification and recognition of dual use classification of land: One of the barrier observed with reference to Agri-PV adoption in India is the risk of land reclassification. When agricultural land is converted to “non-agricultural” or “industrial” status for solar installations, farmers are at the risk of losing eligibility for crop insurance and to get benefits under major schemes such as PM-KISAN, PM-KMY, PMFBY, which require land to remain under agricultural use. The lack of uniform policy defining Agri-PV as a legitimate *dual-use* activity creates uncertainty across states. Without clear legal recognition that land with solar panels can still be considered agricultural, farmers face regulatory complexity, potential loss of subsidies, and disincentives to adopt Agri-PV systems.

Other Legal Barriers



9. KEY RECOMMENDATIONS AND WAY FORWARD

9.1.1 DEFINE AGRIVOLTAICS

India is an agrarian country, where agriculture serves as the backbone of the economy and supports a large portion of the population. As Agri-PV systems are installed on cultivable land, it becomes crucial to ensure that their development and operation do not adversely affect agricultural productivity. The success of Agri-PV in India therefore depends on maintaining a careful balance between renewable energy generation and the preservation of agricultural output, ensuring that both sectors complement rather than compete with each other. In this context, it becomes imperative that the term *Agrivoltaics* is defined in a manner that reflects India's agricultural priorities—emphasizing the primacy of agriculture while enabling the complementary use of land for solar energy generation. Presently, there is no standardized definition or criteria to determine what installations qualify as Agri-PV. Therefore, it is necessary to develop a nationally accepted definition that considers key parameters such as the minimum percentage of land retained for agriculture after solar installation, the minimum crop yield required compared to pre-installation levels, and the permissible reduction in agricultural productivity. In developing such a definition, it will be useful to review international approaches (e.g., from Japan, China, Italy and others) and adapt relevant elements to India's agro-climatic, socio-economic and land-use context while ensuring that the integration of solar PV systems does not compromise food security or the sustainability of farming operations.

9.1.2. DEDICATED SCHEME FOR AGRI-PV

Given the emerging nature of Agri-PV in India, a dedicated scheme—modelled on the lines of the PM-KUSUM program—is essential to accelerate its adoption and integration into mainstream infrastructure. The current uniform tariff framework under existing PM-KUSUM scheme is not well-suited for Agri-PV projects, as it does not account for their higher capital costs and unique land-use characteristics. Agri-PV systems often require elevated mounting structures and are installed on productive or peri-urban farmland where land values are significantly higher than barren lands used for ground-mounted solar projects. These factors make Agri-PV installations more capital-intensive and less viable under the same tariff structure applied to conventional solar plants, thereby placing them at a competitive disadvantage.

A separate and dedicated Agri-PV scheme would help address these challenges by providing innovative tariff structure, capital subsidies, interest subvention, or Viability Gap Funding (VGF) to offset higher upfront costs. Additionally, it could also give policy clarity and institutional coordination frameworks tailored specifically to Agri-PV systems.

9.1.3 MAINSTREAMING AGRIVOLTAICS WITHIN AGRICULTURAL AND RENEWABLE ENERGY SCHEMES

The government programs that support farmers and rural development can play an important role in promoting agrivoltaic systems. By including agrivoltaics under these programs, farmers could receive financial support to reduce the high upfront costs of installing solar panels on their land. Such support could help farmers use solar energy to improve crop production and add value through facilities like solar-powered dryers, cold storage units, and small processing units.

Insurance programs for farmers could also be expanded to cover possible yield losses from crops grown under solar installations, reducing the risk for those adopting this new approach. Overall, by adjusting current agricultural and infrastructure support schemes to include agrivoltaics, the government can make it easier for farmers to adopt this technology-strengthening both clean energy generation and agricultural productivity.

9.1.4 REFORM OF LAND USE LEGAL FRAMEWORK TO SUPPORT AGRIVOLTAICS

The existing land regulations in Madhya Pradesh allow the leasing of agricultural land, but only under stringent conditions that are not conducive to the promotion of Agrivoltaics in the State. For the implementation of Agri-

PV projects on agricultural land, the law currently requires the land to be converted to non-agricultural use if the owner of the land/ farmer wishes to lease it to a solar developer for project development. This requirement persists despite the fact that, under the Agri-PV concept, the land continues to serve both agricultural and energy generation purposes. The absence of legal recognition for dual or mixed land use thus creates a significant barrier to Agri-PV deployment. Introducing suitable legal provisions to recognize and regulate dual land use would enable farmers to participate in Agri-PV initiatives without losing the agricultural status of their land. This would also give relief to them from losing eligibility for crop insurance and other benefits under various agriculture schemes which are available only for agriculture land.

9.1.5 REFORM TAX REGULATIONS TO SUPPORT AGRIVOLTAICS

State governments need to reform tax regulations to better support the growth of Agrivoltaics. At present, tax laws draw a strict distinction between agricultural and non-agricultural activities, with each category governed by separate tax treatments and benefits. This separation poses challenges for Agri-PV projects, which combine both activities on the same land. To facilitate adoption, tax laws should be amended to recognize and incentivize hybrid business models that integrate agricultural production with renewable energy generation, ensuring that farmers and developers engaged in Agri-PV projects can access appropriate fiscal benefits under both sectors.

9.1.6 TENDERS FOR AGRIVOLTAICS

Similar to rooftop or ground-mounted solar projects, DISCOMs can float tenders specifically designed for Agri-PV projects. This would not only encourage large-scale adoption of integrated solar and agricultural systems but would also help establish quality standards and performance benchmarks for Agri-PV system, ensuring that projects meet best industry practice, safety norms and environmental regulations.

9.1.7 CAPACITY DEVELOPMENT FOR AGRI-PV ECOSYSTEM

Since Agri-PV is a relatively new concept in India, capacity building becomes especially important to ensure its successful adoption and implementation. Most stakeholders - farmers, developers, government agencies, and technical institutions - are still unfamiliar with the design, operation, and management of Agri - PV systems. Similarly, crop management under shading conditions requires advanced skills among farmers. Therefore, structured programs focused on training, awareness, and knowledge sharing in the key areas such as selection of site and crops, designing efficient system, integrating solar power with agricultural operations etc. are essential to build the necessary technical and practical expertise.

ANNEXURE I

POLICY FOR IMPLEMENTATION OF SOLAR POWER BASED PROJECTS 2012

The **Policy for Implementation of Solar Power Based Projects, 2012** was introduced by the Government of Madhya Pradesh to accelerate solar power generation in the state and attract private sector investment. It provided a structured framework for developing both solar photovoltaic (PV) and concentrated solar power (CSP) projects, with clear provisions on project categorization, land allotment, power purchase agreements, and transmission connectivity. It offers incentives such as exemptions on duties, banking of energy, and facilitation of solar parks, the policy to remove regulatory and infrastructural barriers to investment. It also aligned with national renewable energy initiatives, ensuring that Madhya Pradesh could contribute significantly to India's solar capacity targets while promoting sustainable development and energy security.

Aspect	Details
Objective	• To promote and enable development of solar power projects in Madhya Pradesh, with a view to augmenting power supply, encouraging private investment, improving transmission infrastructure, and ensuring sale of solar power to state utilities (MPPMCL / DISCOMs).
Scope / Project Categories	• Category I: Solar power projects intended for sale of power to the state power distribution company (MPPMCL). • Includes both Solar PV and CSP (Concentrated Solar Power).
Minimum Project Size	• For grid-connected PV projects: minimum 5 MW. • For CSP plants: minimum 50 MW.
Tariff / PPA	• Long-term PPAs (25 years) between developer and state utility. Tariffs determined via competitive bidding.
Land & Infrastructure Support	• Government assists with land allocation, including concessional leasing of government land; also suggests development of Solar Parks with common infrastructure (roads, transmission, water etc.).
Transmission / Evacuation	• Projects must connect to the nearest grid substation; state transmission company (MPPTCL) to facilitate the evacuation infrastructure. • Costs for connection from project site to grid are usually borne by developer. Priority given in disposal / evacuation.
Incentives & Exemptions	• Entry tax exemptions for solar equipment. • Electricity duty exemptions. • Banking of surplus energy allowed (within same financial year) • Capital subsidies via central schemes also available
Timelines & Compliance	• Specified deadlines for commissioning projects; delays may attract penalties unless due to force majeure or governmental delay. • Developers must meet regulatory, environmental, and technical compliances.
Environmental / Regulatory Requirements	• All required environmental approvals to be obtained; environmental impact assessments as per norms. Specific norms for CSP relating to water use

ANNEXURE II

ADDITIONAL INCENTIVES UNDER MP RENEWABLE ENERGY POLICY 2025

<table>
<tr><th>Areas of incentive</th><th>Quantum of Incentives</th></tr>
<tr><td colspan="2">Green Hydrogen & RE-sourced Energy Storage Projects:</td></tr>
<tr><td>Basic Investment Promotion Assistance (BIPA)</td><td>• BIPA shall vary between 40% to 10% based on a formula tied to the Eligible Fixed Capital Investment (EFCI).
• BIPA shall be limited to maximum ₹200 Crores, paid out over 7 equal annual instalments</td></tr>
<tr><td>Infrastructure Development Assistance</td><td>• Units engaged in green hydrogen production are eligible for 50% assistance in building infrastructure up to the factory gate.
• This includes things like power, water, gas pipeline, roads, drainage, sewage etc.
• This assistance is subject to a maximum ceiling (i.e. maximum amount caps) if the investor acquires private land or gets undeveloped government land.</td></tr>
<tr><td>Green Industrialisation / Environmental / Waste / Pollution Control Assistance</td><td>• For pollution control / waste management systems (ETP, STP etc.), up to a certain assistance amount.
• For instance, up to ₹210 Crores for ETPs with Zero Liquid Discharge in two equal annual instalments.</td></tr>
<tr><td>Other incentives (from the guidelines for Green Hydrogen / Electrolyser / RE equipment manufacturers)</td><td>
<table>
<tr><th>Incentive</th><th>What is Offered</th></tr>
<tr><td>Discount on prevailing power tariff</td><td>Energy charges shall be levied at Re 1 per unit less than the tariff determined by MPERC, for 10 years from policy notification.</td></tr>
<tr><td>Land concession</td><td>50% concessionality on government land (circle rate) or land rates as per industrial policy.</td></tr>
<tr><td>Electricity duty waiver</td><td>100% waiver for 10 years.</td></tr>
<tr><td>Stamp duty reimbursement on purchase of private land</td><td>100%</td></tr>
<tr><td>Interest subsidy</td><td>As per details provided in the MP Industrial Promotion Policy.</td></tr>
<tr><td>Subsidy for Intellectual Capital & Enhanced Quality Certification</td><td>As per Industrial Promotion Policy.</td></tr>
<tr><td>Single Window Clearance</td><td>Yes.</td></tr>
<tr><td>Investment Promotion Assistance (IPA)</td><td>As per MP Industrial Promotion Policy.</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Biofuel Projects (specifically advanced biofuels)</td></tr>
<tr><td>Capital Subsidies</td><td>A 40% capital subsidy on investment for MSMEs, in addition to central subsidies.</td></tr>
<tr><td>BIPA</td><td>Capital subsidies up to ₹2 billion disbursed over seven years for large projects.</td></tr>
<tr><td>Infrastructure Assistance</td><td>An additional ₹50 million for critical infrastructure and up to ₹100 million for zero liquid discharge systems.</td></tr>
<tr><td>Government Land</td><td>Available at concessional rates (50% of the circle rate for government revenue land).</td></tr>
<tr><td>Tax and Duty Exemptions</td><td>100% exemption from electricity duty and energy development cess for 10 years.</td></tr>
<tr><td>Stamp Duty Reimbursement</td><td>50% reimbursement on stamp duty for private land purchases.</td></tr>
</table>

ANNEXURE III

OPERATIONAL GUIDELINES FOR MP RENEWABLE ENERGY POLICY 2025

<table>
<tr><th>Coverage</th><th>Sections</th><th>Provisions</th></tr>
<tr><td colspan="3">MP Renewable Energy Policy 2025</td></tr>
<tr><td>Applicability</td><td>Section 6.1 - 6.3</td><td>• The Policy is applicable to all renewable energy technology- based projects except those specifically excluded in the Policy.
• Renewable energy technology-based projects shall carry the meaning as provided either in Annexure - I of the Policy or in the Guidelines
• To avail benefits & incentives the projects need to be registered with NRE.
• Agri-PV project that is a ground-mounted solar installation (or hybrid) falls within “renewable energy technology-based projects” in Section 6 and may be treated as a solar project for registration and incentives.
• If the Agri-PV installation is small rooftop net-metered on a farmer’s pump/ household, it will generally be excluded from policy registration and instead to be registered with the DISCOM net-metering scheme.</td></tr>
<tr><td>Capacity threshold & exclusion of decentralized systems</td><td>Section 6.5 - 6.6</td><td>• Applicable for all renewable energy technology-based projects of capacity equal to or more than 500 kW, unless specified otherwise
• This Policy shall not be applicable for decentralized RE systems, for which a separate policy exists.
• In case of any contradiction or overlap in the provisions under two policies, the Madhya Pradesh Policy for Decentralized RE Systems - 2016 shall prevail for all RE beneficiaries in whose premises off-grid or grid connected RE System are installed up to capacity of 2 MW.</td></tr>
<tr><td>Incentives for registered projects</td><td>Section 7.1 - 7.2</td><td>• Any renewable energy generation project registered under the Policy will be eligible for applicable Incentives.
• However, any project, registered under any other Policy of GoMP will not be eligible to avail incentives/ benefits under multiple policies.
<table>
<tr><th>Area of Incentive</th><th>Quantum of Incentive</th></tr>
<tr><td>Exemption in Electricity Duty and Energy Development Cess:</td><td>• As per the provisions of Madhya Pradesh Vidyut Shulk Adhiniyam, 2012 projects shall be entitled to receive 100% exemption from payment of Electricity Duty on generation of electrical energy for period of 10 years from the date of COD.
• No energy development cess shall be payable on the power supplied by renewable energy projects for a period of ten (10) years from the COD.</td></tr>
<tr><td>Reimbursement of Stamp Duty</td><td>50% reimbursement on stamp duty on purchase of private land for the project shall be available to developers.</td></tr>
<tr><td>Government Land on concessional rate:</td><td>Government land, if available, shall be provided on concessional rate (rebate of 50% on circle rate) to developers.</td></tr>
<tr><td>Waiver of wheeling charges</td><td>50% waiver on wheeling charges shall be applicable… for 5 years from COD</td></tr>
</table></td></tr>
<tr><td>Repeal and transition / migration clauses</td><td>Section 19.1-19.2</td><td>• Projects registered under Madhya Pradesh Renewable Energy Policy, 2022 shall be deemed to be registered under the new Madhya Pradesh Renewable Energy Policy, 2025.
• In case of any discrepancy in the provisions, the provisions of Madhya Pradesh Renewable Energy Policy, 2025 shall prevail</td></tr>
</table>

IMPLEMENTATION GUIDELINES OF THE MP RE POLICY 2025

Coverage	Sections	Provisions
Registration for ≤ 1 MW	Section 2.1	• Renewable energy projects with valid PPA/ LoA/ work order/ Land Use Permission Agreement or any other document evidencing development of RE project shall be registered with Nodal Agency. A non-refundable registration cum facilitation fees of INR 100 per kW of Renewable Energy and/or Energy Storage capacity to be paid by eligible projects. • 50% of the same shall be towards facilitation charges of nodal agency and 50% shall be towards registration of project. • Appropriate Bank details for the payment of registration cum facilitation shall be provided by the Nodal Agency at the time of submission of the application by the project developer.
Registration for > 1 MW	Section 2.2	• A non-refundable registration cum facilitation fees of INR 1 lakh per MW of Renewable Energy and/or Energy Storage capacity to be paid by eligible projects. • 50% of the same shall be towards facilitation charges of nodal agency and 50% shall be towards registration of project. • Appropriate Bank details for the payment of registration cum facilitation shall be provided by the Nodal Agency at the time of submission of the application by the project developer
Transition to online portal / offline registration	Section 2.4.8	• Nodal Agency to continue to register the RE project through offline mode until online portal to project registration is developed and become functional. • Nodal Agency shall develop such online portal within 6 months from the date of issuance of the Madhya Pradesh Renewable Energy Policy, 2025 and these Guidelines, beyond which no project shall be registered through offline mode.

Priority in land allotment / conditions	Section 3.2.2 and 3.2.4	• Land shall be provided to entities selected through competitive bidding or in accordance with the provisions of the Electricity Act, 2003, the National Tariff Policy/Standard Bidding Guidelines. • Projects providing more than 50% of Renewable Energy to MPPMCL/ Madhya Pradesh Discoms shall be given priority in land allotment over other RE Projects. • Government land shall be provided on a concessional rate (rebate of 50% on circle rate) to developers, subject to availability. • Following shall be the order of priority for allotment of Government land for Renewable Energy Projects: • **First priority** – Projects producing green hydrogen and biofuels. • **Second priority** - Projects/parks developed under ambit of **RUMSL** / any other entity of Madhya Pradesh. • **Third priority** – Projects/parks with **MNRE approval** and Letter of Intent (LoI)/ LoA from a public entity/DISCOMs as procurer of power from such projects/parks. Provided the project has been awarded on competitive bidding basis and more than 50% of power is supplied by the project/park within State. • **Fourth priority** – Project/park developed by Department/Organization/ Enterprises/Local Bodies under the ambit of Government of Madhya Pradesh, for captive purpose, where **100% of the electricity generated** from RE project would be used for captive purpose only. • **Fifth priority** – Projects with **capacity of more than 250 MW, where Government Land allotment** is essential to bring contiguity of the private land parcel wherein government land of maximum upto 50% of the total land required for proposed projects all be allotted to projects fulfilling the conditions laid down thereunder. • **Sixth Priority** - Projects with **capacity of more than 100 MW, but lesser than 250 MW, where Government Land allotment** is essential to bring contiguity of the private land parcel wherein government land of maximum upto 25% of the total land required for proposed projects all be allotted to projects fulfilling the conditions laid down thereunder. • **Last priority** – All other projects.

Transfer of Land Use Permission and Surrender	Section 3.3	• If a developer intends to transfer the land use permission to any third party, including a Special Purpose Vehicle (SPV), the following conditions apply:
		  • Prior approval must be obtained from the Nodal Agency.
		  • The developer must submit an application along with the necessary documents to the Nodal Agency for consideration.
		  • The transfer will be subject to the terms and conditions set by the Nodal Agency, ensuring compliance with the objectives of the Renewable Energy Policy.
		  • The new developer is required to pay transfer fee which shall include re-registration cum facilitation fees @50% of registration and facilitation fees prescribed at Section 2 and differential land charges. But exemption is allowed for such payment if application of transfer is received within 1 year from the COD of the project.
		• If the developer wishes to surrender the land use permission voluntarily, the following steps must be followed
		  • The developer must notify the Nodal Agency in writing about the intention to surrender the land use permission.
		  • Upon receiving the notification, the Nodal Agency will initiate the process of surrender, which may include verification of the land status and compliance with any outstanding obligations.
		  • The developer must fulfill all obligations and clear any dues before the surrender is accepted
		• In cases where the developer fails to comply with the terms and conditions of the land use permission or the objectives of the Renewable Energy Policy, the Nodal Agency may initiate the process of compulsory surrender
		  • A notice will be issued to the developer, specifying the reasons for the proposed surrender
		  • he developer will be given an opportunity to respond to the notice and rectify any issues within a stipulated time frame.
		  • If the developer fails to address the issues, the Nodal Agency may proceed with the compulsory surrender of the land use permission.
		• In case of private land, registered sale/lease and collect stamp duty receipts (50% reimbursement entitlements require compliance post-COD).

Land Use Permission and government land allotment	Section 3.3	• Government land allotment processes, payment of land use charges, and stamp duty reimbursements (see land use / allotment sections in the Guidelines). • Because Agri-PV uses agricultural land in a dual-use manner, **confirmation on land classification from the** District Collector and Panchayat early. • In case of using government/revenue land, the LUPA/allotment process to be followed and pay land use charges as per the Guidelines. • In case of private land, registered sale/lease and collect stamp duty receipts (50% reimbursement entitlements require compliance post-COD).
Progress Report submission	Section 3.6 and the timeline clauses	• Envisages Quarterly progress updates on the portal from registration to COD to avoid risk of cancellation of registration. • If COD is delayed, one should apply for extensions per the Guidelines and pay extension fees.

<table>
<tr>
<td>Incentives</td>
<td>Section 41 & 4.2</td>
<td>

All incentives applicable under the Madhya Pradesh Renewable Energy Policy - 2022 shall continue to be applicable unless specifically amended or superseded by the provisions of this Policy.
In addition to the incentives mentioned in the previous policy, the following new incentives are introduced under the new Policy:

Capital Subsidy: Developers may be eligible for a capital subsidy on the capital cost of the project, subject to the availability of funds and as per the guidelines issued by the Nodal Agency.
Interest subvention on loans availed for the project may be provided, reducing the financial burden on developers.
Government land may be allotted at concessional rates to RE project developers, subject to availability and approval from the concerned authorities.
Stamp duty on land transactions related to RE projects may be exempted, facilitating smoother land acquisition processes.
Developers may be eligible for GST incentives, including refunds or exemptions, as per the applicable laws and regulations.
A single window clearance mechanism will be established to expedite the approval process for RE projects, reducing delays and administrative burdens.
Support for capacity building and training programs will be provided to developers and stakeholders to enhance technical and managerial skills.
Encouragement for R&D activities related to renewable energy technologies, with potential funding and collaboration opportunities.

</td>
</tr>
<tr>
<td>Land required for different RE based projects and their COD timelines</td>
<td>Annexure I</td>
<td>
<table>
<tr><td rowspan="2">RE Technology</td><td rowspan="2">Maximum Area requirement (ha/MW)</td><td colspan="2">Capacity-wise commissioning Timelines from date of PPA/LOA/ WO (months0</td><td rowspan="2">Tenure of LUPA from COD (years)</td></tr>
<tr><td>< 1000 MW</td><td>> 1000 MW</td></tr>
<tr><td>Solar PV</td><td>2</td><td>24</td><td>30</td><td>25</td></tr>
<tr><td>Energy Storage Project</td><td colspan="3">As per Technology and Source</td><td>25</td></tr>
</table>
For projects selected through competitive bidding, COD timelines shall be governed by the timelines provided in the Bid Documents and Project Agreement
Nodal Agency shall allot Government land to the Developer based on the Project configuration and considering the land requirement for different RE sources.
50% of registration and facilitation charges if extension upto 6 months and 100% of registration and facilitation charges , if extension of more than 6 months is required to be paid by the Developer.
</td>
</tr>
</table>

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