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Climate Change Agreement for Data Centres

Note 04:Applying for a Climate Change Agreement (CCA)

Updated January 2021

This document describes:

- Who is involved with the setting up and maintenance of a CCA

- What the various parties do and when they do it

- Where you fit into the process and the actions you need to take

The following 4 pages provide an overview of the three stages of a CCA agreement:

- The background as to how the techUK CCA scheme came about
- Steps in applying for a data centre CCA
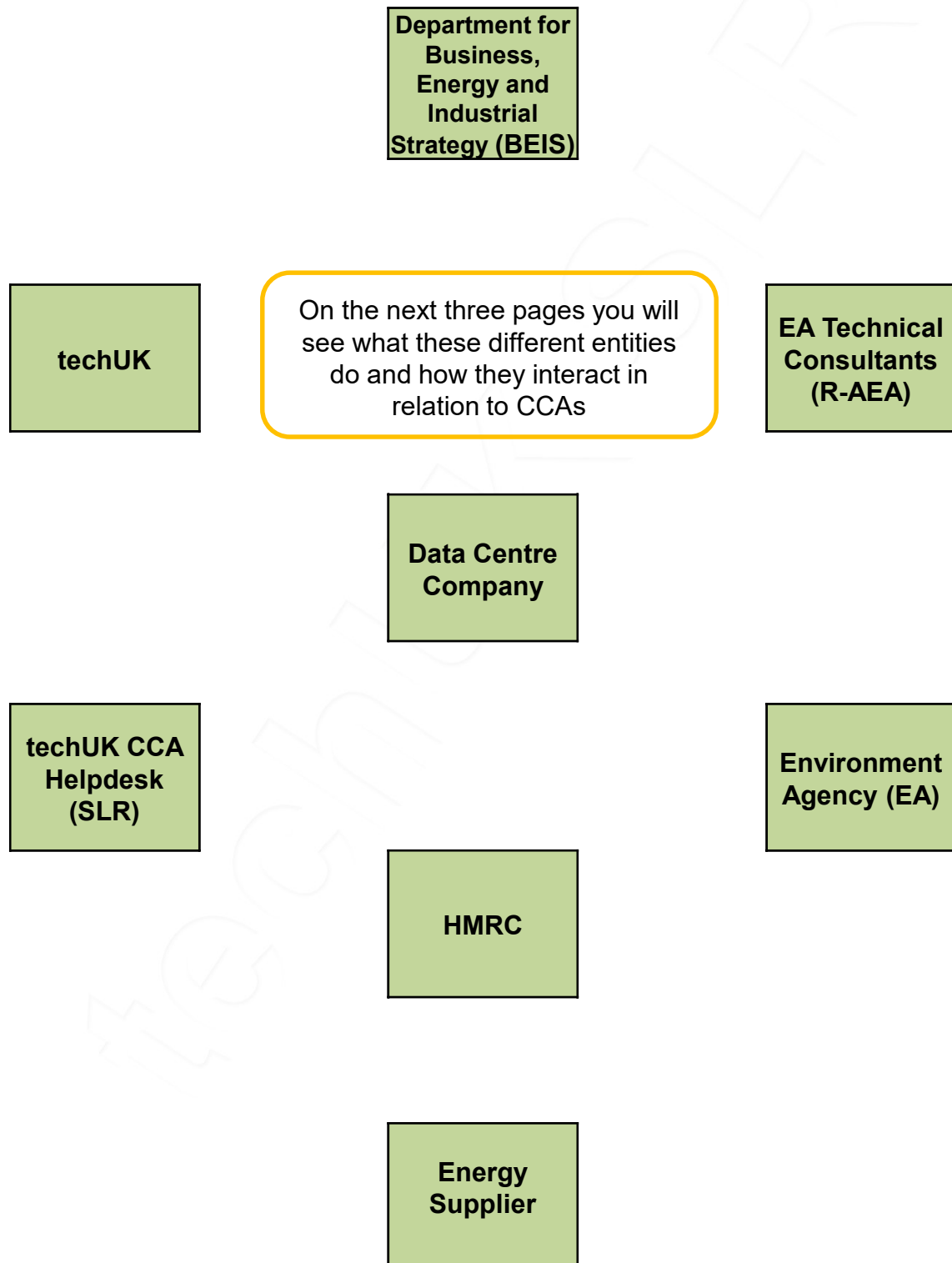- What happens after your CCA is activated

Pages 6 and onward drill down to further detail on the steps in the process of applying for a data centre CCA.

We refer out to a number of supporting information notes to provide detailed guidance on some requirements that you will need to know about in preparing your application.

However if you know little about what a CCA is and what the benefits may be for your organisation, we suggest you first read techUK Note 01: What is a CCA?

Who does What and When?

There are many entities involved with the creation and maintenance of your CCA. The process is complex so to explain who does what and when, we have split the process into 3 stages: Policy - Background to your CCA, Applying for your CCA and After your CCA is Activated.

Department for Business, Energy and Industrial Strategy (BEIS)

techUK

On the next three pages you will see what these different entities do and how they interact in relation to CCAs

EA Technical Consultants (R-AEA)

Data Centre Company

techUK CCA Helpdesk (SLR)

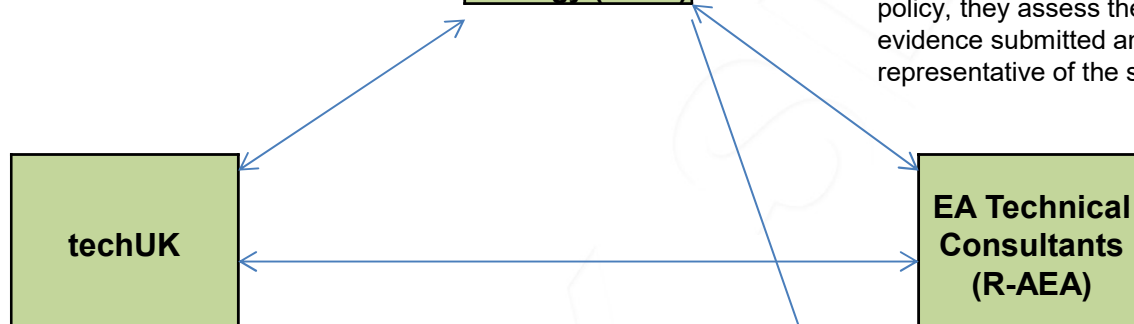**Environment Agency (EA)**

HMRC

Energy Supplier

This diagram shows who was involved with creation of the CCA agreement between BEIS and techUK (Sector Umbrella Agreement). This is the agreement that allows you to apply for a CCA

BEIS: Government departments develop policy. techUK negotiated with BEIS for the CCA. Now the statutory instrument has been laid, BEIS take a back seat UNLESS techUK wish to negotiate an expansion to the scheme.

Department for Business, Energy and Industrial Strategy (BEIS)

R-AEA: were the technical advisors to BEIS during the CCA negotiations so they were involved during the dialogue. They don't advise on policy, they assess the quality of evidence submitted and whether it is representative of the sector, etc.

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EA Technical Consultants (R-AEA)

techUK: is the administering trade association for data centres. techUK negotiated the CCA and their job is to aggregate demand for the scheme, inform the industry, help them prepare their applications and collate all the reporting and target data and so forth.

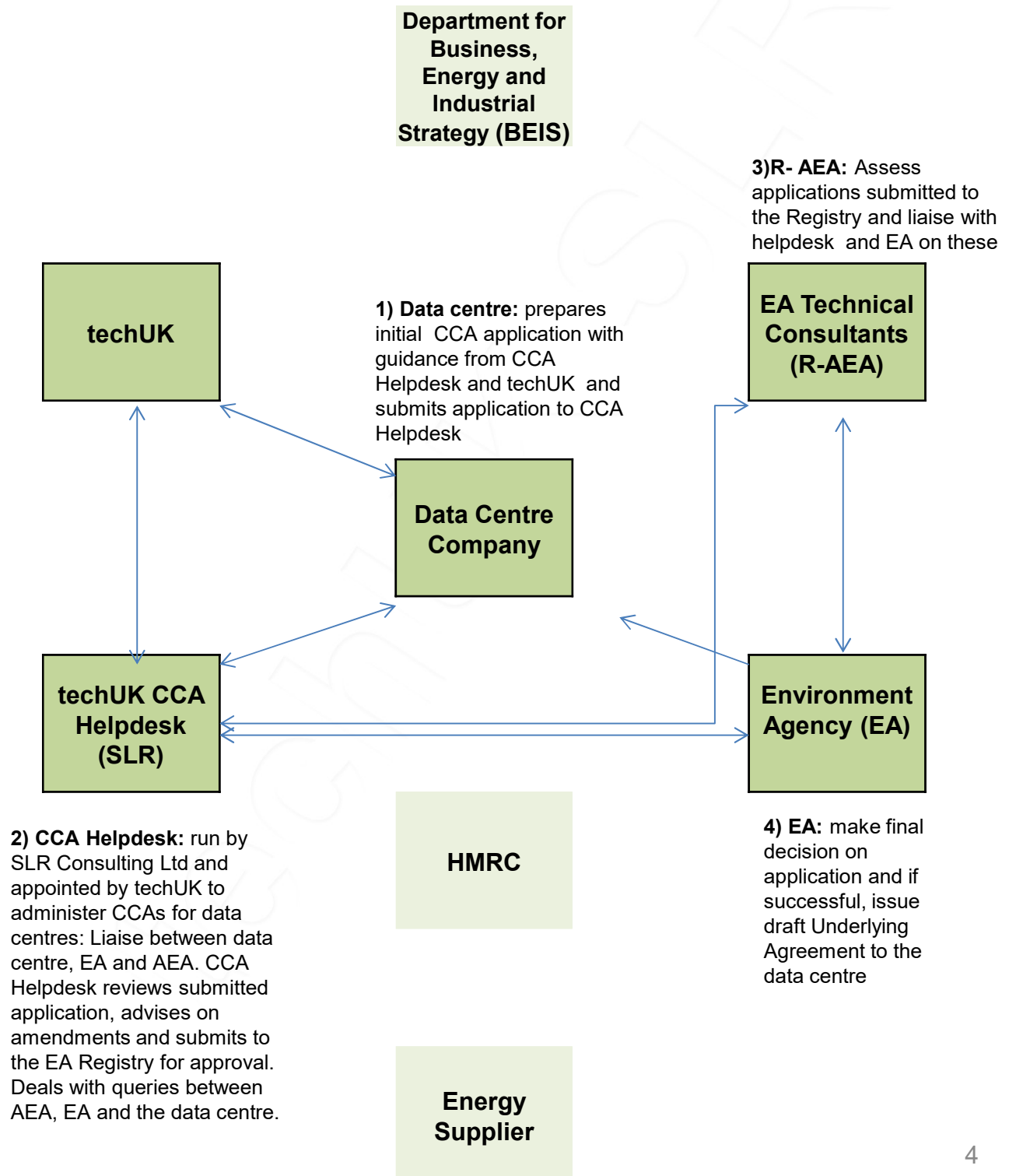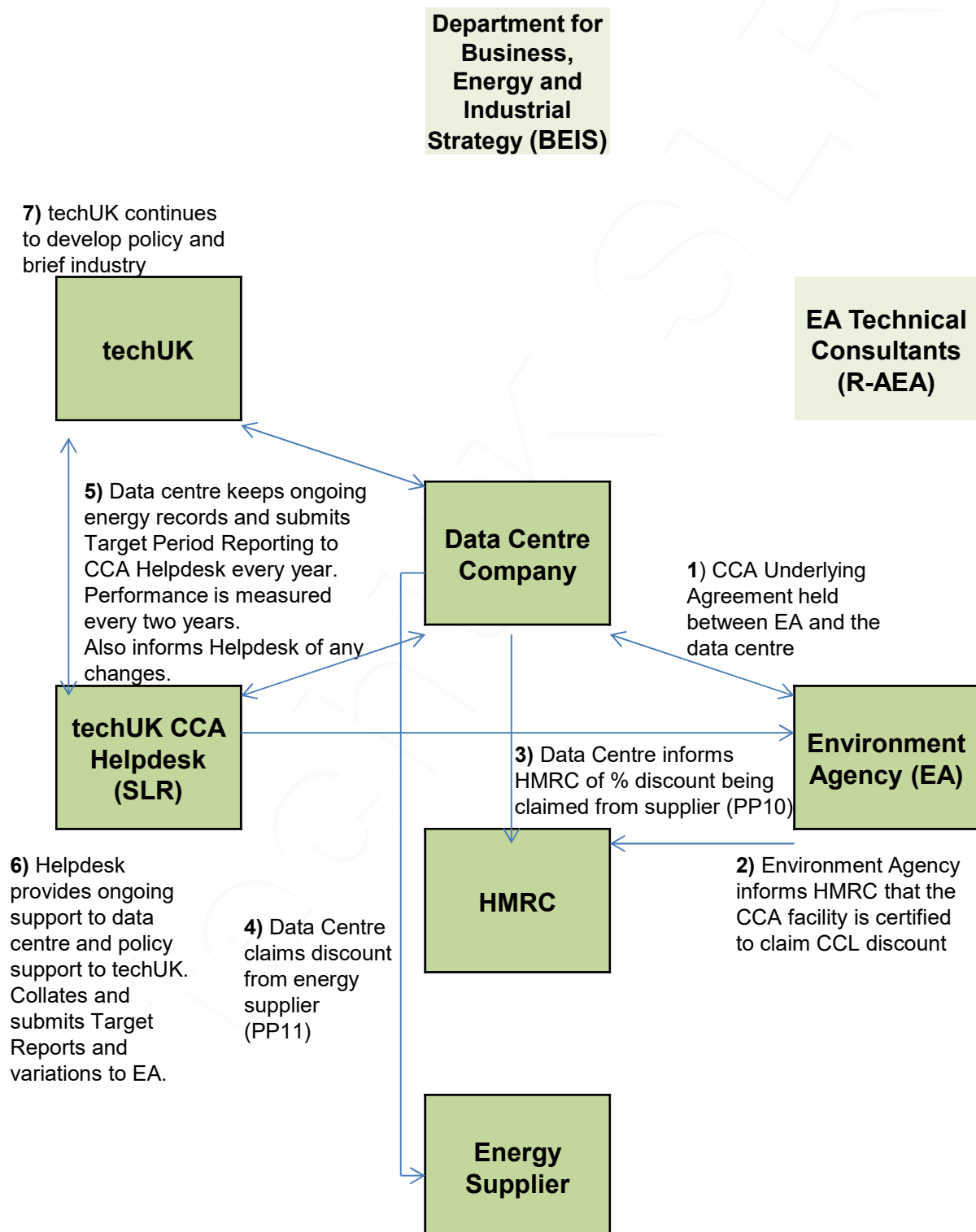**Data Centre Company**

techUK CCA Helpdesk (SLR)

Environment Agency (EA)

HMRC

Environment Agency: Once the policy tool was agreed, BEIS devolved all the administrative and enforcement functions to the EA as the official regulator for most environmental policy. So all the formal acknowledgements and issuance of agreements and auditing relating to the CCA scheme will come from the EA. So will the auditors!

Energy Supplier
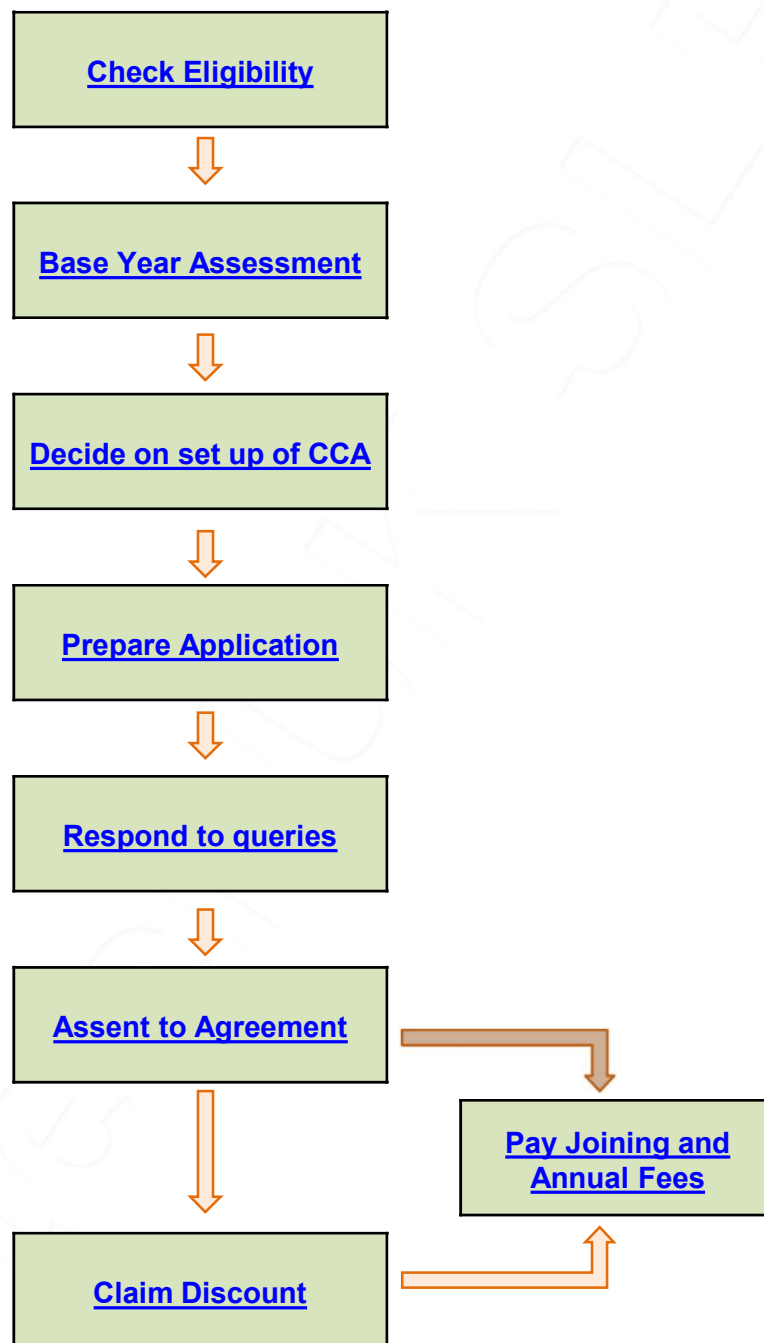
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When preparing your application, your primary contact will be with the techUK CCA Helpdesk although techUK will be on hand to assist with escalations, managing expectations and so on.

Department for Business, Energy and Industrial Strategy (BEIS)

3)R- AEA: Assess applications submitted to the Registry and liaise with helpdesk and EA on these

techUK

1) Data centre: prepares initial CCA application with guidance from CCA Helpdesk and techUK and submits application to CCA Helpdesk

EA Technical Consultants (R-AEA)

Data Centre Company

techUK CCA Helpdesk (SLR)

Environment Agency (EA)

2) CCA Helpdesk: run by SLR Consulting Ltd and appointed by techUK to administer CCAs for data centres: Liaise between data centre, EA and AEA. CCA Helpdesk reviews submitted application, advises on amendments and submits to the EA Registry for approval. Deals with queries between AEA, EA and the data centre.

HMRC

4) EA: make final decision on application and if successful, issue draft Underlying Agreement to the data centre

Energy Supplier

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Once your CCA has been activated, the work doesn't stop there. There are records to be kept, reporting to be done on a regular basis and you need to keep people informed of any changes.

Department for Business, Energy and Industrial Strategy (BEIS)

7) techUK continues to develop policy and brief industry

techUK

EA Technical Consultants (R-AEA)

5) Data centre keeps ongoing energy records and submits Target Period Reporting to CCA Helpdesk every year. Performance is measured every two years.
Also informs Helpdesk of any changes.

Data Centre Company

1) CCA Underlying Agreement held between EA and the data centre

techUK CCA Helpdesk (SLR)

Environment Agency (EA)

3) Data Centre informs HMRC of % discount being claimed from supplier (PP10)

6) Helpdesk provides ongoing support to data centre and policy support to techUK. Collates and submits Target Reports and variations to EA.

4) Data Centre claims discount from energy supplier (PP11)

HMRC

2) Environment Agency informs HMRC that the CCA facility is certified to claim CCL discount

Energy Supplier

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Steps in Applying for a CCA

There are a number of steps involved in the setting up of a CCA. The following slides provide detail on each step as in the flow map below.

Check Eligibility

⇩

Base Year Assessment

⇩

Decide on set up of CCA

⇩

Prepare Application

⇩

Respond to queries

⇩

Assent to Agreement

Pay Joining and Annual Fees

Claim Discount

The first step is to determine whether or not you are actually eligible to apply for data centre CCA. You need to be able to meet _all_ of the criteria in the blue box below.

The definition of eligibility for a data centre CCA is:

> _The business activity is the leasing or licensing of a data facility which is being used as a data centre. "data facility" means a room, or rooms sharing the same electricity supply circuit, occupied mainly or exclusively by computer equipment which is enabled to transfer data electronically, and where in respect of the room or rooms—_
>
> ➢ _the temperature and humidity is regulated in connection with the operation of the computer equipment;_
> ➢ _the electricity supply is at least 200kW; and_
> ➢ _electricity is supplied by a back-up electricity supply when the mains supply is interrupted._

This means that data centre businesses providing colocation (colo) space (both wholesale and retail) are eligible. A facility will be classed as colo if it houses third party computing assets (i.e. servers).

Space used to house servers that provide corporate IT function for the operator is _ineligible_. This exclusion is because only the colo model was energy intensive enough to qualify for the scheme.

However, techUK will be seeking to expand the scheme to enterprise operators on the basis that they do exactly the same thing.

The techUK Note 03a: CCA decision tree should help you determine whether your business meets the eligibility criteria for a data centre CCA:

Eligibility for a CCA is determined at a site, also known as a facility, level.

IMPORTANT NOTE: A mandatory requirement for a data centre CCA is that the IT energy _MUST_ be separately sub metered to record cumulative annual energy consumption in kWh/MWh. This must be in place before an agreement with the Environment Agency is entered into. Please see techUK Note 04b: Sub-metering for full details on requirements.

Applications to join a CCA can be submitted at any time except during the last 2 months of a target period or during the final target period. Please refer to the timetable on the next page to view target period dates.

Base Year Assessment

> Once you have determined that you should be eligible to apply for a CCA, you will need to prepare an application pack that will provide eligibility evidence and a baseline of energy performance for the site(s). The baseline will be used to set milestone targets for you to meet.

Each site or company that has a data centre CCA is given an energy saving target, measured as energy delivered to site relative to eligible IT energy (CCA 'PUE'). The target is set as a series of efficiency improvements compared to a "base year" (usually 2011). Each "target period" is two calendar years in duration; see the timetable below, and at the end of the target period the energy efficiency performance is assessed and compared to the target that has been set.

If the target is achieved then the CCL discount is retained for the next two year period.

If you fail to meet a target all is not lost. There is a "buy-out" mechanism that allows a company that has failed its target to buy "CO2 allowances" to offset the extra CO2 emitted.

Timetable for New CCAs (Updated July 2017)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
New Applications (i.e. those sites that have never been in the scheme before) (i) = for your information (!!) = might be applicable (A) = action required											
(i) Window for New Entrant Applications	to Oct 2014		Jan 15 to Oct 16		Jan 17 to Oct 18						
(i) CCL discount available upon signing up to a **CCA**	from date of assent to Jun 2015		from date of assent to Jun 2017		from date of assent to Jun 2019						
(!!) Deadline for submitting new entrant documentation to techUk CCA help desk						30th June 2018	No sites can join the techUK CCA after 31st October 2018				
Target period reporting and recertification											
(i) 1st Target Period 2013-14	Jan 2013 - Dec 14										
(i) CCL Discount for meeting 1st Target			Jul 15 - Jun 17								
(i) 2nd Target Period 2015-16			Jan 2015 - Dec 16								
(i) CCL Discount for meeting 2nd Target					Jul 17 - Jun 19						
(i) 3rd Target Period 2017-18					Jan 2017 - Dec 18						
(A) Reporting 3rd Target Period					2017: Jan-Apr	2018: Jan-Apr					
(i) CCL Discount for meeting 3rd Target							Jul 19 - Jun 21				
(i) 4th Target Period 2019-2020							Jan 2019 - Dec 20				
(A) Reporting 4th Target Period							2019: Jan-Apr	2020: Jan-Apr			
(i) CCL Discount for meeting 4th Target										Jul 21 - Mar 23	

techUK Note 04c: Measuring Your Base Year Data contains important detail on how a CCA PUE is calculated and how the IT energy should be measured. Please read this before collating your baseline data.

techUK Note 01: What is a CCA? contains further detail on targets.

Base Year Assessment

Your Base Year for Target Period 5 should be a full 12 months of auditable data starting 1st January 2018 or the earliest 12 months following this if you do not have data from this date.

Your data centre site can be seen as consisting of three separate CCA categories. You will need to undertake a site assessment to determine which category each area/activity on site falls under in order to establish what can be included in your CCA for your baseline. The categories are:

• Eligible Process
• Directly Associated Activities (DAAs)
• Ineligible energy/Ineligible area

You will need to determine the energy used in the separate categories and also annotate a site plan accordingly.

Eligible process has been covered on the previous page – this is *solely* the colo racking and does not include any of your own racking. See Note 04c: Measuring Your Base Year Data .

DAAs – these are the essential services that are required to support the eligible process. E.g. Chillers, UPS, switchgear and so on. You may also include areas/activities that are an essential part of the service offering they are included as part of your lease/licensing terms (e.g. Security, fire suppression etc). In addition, if a loading bay or lift etc. is essential for the customers to unload their equipment, you may be allowed to include this energy also.

Ineligible – these are all activities/areas that are not directly required to support the eligible process. Examples are: Canteen, offices, rest rooms, car park, corridors etc. Any IT racking for your own use is also classified as ineligible.

If an area is 'eligible' then lighting for that area should be treated as a directly associated activity, as are heating and cooling etc. If an area is *ineligible,* then lighting, heating and cooling and appliances in that area should also be treated as *ineligible.*

If more than 70% of all the primary energy used across the whole site is used in the eligible process then 100% of the site can claim the CCL discount. This is known as the '70/30' rule.

If you fail the 70/30 rule, you may still apply for a CCA however you will not be able to claim 100% of the site energy. Details of how this works are covered in techUK Note 01c: techUK CCA Briefing and details of how you evaluate your 70/30 status are covered in pages 16-21 of techUK Note 04a: CCA Supporting Documentation.

Once you have established what can be included in your CCA, you need to collate energy figures for 2011 base year for the IT energy and Site energy that are to be included in your CCA.

Target Unit structure/Bubbling sites: An important choice available to applicants with more than one site is how to structure the CCA. The options are shown below.

1. Keep each site separate, with an individual CCA for each site and hence each site has its own targets. A company with only one site has no choice other than this option.

2. Put all the sites into a single target unit or "bubble", with the energy and production data from each site aggregated together. Each site must still provide energy and production data separately, but the target is set for the whole bubble. Please note that all sites must belong to the same legal entity for this to be allowed (the companies house number is often requested).

3. Split the sites into several bubbles. For example, a company with 10 sites may decide to have 2 bubbles, one with 6 sites and another with 4.

Features of a bubbled agreement:

➢ One underlying agreement containing one Responsible Person and one Administrative Contact. Individual sites will not be contacted by the CCA Helpdesk.

➢ One target for the whole 'bubble' of sites and hence one result.

➢ CO_2 is in essence 'traded' between the sites to arrive at the one result.

➢ If the bubble fails the target then CO_2 is bought for entire bubble.

➢ If the bubble passes the target then the surplus CO_2 is banked for the bubble.

➢ Penalties are set on the entire bubble (up to 10% of CCL discount using base year data).

➢ If a site is sold then targets are reset to exclude this site's data.

➢ If the bubble created banked CO_2 at a previous target then the future of this needs incorporating into sales agreement.

Pros and Cons of bubbling:

Pros	Cons
Suits a central coordination approach	Expensive if you fail to comply

CHP Special Reporting Methodology (SRM): if you are a site in the EU ETS and have a CHP then you may wish to use the CHP Special Reporting Method. If so, please contact the techUK CCA Helpdesk for further information.

Contact the techUK Helpdesk for an application pack at techUK@slrconsulting.com. The pack will contain the required forms/spread sheets and supporting guidance

You will need to prepare a number of supporting documents for your application. Each document has to be uploaded separately to the EA CCA Registry. The list below shows each document required:

Document	Format	File Type to submit
CCA Application Form	Excel workbook	Excel
Process Description	Written document	pdf
Eligible Process Description	Written document	pdf
Description of Directly Associated Activities	Written document	pdf
Process Flow Map	Diagram	pdf
Annotated Site Plan	Diagram/CAD drawing/modified GPS image	pdf
70/30 evaluation	Excel spreadsheet with relevant calculations	Excel
Estimated consumption methodology	Usually spread sheet however can be written document or email statement	As appropriate

The following page contains information on completing the CCA Application form and detailed guidance on preparing the other documents can be found in techUK Note 04a: CCA Supporting Documentation.

The Environment Agency has quite specific requirements with respect to what they want to see included in these supporting documents, so it is important to get it right.

If the EA or AEA are not satisfied that the documents provide accurate evidence of eligibility and data then they will query the submission which will delay the application. techUK note 'Documentation delays' list some common areas in applications that need to be re-worked.

The techUK Helpdesk will pre-review your application documents to help you finalise your submission. This can be useful to highlight any areas that need amending as you go along and help steer you in the right direction if you are not clear on requirements.

The following three pages contain detail on completing the CCA Application Form. Once you have this form and the supporting documents completed, please email them to: techUK@slrconsulting.com

The CCA Application Form is an Excel workbook that needs to be completed for each CCA application. It requests administrative information relating to the site (e.g. address, is it in EU ETS), and information to establish that the site is eligible for a CCA

If you have a number of sites that you wish to bubble together, please provide details for all sites in the bubble in a single workbook. If you have a number of site but wish to have separate CCAs for each, then please complete a separate workbook for each site.

You will be asked for:

Contact details for the CCA:

➤ *Administrative Contact: this is the person from within the company that will be the main day-to-day contact for the CCA and all correspondence will be issued to this person.*

➤ *Responsible Person: this person must have sufficient management authority to be able to enter into an agreement on behalf of the company and be contactable at a UK address. The Responsible Person will be asked to assent to the agreement and will receive Penalty Notices if applicable.*

You are also required to submit base year data via this spreadsheet. The Base Year for data centre CCAs is 2011. If data for 2011 is not available, as previously stated, then a more recent period can be used, providing it is a continuous 12 month period and as old as is possible.

If the site is a brand new facility; i.e. a greenfield site, then it may apply without any firm base year information but it must provide estimates and commit to supplying 12 months of accurate data within a certain timeframe.

Energy data should:

➤ Include all energy streams to site
➤ Be provided in terms of kWh of delivered energy; i.e. as invoiced or supplied to the site - please see the next page for a list of conversion factors to convert fuel usage into kWh.
➤ If fuels are covered by EU ETS, you need to include the kWh usage of these however you also need to let us know by email the quantity that is covered under EU ETS.

EU ETS fuels will not be included in your targets however the data is captured in the event the site later comes out of EU ETS and the baseline and targets need to be readjusted.

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CCA Application Form continued....

Conversion factors used in data centre CCAs

Fuel	Gross Calorific Value			Carbon Emission Factors
	GJ per Tonne	**KWh per Tonne**		**Kg per kWh**
Coal (industrial)	27	7500		0.0794
Coke	29.8	8278		0.117
Electricity				0.0546
Petroleum Products	**GJ per Tonne**	**Litres per Tonne**	**KWh per Litre**	
Liquified Petroleum Gas (LPG)	49.2	1914	7.1	0.0585
Ethane	50.7	2730	5.2	0.0545
Motor Spirit (petrol)	47.1	1360	9.6	0.0643
Gas/Diesel oil (including DERV)	45.3	1156	10.9	0.0758
Fuel Oil	43.3	1015	11.9	0.0732
Naphtha	47.8			0.0646
Petroleum Coke	35.8			0.0908
Gas	**MJ per Meter^3**		**KWh per Therm**	
Natural Gas	39.5		29.3	0.0505
Coke Oven Gas	18		29.3	
Blast Furnace Gas	3		29.3	
Landfill Gas	23		29.3	
Sewage Gas	23		29.3	
Refinery Gas			29.3	0.0671
Other Fuel Used	**Fuel Name**			
Other Fuel - 01				0

IT energy ("Establishing the PUE"):

This needs to be the electricity that serves the data hall racking/servers only. Please don't include energy for any of the DAAs etc in this figure. (It is surprising how many people try to but by now you should have read Note 04c: Measuring Your Base Year Data so will be better informed that they are!)

Although it is a requirement for the IT energy to have cumulative sub metered data, in 2011 many data centres were not recording the IT energy in this manner. Therefore, for base year data *only*, the EA have allowed that they may accept estimations/calculations for the IT energy figure, but *only* if they consider them to be robust enough. The minimum frequency of spot readings they have accepted at the time of writing is monthly.

So, if your IT energy data relies on estimates/calculations as above, you need to indicate this in the workbook and will need to email the techUK Helpdesk with details of calculations in support of the application.

Don't be an ostrich! The query won't disappear on it's own, it will just be the value of your CCL discount that is gradually diminishing....

The information you supply is screened by the techUK CCA Helpdesk team and they will contact you if any information is missing, needs clarification or looks unusual. They will then upload the information and supporting documents to the Environment Agency (EA) CCA on-line Registry.

The EA check each application, ensuring that the sites are eligible and that the supporting documents, such as 70/30 rule calculations, are in order. They may pass some of the application data to their Technical Consultants Ricardo AEA for further checking.

In some cases an application progresses through the submission process "without incident". In many cases for data centre applications, the EA or AEA make a query (via the techUK Helpdesk) that will need attention from the applicant.

It can usually take between 4 – 6 weeks for a new application to be processed by the EA however the process may be faster or slower than this depending on the quality and complexity of the application.

The faster and more accurately that you respond to any queries sent to you, the faster your application will progress. If you don't fully understand what a query is asking for, then please call the techUK Helpdesk on 0844 800 1880 for help.

You cannot claim CCL discount until the Underlying Agreement is finalised and activated by the Environment Agency. The date shown on the finalised agreement is the activation date.

What is the Underlying Agreement?

The Underlying Agreement is between the organisation and the Environment Agency. It has been generated using the information submitted in your application. It is a standard document that is issued to every company that signs up to a CCA.

You may wish your legal colleagues to check over it however be aware that the wording cannot be changed at all and you are entering into a voluntary agreement.

What you do need to check on the agreement is the data shown from page 22 onwards is correct as these contain company specific information including your target. A more detailed description of what the Underlying Agreement contains can be found in techUK note Note 05: Explaining the Figures in Your UnA

If you have a bubble of sites with differing base years, you will not be able to reconcile the energy figure shown in the agreement with your records. This is because calculations need to be applied to adjust the data to match the predominating year. This is explained in the techUK note above.

The agreement will not be made public but certain pieces of information contained within the agreements will be published. For data centres, the published Reduced Rate Certificate information includes only Facility Identifier, TU Operator Name and Scheme Entry Date.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408025/LIT__10007.pdf

Assenting to the agreement

A copy of the Underlying Agreement will be emailed to the Responsible Person directly from the EA. The Responsible Person must email the EA to give their assent and must follow the instructions in the original email from the EA (i.e. send to the right email address and state the right words in the title and body of the email). The assent must come from the email address of the Responsible Person.

The EA will confirm when an assent has been received and will make the agreement live on their registry. Once this has been completed, the EA will email the finalised agreement containing the agreement activation date, back to the Responsible person.

How and when do you claim your discount? After all, this is what all this has been leading up to.

You must claim the discount on the CCL by completing the HM Revenue & Customs forms PP10 and PP11.

Once you have received your activated Underlying Agreement back from the Environment Agency, you will see that on the first page, there is an ''agreement date''. This is the date that you need to enter on the claim forms where they ask for ''date from which the relief applies''.

If you are unable to complete the PP10 and PP11 forms immediately, you can complete them later and submit with the relief date backdated to the agreement date. (However you cannot backdate more than 4 years!)

PP10 and PP11 forms are valid for five years from the date that they are submitted. They must be resubmitted if you change energy supplier, change the percentage CCL relief being claimed or if five years have lapsed and they become invalid.

Detailed guidance on how to download the online forms and complete them can be found in techUK Note 06: Completing HMRC PP10 and PP11 Forms

Timetable for CCAs (Updated July 2017)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
					(i) = for your information		(!!) = might be applicable		(A) = action required		

Other activities

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
(!!)	Reporting CCL discount to HMRC (if over the threshold, see Guidance Note 13)					31st May	30th April	30th April	30th April	30th April	30th April	30th April
(A)	Reporting changes within 20 working days (e.g. company ownership, significant change to eligible processes)											
(A)	Reporting changes as soon as known (e.g. administrative contact or responsible person, company name)											
(i)	Change in rates of Climate Change Levy					1st Apr	1st Apr	1st Apr				
(i)	Increase in maximum Climate Change Levy discount (see Guidance Note 01 What is a CCA)							1st Apr				
(A)	Resubmit PP10 and PP11 forms to reflect increase in maximum discount							1st Apr				
(!!)	Resubmit PP10 and PP11 forms if their content is out of date (e.g. change energy supplier), or, they are more than 5 years old											

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tech^{UK} Pay Joining Fees & Annual Fees SLR

There are fees associated with application and administration of your CCA. Invoices for these will be raised and sent to you by SLR Consulting Limited, who run the techUK CCA Helpdesk. You may need to set SLR up as a supplier in your company's finance systems.

The table below shows fee rates for techUK members and non-members. Trade Association members are charged at a discounted rate as their membership fees also contribute towards the work that goes into ongoing policy negotiations with BEIS.

The fees are made up of the Environment Agency fee which is £185 per site per year which we pay on your behalf and the Climate Change Annual fees which pay for the technical helpdesk , administration and ongoing services.

Table of data centre CCA fees

		Trade Association Members £ per site	Non-Members £ per site
Joining Fee	Band A (Small)	478.77	1013.00
	Band B (Large)	478.77	1621.00
Annual Fee	Band A (Small)	774.60	1618.00
	Band B (Large)	934.20	2733.00

Annual fees stated above are <u>inclusive</u> of Environment Agency Fees
The size banding is based on the amount of primary energy used during the base year as follows:
Small sites   up to 15,000 MWh per year
Large sites   from 15,001 MWh per year

The CCA year runs 1st January to 31st December.

Annual fees are payable in advance and cover the 12 month period above. If a site is included in the scheme for only part of a year, the full annual payment for that site still applies.

Joining Fees apply per site for new CCA applications. These cover administration for the application process and are due on submission of an application regardless of whether successful or not.

Existing sites will be invoiced at the start of the year for the Annual Fees.

New joining sites will be invoiced following application, either for just the joining fee, if unsuccessful or for both joining and annual fees if successful.

techUK CCA Helpdesk

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