

Checklist for DCS Submission

Name of Building: _____

Site Location: _____ Lot No. _____, Site No. _____

Name of Consumer: _____

Date of Submission: _____ / _____ / _____ (DD/MM/YYYY)

Revision no. of Submission: Revision: _____ (Revision 0 as 1st submission, Revision 1 as 2nd submission etc .)

Part A : (To be completed by the Authorized Person / Registered Professional Engineer of the Building)

<u>Information to be submitted with this DCS submission</u>			
Please put a tick if the following information are submitted together with this DCS submission			
	Yes	No	Remarks
1. <u>General</u>			
1.1 DCS submission with AP/ RPE. signature	<input type="checkbox"/>	<input type="checkbox"/>	Hard copy: <input type="checkbox"/> Soft copy: <input type="checkbox"/> PDF. / CAD.
1.2 General Building Plan with highlight of all A/C area	<input type="checkbox"/>	<input type="checkbox"/>	
1.3 Summary of changes (for re-submission only)	<input type="checkbox"/>	<input type="checkbox"/>	
2. <u>Detailed Cooling Load Calculation(s) showing the following information:-</u>			
2.1. GFA	<input type="checkbox"/>	<input type="checkbox"/>	_____ m ²
2.2. All air-conditioned area	<input type="checkbox"/>	<input type="checkbox"/>	_____ m ²
2.3. Type of use and its air-conditioned area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Retail: _____ m ² <input type="checkbox"/> Office: _____ m ² <input type="checkbox"/> School: _____ m ² <input type="checkbox"/> Hospital/Clinic: _____ m ² <input type="checkbox"/> Sports Centre: _____ m ² <input type="checkbox"/> Fire/Police Station: _____ m ² <input type="checkbox"/> Hotel: _____ m ² <input type="checkbox"/> Railway: _____ m ² <input type="checkbox"/> Others: _____ m ²
2.4. Adopted Design Parameters:-			
(a) Occupancy density	<input type="checkbox"/>	<input type="checkbox"/>	_____ m ² / person
(b) Occupancy schedule	<input type="checkbox"/>	<input type="checkbox"/>	
(c) Lighting power density	<input type="checkbox"/>	<input type="checkbox"/>	_____ W/m ²
(d) Equipment and other power density	<input type="checkbox"/>	<input type="checkbox"/>	_____ W/m ²
(e) Designed indoor temperature	<input type="checkbox"/>	<input type="checkbox"/>	_____ °C
(f) Safety factor allowed, if any	<input type="checkbox"/>	<input type="checkbox"/>	_____ %
(g) Design temperature* of terminal air-conditioning equipment (such as air handling units / fan coil unit, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	Chilled Water Supply Temperature: _____ °C Chilled Water Return Temperature: _____ °C
*Please refer to the requirement as specified in Technical Guidelines for Connection to DCS			

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	Yes	No	Remarks
2.5. Estimated max. cooling load and cooling load density for each type of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Retail: _____ kW _____ kW/ m ² <input type="checkbox"/> Office: _____ kW _____ kW/ m ² <input type="checkbox"/> School: _____ kW _____ kW/ m ² <input type="checkbox"/> Hospital/Clinic: _____ kW _____ kW/ m ² <input type="checkbox"/> Sports Centre: _____ kW _____ kW/ m ² <input type="checkbox"/> Fire/Police Station: _____ kW _____ kW/ m ² <input type="checkbox"/> Hotel: _____ kW _____ kW/ m ² <input type="checkbox"/> Railway: _____ kW _____ kW/ m ² <input type="checkbox"/> Others: _____ kW _____ kW/ m ²
2.6. Overall estimated max. cooling load of the building and the cooling load density	<input type="checkbox"/>	<input type="checkbox"/>	_____ kW _____ W/m ²
2.7. Overall estimated light cooling load of the building and the operating schedule, if any	<input type="checkbox"/>	<input type="checkbox"/>	_____ kW
2.8. Air-conditioning system schematic drawing(s)	<input type="checkbox"/>	<input type="checkbox"/>	Secondary pump flow rate:_____ (m ³ /s)
2.9. All air-conditioned area layout drawing(s)	<input type="checkbox"/>	<input type="checkbox"/>	
2.10. Consumer's computer simulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> : E20.; <input type="checkbox"/> Other: _____ CHWS/R Temp.: _____ °C/ _____ °C
2.11. Provision for maintaining the required return chilled water temperature* on consumer side before entering the heat exchange of DCS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Variable speed chiller pump at consumer's side <input type="checkbox"/> By pass pipe completed with a modulating valve connecting the consumer's chilled water supply and return mains <input type="checkbox"/> Others please specific: _____ (e.g. differential pressure transmitters (DPT), pressure independent control valve (PICV)) etc.
*Please refer to the requirement as specified in Technical Guidelines for Connection to DCS			

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	Yes	No	Remarks
<p>3. <u>Drawing(s) of DCS pipeline showing the following information:</u></p> <p>3.1. DCS pipe routing from designated valve chamber to substation, including setting out of pipe, pipe trench, pipework penetration openings at walls, etc.</p> <p>3.2. DCS cable duct routing from designated valve chamber to substation, including setting out of duct, ductwork penetration openings at walls, etc.</p> <p>3.3. DCS trench details with section, including setting out, backfill materials and mounting bracket details, etc.</p> <p>3.4. Location of structure joint of the building / common utility enclosures/tunnel etc where the DCS pipework would pass through.</p> <p>3.5. Spatial planning of maintenance access to DCS pipeline / cable ducting</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Level: B.L. at _____mPD</p> <p>Level: B.L. at _____mPD Water level of site: _____</p> <p>Level: B.L. at _____mPD Backfill materials: _____</p> <p>Settlement figure: _____mm</p>
<p>4. <u>Drawing(s) of substation showing the following information:</u></p> <p>4.1. Location and level of substation</p> <p>4.2. Heat exchangers and accessories for equipment installation(s)</p> <p>4.3. Clearance separation from wall/ column to heat exchanger's plinth</p> <p>4.4. Clear internal room size (length, width and height)</p> <p>4.5. Temporary bypass pipe to facilitate pipe flushing work before the DCS is put into service</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Location: Grid Level: G/F or B1/F (Please delete as appropriate) at _____ mPD</p> <p>Drawing No.: _____</p>
<p>5. <u>Other drawing(s) showing the following information:</u></p> <p>5.1. Equipment delivery/ maintenance route with satisfactory swept path study conducted</p> <p>5.2. 24-hour free access route to DCS installations</p> <p>5.3. Maintenance swept path layout for equipment inside substation</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	

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	Yes	No	Remarks
5.4. Supporting facilities for equipment delivery/ maintenance of the equipment	<input type="checkbox"/>	<input type="checkbox"/>	
5.5. Hoisting equipment for installation work and future O&M	<input type="checkbox"/>	<input type="checkbox"/>	S.W.L : _____ kg
6. <u>Works Programme showing the following information:</u>			
6.1. Required availability date of DCS puddle flange to be casted in building perimeter wall, such as basement diaphragm wall	<input type="checkbox"/>	<input type="checkbox"/>	Date: ____ / ____ / ____ (DD/MM/YYYY) D-Wall thickness: _____
6.2. Handover date of work area / pipe trench for DCS pipe / ducting installation to EMSD	<input type="checkbox"/>	<input type="checkbox"/>	Date: ____ / ____ / ____ (DD/MM/YYYY)
6.3. Handover date of substation to EMSD	<input type="checkbox"/>	<input type="checkbox"/>	Date: ____ / ____ / ____ (DD/MM/YYYY)
6.4. Chilled water supply date of consumer side for T&C of the heat exchangers and related facilities.	<input type="checkbox"/>	<input type="checkbox"/>	Date: ____ / ____ / ____ (DD/MM/YYYY)
6.5. Intended start date of DCServ	<input type="checkbox"/>	<input type="checkbox"/>	Date: ____ / ____ / ____ (DD/MM/YYYY)
7. <u>Other supporting information:</u>			
7.1. Consumer's backup chiller plant justification, if any	<input type="checkbox"/>	<input type="checkbox"/>	
7.2. Other please specific: _____	<input type="checkbox"/>	<input type="checkbox"/>	
8. <u>Any other documents as required by EMSD</u>	<input type="checkbox"/>	<input type="checkbox"/>	

Part B : (To be completed by the Authorized Person/ Registered Professional Engineer and Applicant of the building)

Declaration by the Authorized Person / Registered Professional Engineer of the Building	
<p>I, as the *Authorized Person (AP)/ Registered Professional Engineer (Building Services or Mechanical Engineering discipline) (RPE) of the building, confirm that the above submitted information is accurate and compliance with the relevant technical requirements as specified in latest Technical Guidelines for Connection to District Cooling System and District Cooling Services Supply Condition.</p> <p>Signature of *AP/ RPE: _____</p> <p>Full name of *AP/ RPE: _____</p> <p>*AP/ RPE Registration No.: _____</p> <p>(*Building Services / Mechanical Engineering Discipline)</p> <p>Company: _____</p> <p>Tel. No.: _____ Fax No.: _____</p> <p>Email: _____</p> <p>Corresponding address: _____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p> <p>(*Please delete as appropriate)</p>	<p style="text-align: center;">Company Chop:</p>
Declaration by the Applicant of the Building	
<p>I, as the Applicant of the building, confirm the above *AP/ RPE of the building is employed by our company, and I fully support his/ her submission.</p> <p>Signature of Applicant or his Representative: _____</p> <p>Full name of Applicant or his Representative: _____</p> <p>Company: _____</p> <p>Tel. No.: _____ Fax No.: _____</p> <p>Email: _____</p> <p>Corresponding address: _____</p> <p>_____</p> <p>_____</p> <p>Date: _____</p>	<p style="text-align: center;">Company Chop:</p>