

DRAFT FOR DISCUSSION

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Ministry of Electronics & Information Technology
(e-Governance Division)

Data Centre Policy 2020

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1 Background

- 1.1. India is witnessing a transition from an emerging to a developed market economy and digital is slated to play a key role in this journey. Digital is not only catalysing economic growth across all sectors and sub-sectors, but also forms the bedrock for providing better services to citizens, enabling social and financial inclusion, enhancing productivity and helping create a connected ecosystem. The size of the digital economy in India is estimated to grow from \$ 200 billion in 2017-18 to a staggering \$ 1 trillion by 2025.
- 1.2. With over a billion mobile phones and more than 700 million internet subscribers, India has also witnessed an exponential growth in digital-commerce, digital entertainment and use of social media. India's mobile data consumption is already the highest in the world and is constantly increasing.
- 1.3. The size of the digital population in India and the growth trajectory of digital economy necessitates a strong growth of Data Centres, which has the potential to fulfil the growing demands of the country. Indian Data Centre market has seen tremendous growth in the past decade, riding on the explosion of data through smartphones, social networking sites, ecommerce, digital entertainment, digital education, digital payments and many other digital businesses / services. This growth in data is further stimulated by adoption of emerging technologies such as quantum computing, artificial intelligence, internet of things etc. This has been supported by various efforts of government in forms of various enablement for the sector.
- 1.4. Need for Data Centre infrastructure within the boundaries of the country is further necessitated by the data localization provisions of proposed Data Protection Act and for protection of the digital sovereignty of the country in an increasingly connected world. India also offers advantages of having a favourable geographical location on the world map, availability of economic resources, established global connectivity through submarine cables, easy and cost-effective access power and readily available skilled manpower provides, enabling the nation to become a global Data Centre hub.

- 1.5. This need for Data Centre infrastructure in the country already opens up a potential opportunity for investments of the order of USD 4.9 billion by 2025, which could be further increased given we progress in the direction of becoming a Data Centre location of choice for global players. Currently, as per various estimates, India has around 375 MW installed power capacity for Data Centre and as per projections, this may grow to three times by 2025. This policy intends to accelerate the projected Data Centre growth and investments in the sector.
- 1.6. While the Data Centre sector is witnessing growth in the country, there are known impediments to its growth such as lack of infrastructure or Industry status of the Data Centres, complex clearance processes, time consuming approvals, high cost of power, lack of published standards, absence of specialised building norms for building the Data Centres, submarine cable network connectivity limited to few states and high cost of capital and operational expenditure etc. This policy aims to offset these challenges in order to accelerate the current pace of growth and propel India in becoming a global Data Centre hub.
- 1.7. This document lays out a policy framework including various structural / regulatory interventions, investment promotion in the sector, possible Incentivization mechanisms along with the institutional mechanism required for the governance. The policy framework also seeks to strengthen the recently announced “Atmanirbhar Bharat” initiative by identifying possible opportunities of manufacturing of Data Centre equipment (IT as well as non-IT) in the country. It also identifies possible areas of participation by MSMEs and Start-ups.
- 1.8. The policy measures, as mentioned in the document, are applicable for Data Centre park developers/Data Centre operators as well as the allied ecosystem of Data Centre sector.
- 1.9. This policy framework shall be followed by a detailed scheme with implementation guideline document providing the particulars of various fiscal and non-fiscal incentives to be provided to the sector by the Central and State Government.

2 Vision

- 2.1 Making India a Global Data Centre hub, promote investment in the sector, propel digital economy growth, enable provisioning of trusted hosting infrastructure to fulfil the growing demand of the country and facilitate state of the art service delivery to citizens.

3 Mission

- 3.1 Ensure sustainable and trusted Data Centre capacity in the country to meet the enormous demand generated in one of the fastest growing economies.
- 3.2 Strengthen India's position as one of the most favourable countries for Data Centres by incentivizing and facilitating establishment of state-of-the-art Data Centres.
- 3.3 Encourage domestic and foreign investments in the sector
- 3.4 Promote R&D for manufacturing and development of Data Centre related products and services for domestic and global markets.
- 3.5 Promote domestic manufacturing, including non-IT as well as IT components, to increase domestic value addition and reduce dependence on imported equipment for Data Centres.

4 Objectives

The following are some of the key objectives to be driven through this policy:

- 4.1 Drive necessary regulatory, structural and procedural interventions for enabling ease of doing business in the sector, towards attracting investments and accelerating the existing pace of Data Centre growth in the country.
- 4.2 Promote sector competitiveness through various fiscal and non-fiscal incentives.

- 4.3 Promote domestic start-ups, MSMEs and other Indian IT companies and provide impetus to indigenous manufacturing of IT and non-IT equipment.
- 4.4 Facilitate access to uninterrupted and cost-effective power, which forms one of the most critical aspects for operating the Data Centre.
- 4.5 Measures to bring in necessary improvement in network backhaul, domestic as well as international.
- 4.6 Meet the data security needs by promoting investments in trusted (safe and secure) Data Centres in India.
- 4.7 Facilitate standardization in the development of Data Centres.
- 4.8 Promote capacity building in the sector through association with various skilling / human resource development programs.

5 Strategies for growth of Data Centre Sector

5.1 Enable Ease of Doing Business

The Policy aims at creating a favourable climate for investments in the Data Centre Sector, both domestic investments and Foreign Direct Investments, and incentivizing the growth of a robust and sustainable Data Centre sector in the country through the following reforms:

5.1.1 Providing Infrastructure Status to the Data Centre Sector

- 5.1.1.1 Government of India to work towards providing “Infrastructure status” for the Data Centre sector, at par with other sectors like Railways, Roadways and Power, bringing in the benefits of availing long-term credit from domestic and international lenders at easier terms. This will provide a boost to the investments in this sector.

5.1.2 Simplify clearances for setting up Data Centres in India

- 5.1.2.1 Rationalize the clearances required to set-up Data Centres/ Data Centre parks in the country. Institutionalize processes for granting single window clearance, in a time bound manner by State Governments / UTs.
- 5.1.2.2 Publish list of approvals / clearances required for operationalization of Data Centres along with the defined timelines for obtaining the same, in collaboration with State Governments / UTs.

5.1.3 Setting up of Pre-provisioned Data Centre Parks

- 5.1.3.1 States shall be encouraged to demarcate specific zones (land parcels) for setting up Data Centre parks with necessary infrastructure like road connectivity, availability of water and other essential infrastructure items.
- 5.1.3.2 Promote pre-provisioned Data Centre parks, to enable 'plug and play' model for Data Centre providers, by provisioning access to:
 - i) Land parcel
 - ii) Power availability at low rates
 - iii) High capacity network back-haul
 - iv) Pre-approved clearances/ approvals

5.1.4 Central and State Governments shall formulate their respective schemes and guidelines detailing out fiscal and non-fiscal incentives in this sector to enable further expansion of Data Centres in the country.

5.1.5 Formulation of Data Centre Incentivization Scheme (DCIS) for promotion of Data Centre Parks / Data Centre.

- 5.1.5.1 A Data Centre Incentivization Scheme (DCIS) will be formulated by Government of India which would specify the intended beneficiaries, applicability criteria and fiscal and non-fiscal incentives for the sector.
- 5.1.5.2 Incentives shall also be provided on usage of domestic IT hardware including servers, storage, network devices, etc. and non-IT equipment such as mechanical, electrical, plumbing, cooling equipment etc

5.2 Enabling a favourable ecosystem for the operations of Data Centres

For the long-term growth of the Data Centre sector in the country, it is critical to create a congenial, competitive and sustainable operating environment for the businesses. Some of the key policy thrust areas in this direction include:

5.2.1 Availability of uninterrupted, clean and cost-effective electricity for Data Centres remains as one of the most important considerations for the Data Centre sector.

The key focus areas of the policy are as follows:-

5.2.1.1 Facilitate provisioning of quality power for uninterrupted supply to Data Centres / Data Centre Parks

5.2.1.2 Facilitate Data Centre Parks to setup own power generation units to ensure quality of power

5.2.1.3 Identify mechanisms to ascertain long term availability of electricity at reasonable rates

5.2.1.4 Enable effective open access system to allow Data Centre service providers directly procure power from generation companies (including renewable power generation units)

5.2.1.5 Encourage use of renewable energy for Data Centres – solar or wind-based power – by collaborating with Ministry of Power on their various green and sustainable energy initiatives.

5.2.1.6 Encourage efficient utilization of energy by promoting innovative techniques and solutions for energy management for reducing the carbon footprint of the Data Centres.

5.2.1.7 Formation of Steering group, comprising of representatives from Ministry of Power, Ministry of Electronics and Information Technology and State Governments to identify the execution mechanism for the identified intervention related to availability of quality power.

5.2.2 MeitY to work with Department of Telecommunications (DoT) to facilitate robust and cost-effective connectivity backhaul

- 5.2.2.1 Leverage the framework provided by National Digital Communications Policy 2018 (NDCP) to encourage and facilitate
 - i. Common service ducts and utility corridors for enabling proliferation of Optical Fibre Cables and dark fibre for the Data Centre operations and ensuring sharp reduction in downtime due to fibre cuts.
 - ii. Sharing of active infrastructure by enhancing the scope of Infrastructure Providers (IP) and promoting and incentivizing deployment of common sharable, passive as well as active, infrastructure (*Ref: NDCP 2018*).
- 5.2.2.2 Facilitate Data Centre providers to establish captive fibre networks, especially for connecting Data Centres, through appropriate review and re-alignment of existing regulations and policies (*Ref: NDCP 2018*).
- 5.2.2.3 Enable and encourage Dial Before You Dig Policy (DBYDP) to allow easy access to information about the underlying network infrastructure before the commencement of digging.
- 5.2.2.4 Improve international connectivity and cost of bandwidth, as per the guidance provided in NDCP 2018. Improved international connectivity will be a key driver for global players to consider India as a preferred destination for their Data Centre investments.
- 5.2.3 Data Centres to be declared as an Essential Service under “The Essential Services Maintenance Act, 1968 (ESMA)”
 - 5.2.3.1 Continuous functioning of Data Centres is critical for continued delivery of services and to maintain the normalcy of day to day activities. Inclusion of Data Centre under the ESMA will enable seamless continuity of services even during times of calamities or crisis.
- 5.2.4 Recognize Data Centres as a separate category under National Building Code
 - 5.2.4.1 Data Centre buildings require different norms as compared to other office/ commercial buildings and therefore, there is a need for creation of a separate category code for Data Centres in the National Building Code of India (NBC 2016).

- 5.2.4.2 As an interim measure, MeitY shall collaborate with authorised Central Govt. bodies for drafting broad guidelines to be issued for Data Centre buildings, facilitating specialized construction and safety approvals.
- 5.2.4.3 These guidelines would be followed by publishing of a separate building code under NBC.

5.3 Setting-up of Data Centre Economic Zones

- 5.3.1 The benefits, as indicated in this policy, would be applicable for both private sector as well as public sector Data Centre Parks /Data Centre Developers and Data Centre Operators
- 5.3.2 Additionally, Government of India also proposes to set-up at least four (4) Data Centre Economic Zones (DCEZ) in the country, as a Central Sector Scheme - DCEZ Scheme. These DCEZs would be concentrated and specialized Data Zones, with the most conducive non-IT and IT infrastructure, connectivity, power and regulatory environment.

The proposed Data Centre Economic Zones would create an eco-system of Hyper-scale Data Centres, Cloud Service Providers, IT companies, R&D units and other allied industries. DCEZ Scheme will be implemented by inviting proposals from the States.

5.4 Promote indigenous technology development, research and capacity building

- 5.4.1 Promote local manufacturing
 - 5.4.1.1 Promote and encourage use of indigenous hardware (IT as well as non-IT equipment) and software products used in the Data Centres, thereby reducing the overall import burden of the country.
 - 5.4.1.2 Extend fiscal incentives to domestic start-ups and MSMEs to develop solutions for Data Centre usage.

- 5.4.1.3 Incentivize global equipment manufacturers to set up manufacturing units of IT/ Non-IT components in India, catering not only to local demands but also for export purposes.
- 5.4.1.4 Strengthen the testing and certification framework for the Data Centre ecosystem, including for the IT and non-IT equipment and software products pertaining to Data Centres operations.
- 5.4.2 Encourage joint ventures between the foreign investors and domestic companies to promote participation from Indian companies, in the development of Data Centres. This would enable long-term capacity building of the domestic companies operating in this space.
- 5.4.3 Promote R&D in Data Centre ecosystem
 - 5.4.3.1 Promote setting up of R&D units to create an ecosystem that will promote development of Data Centre components within the country.
 - 5.4.3.2 Promote technology firms to produce innovative products and services for the Data Centre ecosystem and facilitate their commercialization for sustainable growth.
- 5.4.4 Promote Adoption of Established Global Standards
 - 5.4.4.1 MeitY shall publish and mandate minimum standards for Data Centres / Data Centre Parks in the areas of build, IT, non-IT and security.
- 5.4.5 MeitY to promote global adoption of services from state-of-the-art Data Centre infrastructure available in India, through various inter-governmental initiatives / MoUs.
- 5.4.6 Capacity Building and Human Resource Development
 - 5.4.6.1 Collaborate with Ministry of Skills Development and Entrepreneurship (MSDE) and leading academic institutes to impart large scale trainings to workforce on Data Centre, Digital and Cloud technologies, and facilitate sector linkages for such trained workforce.
 - 5.4.6.2 Promote skill development and upgradation initiatives aimed at addressing the skill gap of trained manpower to be able to meet the demands of Data Centres and Cloud Computing Platform.

- 5.4.6.3 Provide assistance for these programs through Skill Development Mission at National and State Level.
- 5.4.6.4 Design programs for continuous capacity building amongst government officials and personnel on Data Centre and cloud technologies, data classification, storage policies, data security and other allied technologies.

5.5 Institutional Mechanism for Policy governance

- 5.5.1 An Inter-Ministerial Empowered Committee (IMEC) to be set up under the Chairmanship of Secretary, MeitY, with participation from various Central Ministries and State Governments. It shall be the key decision-making body to facilitate the implementation of various measures as defined under this policy framework, enabling ease of doing business in the sector. ToR and constitution of the IMEC shall be notified by MeitY.
- 5.5.2 Institutionalizing Data Centre Facilitation Units (DCFU)
 - 5.5.2.1 Setup a Data Centre Facilitation Unit (DCFU) within MeitY to provide harmonized services to interested Data Centre Parks/Data Centre developers on matters related to setting up of Data Centres.
 - 5.5.2.2 Data Centre Facilitation Unit (DCFU) would be the nodal agency to work under the Inter-Ministerial Empowered Committee to drive and support the implementation of decisions taken.
 - 5.5.2.3 DCFU would monitor the implementation of policy framework and would work with various stakeholders to facilitate timely progress of various initiatives.
 - 5.5.2.4 DCFU would also be responsible for evolving Centre-State coordination mechanism(s) to ensure policy objectives are met.

- 5.5.3 An independent Data Centre Industry Council (DCIC) is also proposed to be set-up, which would act as an interface between the sector and the Government. The council will work to represent the sector's viewpoint and engage with MeitY regarding various matters concerning the growth of Data Centre sector in the country.
- 5.5.4 Government of India to undertake mid-term evaluation of the policy and propose any modifications/ amendments, if required. This would be followed by an end of policy period evaluation. Such evaluation to be carried out by an independent agency appointed by the Inter-Ministerial Empowered Committee/ DCFU.

Glossary of Terms

Acronyms	Expansion
AI	Artificial Intelligence
APAC	Asia Pacific
CAGR	Compounded Annual Growth Rate
CEZ	Cloud Economic Zone
CoE	Centre of Excellence
COVID-19	Corona Virus Disease 2019
DC	Data Centre
DEA	Department of Economic Affairs, Government of India
DoE	Department of Expenditure, Government of India
DoT	The Department of Telecommunication, Government of India
EoDB	Ease of Doing Business
FDI	Direct Investments
GDP	Gross Domestic Product
GSI	Geological Survey of India
GW	Gigawatt (Unit)
HSDC	Hyperscale Data Centres
ICT	Information and Communications Technology
IIM	Indian Institute of Management
IIT	Indian Institute of Technology
IoT	Internet of Things
ISO	International Organization for Standardization
ISP	Internet Service Providers
IT	Information Technology
IT BPM	Information Technology – Business Process Management
ITeS	Information Technology enabled Services

Acronyms	Expansion
MeitY	Ministry of Electronics and Information Technology, Government of India
MHA	Ministry of Home Affairs, Government of India
MoHUA	Ministry of Housing and Urban Affairs, Government of India
MNRE	Ministry of New and Renewable Energy, Government of India
MoF	Ministry of Finance, Government of India
MoP	Ministry of Power, Government of India
MSDE	Ministry of Skill Development and Entrepreneurship, Government of India
MW	Megawatts (Unit)
NIT	National Institutes of Technology
NIXI	National Internet Exchange of India
NSDC	The National Skill Development Corporation India (NSDC)
PPP	Public Private Partnership
PSU	Public Sector Undertakings
R&D	Research and Development
ROI	Return on Investment
SAARC	South Asian Association for Regional Cooperation
SGST	State Goods and Service Tax
SME	Subject Matter Expert
SPV	Special Purpose Vehicle
TCO	Total Cost of Ownership
TIA	Telecommunications Industry Association
USD	United States Dollar
UT	Union Territories

Definitions

Term	Definition
Data Centre	Data Centre is a dedicated secure space within a building / centralized location where computing and networking equipment is concentrated for the purpose of collecting, storing, processing, distributing or allowing access to large amounts of data.
Data Centre Park	Data Centre Parks are specialized secure Data Zone , strategically located with the most conducive non-IT and IT infrastructure, and regulatory environment for housing mix of small scale / large scale / clusters of Data Centres to serve the high needs of compute, storage, networking and provision of a wide range of data-related services.
Data Centre Park Developer	Data Centre Park Developer is an entity who would be responsible to build the facility of DC park covering land, park area (Water, sewage, Road, parking, green area, etc.), provision of DC essentials setup / equipment's (i.e. Electricity, Network / Fibre connectivity, Mechanical Electrical and Plumbing equipment's (MEP), etc.
Data Centre Operators	Data Centre operator is an entity who would be responsible to manage and operate end to end Data Centre operations
Cloud Service Providers	A cloud service provider is a third-party firm offering a cloud-based platform, infrastructure, application or storage service. These entities would be hosting their IT Infrastructure in Data Centre / Data Centre Parks to provide the Cloud Computing services to the end users
Data Centre Economic Zone (DCEZ)	It would be concentrated and specialized Data Zones, with the most conducive non-IT and IT infrastructure, connectivity, power and regulatory environment
Data Centre Facilitation Unit (DCFU)	Data Centre Facilitation Unit would be an entity setup by MeitY to monitor existing portal to provide harmonized services to interested Data Centre Park/Data Centre developers on matters related to setting up of Data Centres
Data Centre Industry Council (DCIC)	Data Centre Industry Council (DCIC) would be an entity which shall act as an interface between the sector and the Government. This council shall work to represent the sector's viewpoint and engage with MeitY regarding various matters concerning the growth of Data Centre sector in the country
Data Centre Incentivization Scheme (DCIS)	Data Centre Incentivization Scheme is projected scheme outlay that will be published by MeitY to provide the scheme details to provide the fiscal and non-fiscal benefits to Data Centre sector and Cloud Service providers