FOCUS: DATA CENTERS

ESTABLISHING DATA CENTERS
New Age Tech Arena for the Scat Domain

A. DATA CENTERS

The Authority recommends that as part of Data Centre Incentivization Scheme (DCIS), the Government of India should define certain fiscal and non-fiscal incentives for the sector that should be made applicable across all states while leaving the flexibility to the states to announce further fiscal and non-fiscal incentives through their policies. Accordingly, Government should spell out two lists of incentives for Data Centre and DC Park operators. The list of the Central Government will contain Centre specific incentives. The other should be in the form of guidelines for the States for adoption by them.

The Authority recommends that guidelines for States DCIS should enlist inclusion of Data Centres as an essential service under respective Essential Services Maintenance Acts of the states as one of the items. For incorporating in DCIS guidelines for States, the Authority also recommends inclusion of DCs in the list of exemptions from inspections under provisions of the Factories Act, 1948, Shops and Commercial Establishment Acts, other labor laws, and laws on wages.

The Authority recommends a two-prong approach – A) As part of these recommendations, the Authority recommends operationalizing a Data Centre specific portal on National Single Window System (NSWS) for various time-bound single window clearances.

The portal should also list out all policy initiatives and benefits offered by individual states for DC sector. States should be enabled to upload and update the benefits offered as per their policies on this portal. A comparative statement of such benefits and the time taken for issuing clearances on the portal should be displayed to sensitize the states and infuse competitive spirits amongst them.

The Data Centre specific portal on National Single Window System (NSWS), as recommended by Authority above, must further have provisions for –

- Online registration of new DCs/DC Park operators

A. DATA CENTERS

Pradhyakshan nari shikshakshir karita hai ki data center prakalpan yojna (DCCI) ke hisse ke rup mein bharta sarkar ko in kshetra ke liye, kuch rajakarmi aur gaur-viniyog prakalpan karo pariksha karne ke liye, jo ki sami rahun ko unke niyat ko nayak samay main aane ke vinayak aur gaur-viniyog prakalpan ko pariksha karne ke liye pustu dene ke samay sami rahun me laap kila utara chaahit hain.

Tadkaara, sarkar ko data center aur DCCI prakhralna ke liye prakalpan ki do samudayi bnaani chaahit hain. Kshetra sarkar ek gurud me kind bhi nishan prakalpan honge. Uska, rahun dehra apanne ke liye dinim like dehra chahit hain.


Pradhyakshan karne ke liye aapnaa dcci ko kshetra ki shikshakshir karne ke liye hain- ek dinci adhiniyam ke hisse ke rup mein, pradhyakshan bhim samvadish ek dinci prakhralna (pya 2.233 deh) ke liye gaurvyik ek dinci prakhralna (ensi) par ek data center pariksha potalo ko samvadana ki shikshakshir chaahit hain.


Nemul samhi wadi system (ensi) par data center pariksha potalo, trakaakar aap pradhyakshan dehra anumalt kila gaya hain, ke liye aur pravashan hote chaahit.##
without any obligation or registration fees. This will be purely for statistical and record purposes.

- Facility to upload all policy initiatives and benefits offered by individual states for DC sector.
- Displaying a comparative statement of such benefits and the time taken for issuing clearances on the portal.

The portal should also be used for accessing specific aspects related to Centre-state coordination including issue of notifications, announcement of schemes & benefits, frequently asked questions, facility to interact and respond to queries of potential investors, and grievance redressal of existing and prospective DC/DC Park operators.

The Authority recommends that a national level DCRI (Data Center Readiness Index) framework be implemented by Central Government to rank Indian states as per their policy and regulatory environment to promote the DC sector. The Data Centre Industry Council (DCIC) proposed to be formed under MeitY’s draft DC policy, should be entrusted with the work of finalizing the parameters, their weightages, and methodology for giving marks against each parameter. However, an indicative list of parameters and their weightages for ranking the states is suggested below:

The Authority recommends that all the permissions/clearances required by Centre/States/UTs to build and operationalize a Data Centre should be listed on National Single Window System (NSWS) and such permissions/clearances should be given through this portal within prescribed timelines. The various permissions should be categorized as most critical, critical, non-critical, and non-critical categories. It is recommended that all such permissions that fall under the non-critical category be deemed to have been granted after the prescribed timelines elapse. The Authority further recommends that NSWS portal should be interactive in nature, with provision to use new technologies like Artificial Intelligence, Machine learning etc. to facilitate active interaction (including FAQs) between stakeholders and states with provisions to raise queries/grievances and seek responses/resolutions etc.

The Authority recommends that the Central Government should prepare guidelines listing out the incentives for the Data Centres and DC Parks for the states that have scanty DC footprints, in line with other advanced states. The scheme should, inter-alia, offer incentives in form of land, capital subsidy and Interest subsidy. In such a scheme, while the land may be offered by respective states, the land may be offered by respective states,
FOCUS: DATA CENTERS

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<tr>
<th>S. No.</th>
<th>PARAMETER</th>
<th>SUGGESTED WEIGHTAGE (%)</th>
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<tr>
<td></td>
<td><strong>STATUTORY CLEARANCE &amp; EODB (35%)</strong></td>
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<tr>
<td>1</td>
<td>States giving separate category/ recognition to DC/DC Parks building infrastructure vis-à-vis commercial office buildings or malls within the state in the building byelaws of the state.</td>
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<td>2</td>
<td>Performance of states to grant permissions for establishing DC/DC Parks on centralized online portal within specified timeline</td>
<td>10</td>
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<td>3</td>
<td>States categorizing DC/DC Parks for exemption from inspections under provisions of various Acts/Laws related to factories, Shops and Commercial establishment, and Labour &amp; Wages</td>
<td>5</td>
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<tr>
<td>4</td>
<td>States categorizing DC/DC Parks as ‘Essential Services’ in respective Acts</td>
<td>5</td>
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<tr>
<td>5</td>
<td>Availability of Free ROW permission for laying OFC for connecting DC/DC Parks</td>
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<tr>
<td>6</td>
<td>Data Centre building norms included in building norms of State policy</td>
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<td></td>
<td><strong>FISCAL INCENTIVES (25%)</strong></td>
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<td>7</td>
<td>Various fiscal incentives offered to DC/DC Parks</td>
<td>12</td>
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<tr>
<td>8</td>
<td>Whether Capital and interest subsidy offered to DCs and DC Parks</td>
<td>10</td>
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<tr>
<td>9</td>
<td>Whether Capital and interest subsidy or any other fiscal incentive linked to Green Data Certification</td>
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<td></td>
<td><strong>INFRASTRUCTURE RELATED (15%)</strong></td>
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<td>10</td>
<td>Pre-provisioned availability of DC parks with the requisite infrastructure supply to host multiple DC OR Availability / identification of land for DCs/ DC Parks</td>
<td>10</td>
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<tr>
<td>11</td>
<td>Whether available Land in DC Parks or otherwise is being offered at special rate</td>
<td>5</td>
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<td></td>
<td><strong>POWER RELATED (17%)</strong></td>
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<tr>
<td>12</td>
<td>Separate lower/ Special power tariff for DCs/DC Parks</td>
<td>5</td>
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<td>13</td>
<td>Waiver of Electricity Duty for DC/ DC Park</td>
<td>3</td>
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<tr>
<td>14</td>
<td>Ab-initio availability of Power supply from dual power grid networks for DC/ DC parks</td>
<td>4</td>
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<tr>
<td>15</td>
<td>Permission to DC/DC Parks to consume Renewable Energy directly from power producers via open access system, with no restrictions and additional surcharge</td>
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<td>16</td>
<td>Whether fixed demand charges on electricity have been waived off</td>
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<td><strong>WATER RELATED (8%)</strong></td>
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<td>17</td>
<td>Policy for making available redundant/alternate water supply to DC/DC Parks</td>
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<td>18</td>
<td>Declare water supply to DCs and DC Parks as special purpose supply and not subject to any interruption</td>
<td>3</td>
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<tr>
<td>19</td>
<td>Separate lower water charges for DC/DC Parks</td>
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<td></td>
<td><strong>TOTAL</strong></td>
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the expenses on other offered incentives including capital and interest should have at least 75% contribution from central government. The proliferation of digital infrastructure in such states will not only help in boosting economy but will also promote other linked industries in these States.

The Authority recommends that it should be mandatory for all existing and new DCs to register themselves online on the NSWS centralized portal. The data in respect of ownership, capacities and the benefits availed from the Government to establish the DC should be captured on the portal. The registration of DCs should be without any fee or any other obligation. The States should be asked to ensure that all existing DCs availing any benefits from States or even otherwise should register with NSWS centralized portal. Any recurring or new permissions to existing DCs must be processed only after verifying such a registration.

The Authority recommends that the number of Data Centre Economic Zones (DCEZ) that have been envisaged in MeitY’s draft Data Centre Policy, needs to go beyond four.

The Authority recommends that out of the list of 33 SEZs, one SEZ each from State of Andhra Pradesh, Kerala, Karnataka, Maharashtra, Haryana, UP, MP, Gujarat, Rajasthan, and Odisha, can be identified for either converting them into DCEZs or for carving out zones out of these SEZs for establishing DCs/DC parks. Further, in order to avoid the concentration of further Data Centre Parks in already developed locations, those States that are lagging in DCs, should be supported by the Centre for setting up of a Data Centre Parks in such states. For such States, the Center should prepare a scheme for setting up DC Parks, either in line with other states who have come up with Data Park Schemes or independently. The scheme should, inter-alia, offer incentives in form of land, capital subsidy and interest subsidy. While the land is to be offered by respective states, the expenses on other offered incentives including capital and interest subsidy should have at least 75% contribution from central government.

The Authority recommends that following incentives should be provided by Central Government for establishing DC Parks (DCEZs)

(i) Time-bound single window clearance for Central and State level approvals.

(ii) Waiver of import restrictions on essential Data Centre operational equipment.

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(i) Time-bound single window clearance for Central and State level approvals.

(ii) Waiver of import restrictions on essential Data Centre operational equipment.
In addition to incentives rolled out by the Centre, the Authority recommends that guidelines should be issued for the States for rolling out incentives for DC Parks (similar to DCIS guidelines for DCs). The decision on implementing these guidelines for rolling out incentives for DC Parks should be left to the States.

The following incentives can be included in the guidelines for DC Parks:

(i) Deemed distribution licensee status for electricity for DC Park developers
(ii) Provision of Power and water at reduced rates
(iii) Waiver of Electricity Duty
(iv) Capital subsidy in buildings and infrastructure
(v) Reimbursement of stamp duty, conversion fee, transfer duty and registration fee
(vi) Providing free Right of Way for Telecom Service/Infrastructure Providers for building telecom networks to and within DC Parks
(vii) Time-bound single window clearance for central and state level approvals.

The Authority is of the view that there is a need for different India-specific building standards for construction of DCs and recommends that Bureau of Indian Standards (BIS) may be entrusted with developing the standards in a fixed timeframe. For this, BIS should carry out a detailed consultation with the industry, inter-alia, covering following aspects of building norms –

A. For DCs
   i. Floor to Ceiling height
   ii. Load Bearing capacity
   iii. Floor Space Index Norms
   iv. Norms for housing generators, Chillers / Heating, ventilation, and air conditioning (HVAC) system, and other associated utilities like batteries to support DC load.
   v. Parking requirements
   vi. Window requirement
   vii. Boundary walls
   viii. Mandatory rainwater harvesting and recycling arrangements to be included in DC building.

केंद्र सरकार द्वारा शुरू किए गए पोलाईकों के अलावा, पाबंदिकरण सम्बन्धी कर्त्तव्य है कि गैर-गैर भौगोलिक के लिए पोलाईकों को शुरू करने के लिए राज्यों के लिए विभाग ने जारी किये जाने चाहिए, (डीसी के लिए डीसीआईएस डिसेंट्रियों के समान ) डीसी पाकों के लिए पोलाई देने के लिए इन दिशा का निर्देशन उन्हें लाभ करने के लिए निर्णय राज्यों द्वारा ज्ञापित जाने चाहिए। डीसी पाकों के लिए वित्तीय निर्देशित को निर्धारित किया जा सकता है:

(i) डीसी पाक के लिए विजेता के लिए डीसी वित्तीय लाभवान का दर्जा
(ii) कम दरों पर विजेता और पामा का प्राप्तिगत
(iii) विजेता शुलक में छूट
(iv) भवनों व तंत्रज्ञात कूदङ्के में पूर्णता मिलकर
(v) निर्माता शुलक, कम्यूनाईटी शुलक, त्रांगाफ्य शुलक, और पंजोंकरण शुलक
(vi) निर्माता के मीटर और तलाशार्थी नैतिकता बनाने के लिए तलाशार्थी नैतिकता नैतिकता अनुपालन
(vii) विषय और राज्यस्तर की जंतूं के लिए सम्बंधित सिमल विवेचना की अनुमति।
ix. Water and diesel storage
x. Entry routes for Information & Communication Technology (ICT) connectivity and High Tension (HT) power lines with redundancies
xi. Seismic standards

B. For DC Parks - In addition to some of the above points that are also applicable for DCs, covering the following:
i. Own sub-station
ii. Common DGs for multiple DCs
iii. Integration with nearest fire, police station & hospitals
iv. Mandatory rainwater harvesting and recycling arrangements to be included in DC parks.

The Authority also recommends that till necessary changes are done in National Building Code of India by BIS, as an interim measure, MeitY should collaborate with approved Central Government organizations to create broad criteria for Data Centre structures, easing specialized construction and safety permits.

The Authority recommends that there is a requirement of India specific standard-based certification framework for the DCs and for the same, BIS be entrusted with the task. In the meantime, till BIS comes up with India-specific standards, the Authority recommends that BIS may ask DCs to follow any one or more of the international standards like EN 50600.

The Authority recommends that trusted source procurement applicable for licensees under section 4 of India Telegraph Act 1885, should also be made applicable for DCs for security sensitive equipment.

The Authority recommends that Telecommunication Engineering Centre (TEC) and Standardisation Testing and Quality Certification (STQC) Directorate should jointly work to develop DC security certification framework based on third party Audits.

The Authority recommends that if DCs have to establish captive fibre network, they should be allowed to do so under existing licensing framework.

The Authority reiterates that Government should
implement its recommendations on “Roadmap to Promote Broadband Connectivity and Enhanced Broadband speed” dated 31st August 2021 in totality and on priority.

The Authority recommends that other coastal states intending to promote setting up of Cable Landing Stations (CLS) may consider incentives and facilitations as has been done by State of Gujarat in its IT/ITeS Policy 2022-27.

The Authority recommends that Right of Way (RoW) charges for laying and maintaining Optical fibre cables (OFC) infrastructure to CLS may be waived off for encouraging and supporting the new CLS establishment for submarine cables.

The Authority recommends that DoT may take up with Ministry of Power to look into the submissions made by stakeholders for formulation of a DC conducive yet simplified framework for power to address the issues that have been flagged in this section.

The Authority recommends that for the overall development of green DCs in India, energy banking provisions for DC/DC park operators who opt to produce renewal energy for consumption for DC/DC Parks should be extended on yearly basis.

In addition, to promote generation and consumption of renewable energy, the Authority recommends that DoT may take up the issue of providing land on priority and on concessional rates to DC/DC park operators for establishing solar power plants.

The Authority recommends that DG sets at DC and DC Park sites should be allowed to operate as backup power infrastructure without any hindrance from State Pollution Control Boards (SPCB) or Central Pollution Control Board (CPCB). Since power outages for few hours will require huge quantity of diesel to run DGs for large DCs, the Authority recommends that the diesel storage regulation may be suitably revised to cater for the requirement of DCs to operate for a minimum back-up period for up to 48 hours.
The Authority recommends that the Indian Green Building Council (IGBC) along with Telecommunication Engineering Centre (TEC) should be entrusted with task of framing certification standards of green DCs in India. As far as linking incentives to Green DCs is concerned, the Authority feels that this should be considered in totality after the certification process is put in place. Authority has made certain recommendations in this regard in coming sections. However, the Authority will revisit the issue later, if required.

The Authority recommends that adoption of alternate cooling solutions should be left to market forces. In any case, the Authority has already prescribed certification policy for Green Data Centres. Once the Green data certification framework is in place, the Authority recommends that as part of Guidelines to State Governments, Centre should then recommend linking Capital/interest subsidy or any other fiscal incentive that the State Government is offering to DCs to the Green DC Certification they hold. Alternatively, the Authority recommends that if a DC acquires higher rated Green DC certification, their fiscal incentives can be increased. This would give the required motivation to DC operators to adopt alternate cooling technologies.

The Authority recommends that Government should launch a scheme to incentivize (in the form of Government subsidy) implementation of innovative solutions and green initiatives by the DCs. For the same, it may invite Requests for Proposal (RFP) on an experimental basis for new technology/methods/processes that can be adopted for promoting green DCs.

For availing Centrally sponsored incentives, the Authority recommends that, as part of the Central Policy, States should be asked to–

- Declare water supply to DC/DC parks as special purpose supply and not to subject such supply to any interruption.
- Data Centres will be allowed to store water within their premises which can last for seven days.
- Allow more than one water connections for DCs/DC Parks as a part of their respective DC policy.

The Authority recommends that in all future projects, DC parks operators should be mandated to incorporate waste-water recycling plants in their designs for DC Parks.
INTERNATIONAL EXPERIENCE OF CABLE TV DISTRIBUTION

Q: Please share the international Experience of cable TV distribution in UK & USA?

Hemant Chaturvedi, Satellite & Cable TV Consultant, Bangalore

Ans.: UK

There are four major forms of digital television (DTV) broadcast in the United Kingdom: a direct-to-home satellite service from the Astra 28.2°E satellites provided by Sky UK, a cable television service provided by Virgin Media (known as Virgin TV); a free-to-air satellite service called Freesat; and a free-to-air digital terrestrial service called Freeview. In addition, an IPTV system known as BT Vision is provided by BT. Individual access methods vary throughout the country. 77% of the United Kingdom has access to HDTV via terrestrial digital television. Satellite is the only source of HDTV broadcast available for the remaining 23%.

Cable TV has yet to reach the levels of ubiquity in the UK that it has in the USA, although UK cable providers do have a lot to offer including over digital TV channels, HD channels plus access to a vast library of on-demand content – and all without the need for a satellite dish on the outside of your home. Currently there are only a handful of cable TV providers in the UK with their degree of availability being one of the
main differences between them. d. Services 19 UK cable TV networks are not nearly as widespread as those in other parts of the world. Virgin Media is far and away number one amongst UK cable TV providers. Small World is a regional cable TV, broadband and phone provider which has a small fibre optic network localised to parts of southwestern Scotland, the Borders, Cumbria and Lancashire. WightCable is a cable TV, broadband and phone provider with a fibre optic network that serves customers on the Isle of Wight. BT TV isn’t a cable TV provider in the strictest sense of the term although all of BT Vision’s on-demand content is delivered into consumers’ homes via their broadband connection.

USA

The 1992 Cable Act codified, and the Commission has adopted, a regulatory plan allowing local and/or state authorities to select a cable franchisee and to regulate in any areas that the Commission did not pre-empt. Local franchising authorities have adopted laws and/or regulations in areas such as subscriber service requirements, public access requirements and franchise renewal standards. Under the 1992 Cable Act, local franchising authorities have specific responsibility for regulating the rates for basic cable service and equipment. iii. The Communications Act requires that no new cable operator may provide service without a franchise and establishes several policies relating to franchising requirements and franchise fees. The Communications Act authorizes local franchising authorities to grant one or more franchises within their jurisdiction. However, a local franchising authority may not grant an exclusive franchise, and may not unreasonably withhold its consent for new service. Included in the grant of a franchise to a cable system are rights relating to the construction of the system, including the local franchising authority’s authorization to use public rights-of-way, easements, and to establish the areas to be served. In addition, the law requires just compensation 78 to property owners who have suffered damages as a result of a cable operator's construction, operation, installation, or removal of its cable television facilities. Moreover, franchising
authorities are required to ensure that access to cable service is not denied to any group of potential residential cable subscribers on the basis of income class. Although the Communications Act also generally precludes the regulation of cable systems as common carriers, it authorizes the Commission, to require, if it chooses, the filing of informational tariffs for intrastate communications services, other than cable service, which are provided by a cable system. iv. Franchising authorities may charge the cable operator a fee for the right to operate a cable system in that franchise area; however, the franchise fee paid by the cable system can be no more than five percent of its annual gross revenue. A franchising authority may use the money collected from this fee for any purpose. A cable operator may list any applicable franchise fee as a separate item on the subscriber's bill.

Multichannel television in the United States has been available since at least 1948. The United States is served by multichannel television through cable television systems, direct-broadcast satellite providers, and various other wireline video providers. The Telecommunications Act of 1996 defines a multichannel video programming distributor (MVPD) as "a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming", where a channel is defined as a "signaling path provided by a cable television system."