



Overview and Interactions of Fiscal Benefits for GQCHP

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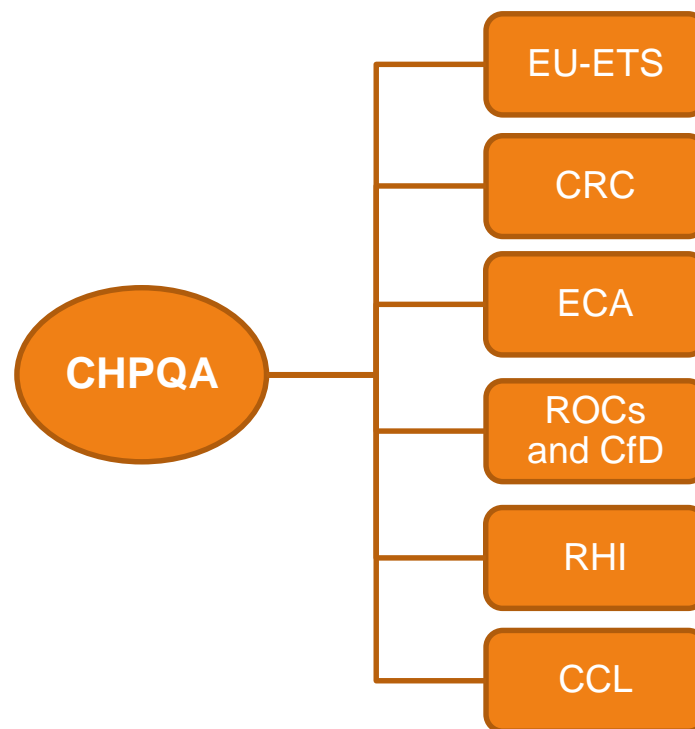
Fiscal Measures and GQCHP

- CCL Exemption (on fuel input and electricity output where directly supplied)
- Business Rates Exemption (embedded schemes)
- Hydrocarbon Oil Duty Relief
- CRC—no emissions attributed to heat from CHP (**Zero Carbon Heat**)
- Carbon Allocation for Heat under EU-ETS Phase III
- Enhanced Capital Allowance
- 1ROC/MWh of electricity from EfW CHP, 2 ROCs/MWh for dedicated biomass CHP (April 2009)
- **CPS:-**
 - Schemes > 2 MWe:- Exemption to fuel for heat
 - Schemes ≤ 2 MWe:- Full exemption from CPS
- **CPS – exemptions for supplies of fossil fuels to CHP where the fuel is used to generate Good Quality electricity used on site (April 2015)**
- **RHI & RO CHP uplift with specific RHI tariff for biomass fuelled GQCHP**
- **CfD eligibility, replace RO for all new projects from 1/4/2017 (18 months later if eligible for RO 'grace' period).**



Talk Coverage

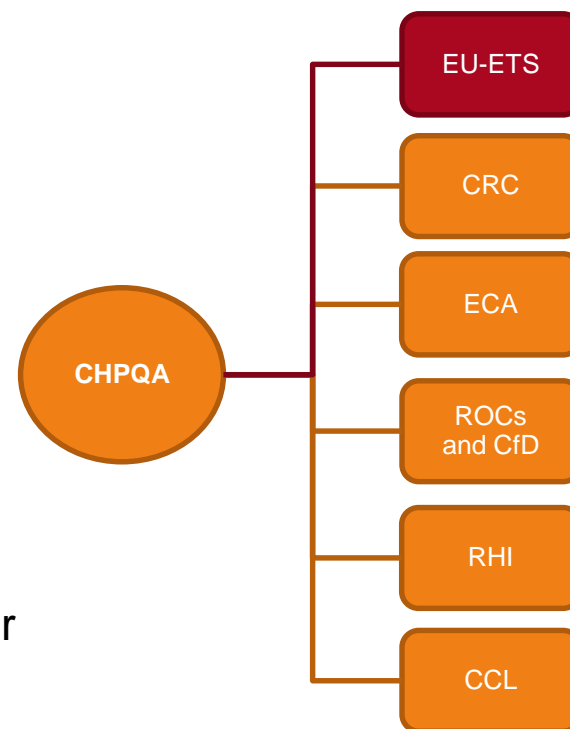
- EU-ETS Phase III allocations
- CRC: New simplified arrangements
- ECA: Clarification only
- ROCs and CfD
- RHI: GQCHP benefits under Phase II
- CCL: 'Standard' and 'CPS'





EU-ETS Phase III

- Started January 2013,
- Covering all types of boilers, burners, heaters, furnaces, incinerators, dryers.
- The 20MW thermal threshold continues to apply
- Catches large stand alone CHP Schemes
- Also catches smaller CHP schemes embedded within an energy intensive users site
- Allocation to heat consumers, third party CHP operators have to purchase allowances.
- Allocation to heat decreases over time
- Two methods for allocations are used; Product or Heat benchmark allocation



- Likely to make investment in CHP more attractive, when compared with the alternatives..... See example.....

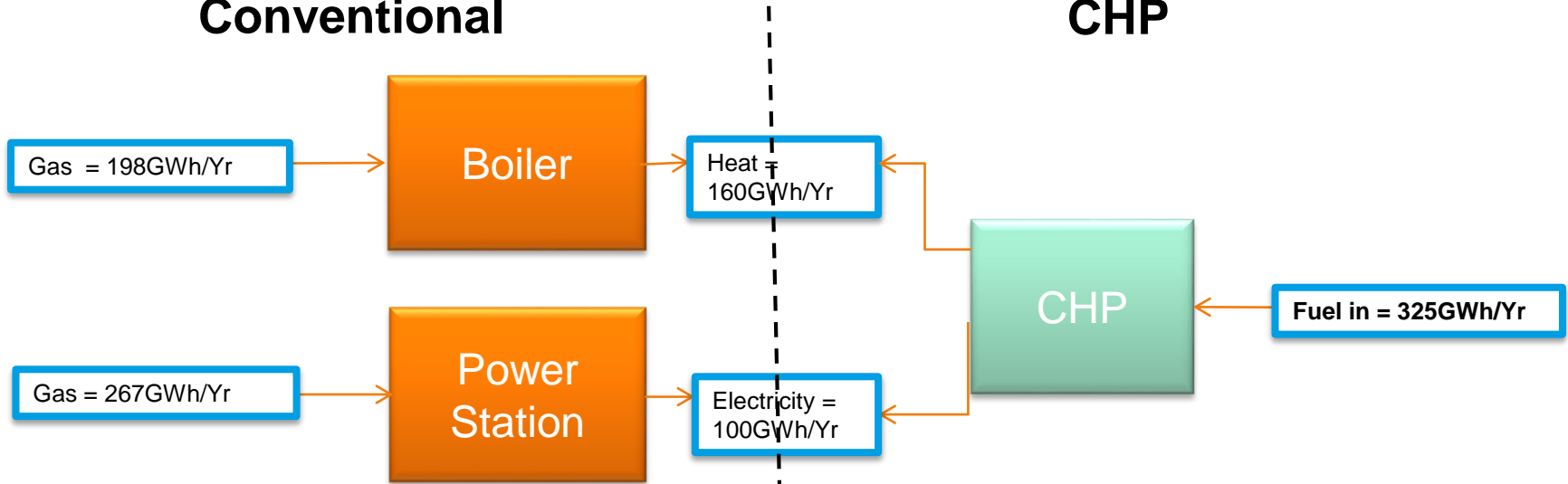


EU-ETS Phase III



Conventional

CHP



Savings from CHP:

Total Gas = 425GWh/Yr
Carbon Emission= 85kTCO₂/Yr
Carbon Allocation to heat = 36 kTCO₂/yr
Carbon to Purchase = 49 kTCO₂/yr

Total Gas = 325 GWh/Yr
Carbon Emission= 60 kTCO₂/Yr
Carbon Allocation to heat = 36 kTCO₂/yr
Carbon to Purchase = 24 kTCO₂/yr

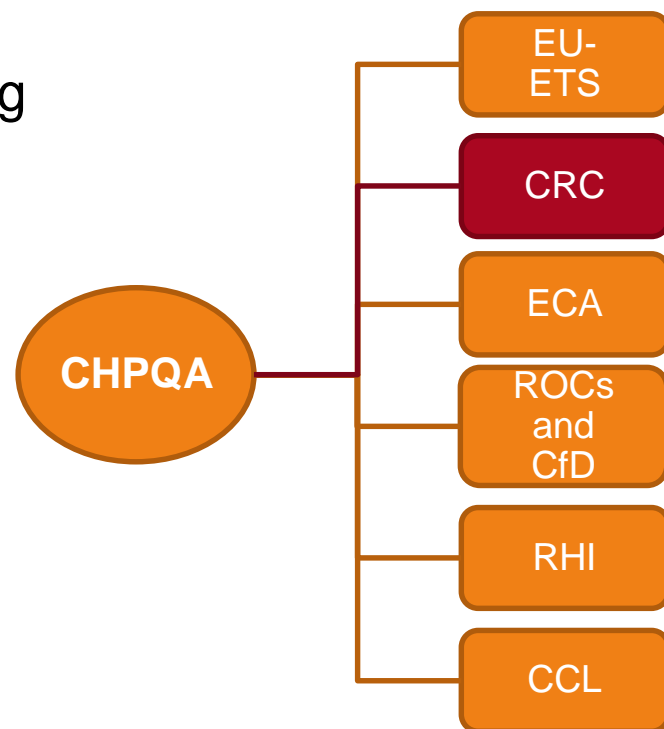
EU-ETS Benefit = 49 - 24 = 25 kTCO₂/yr

Carbon saving = 29%



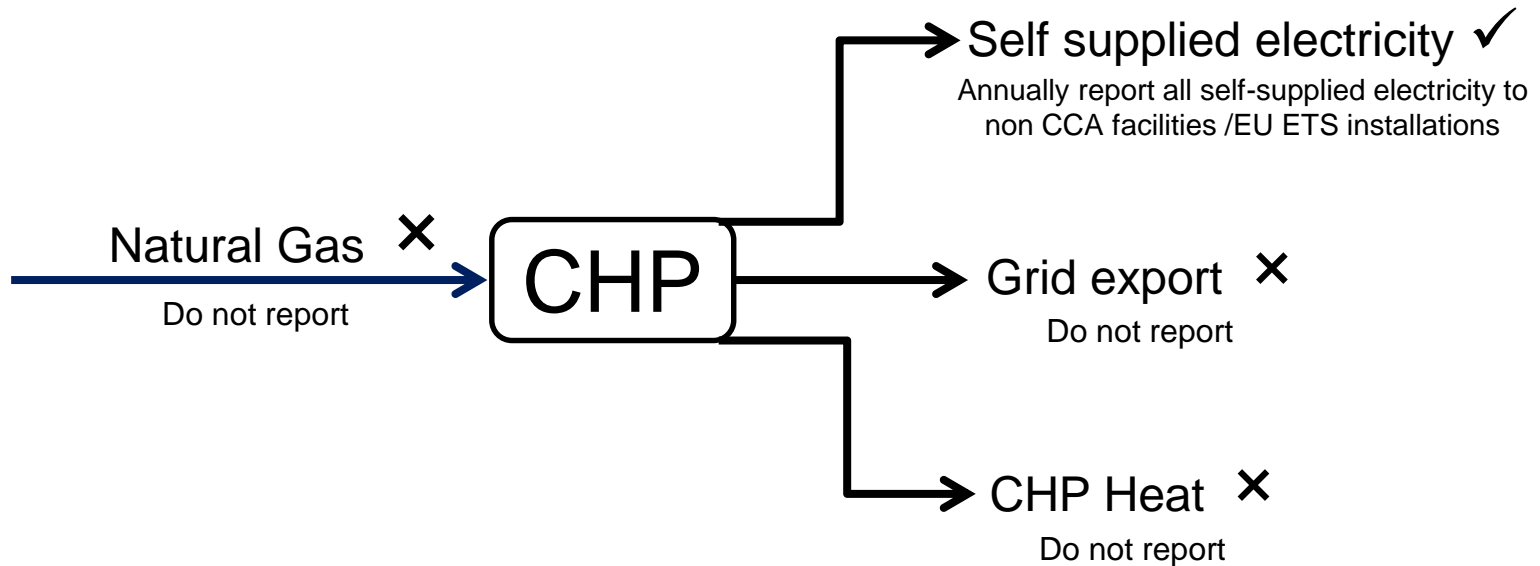
CRC Energy Efficiency Scheme (CRC)

- Began in April 2010
- Captures emissions not covered by existing measures such as EU ETS and CCAs
- A mandatory CO₂ emissions trading scheme affecting large non-energy intensive businesses and public sector **organisations**
- Applicable to organisations with total electricity consumption > 6,000 MWh/y (based on half hourly meters) ~ 1 MWe demand.
- Simplified arrangements from 2012 onwards, for CHP Schemes





CRC- Current simplified arrangements



- CHP at EU-ETS or CCA installations.... Is out of CRC
- CHP at non-ETS/CCA ... Only electricity used on site to be reported
- Makes it very simple but still fair
- For Renewable generation. If ROCs are claimed then electricity must be reported as an import at the grid electricity factor

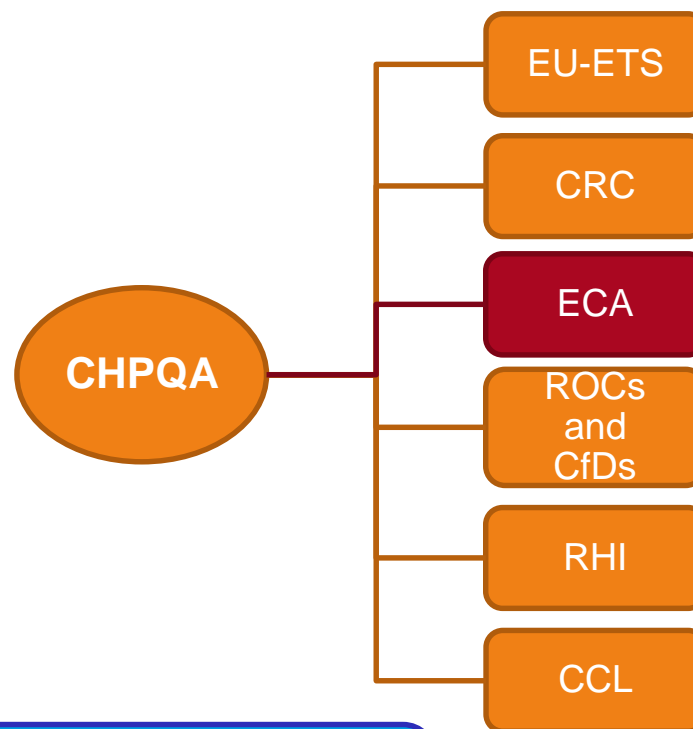
➤ Incentivising higher electrical efficiency and heat recovery



CHP ECA Eligibility

➤ CHP scheme operators need to demonstrate that they comply with the following eligibility criteria:

- *Main intended business to provide heat and power for clearly identified users on site or to known third parties, and not to generate power for sale to or via unspecified third parties.*
- *Not available for companies whose core business is electricity production.*



- This is likely to impact on renewable schemes, sized for exporting electricity, that intend to sell the majority of their electricity to the grid
- Further information will be required on ownership and revenue streams



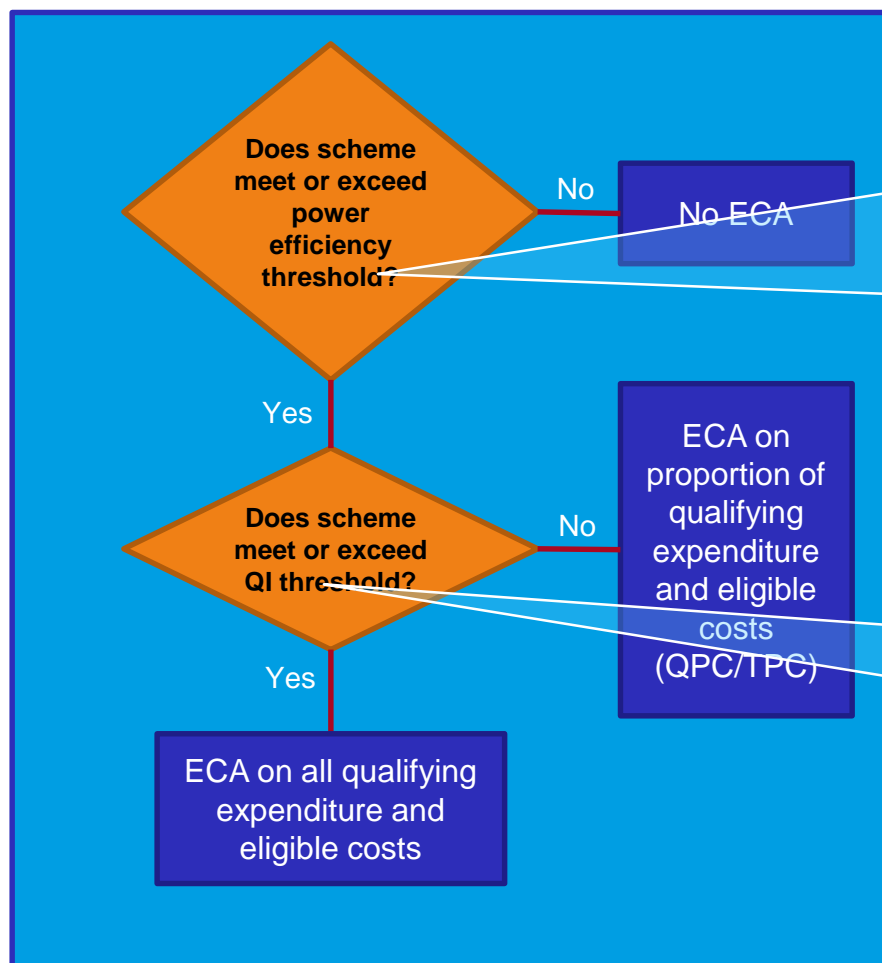
ECA Process

- Scheme specific: no type approval/product certification route
- Applicants must identify heat loads/users
- This needs to meet the “**Useful Heat**” definition (i.e process heat, space heating/cooling)
- Useful Heat? **economically justified** heat loads.
- Need to obtain an Energy Efficiency (EE) Certificate
- EE Certificate is issued by DECC

- **Must have identified heat user(s)**
- **A CHPQA Certificate is required to obtain an EE Certificate**



Calculation of ECA value to a CHP Scheme



Power Efficiency Threshold

- 20% for conventional fuels
- 10% for wholly biomass or solid/liquid waste
- Between 20% and 10% for partly biomass or solid/liquid waste (dependent on fuel mix)

Quality Index (QI) Threshold

- ≥ 105 under MaxHeat conditions



Non compliant schemes

Certificate will be revoked:

- If the original design has changed after certification and a new EE certificate has not been obtained from CHPQA, or
- If no heat customer(s) present at time of commissioning (i.e. not operating as CHP)

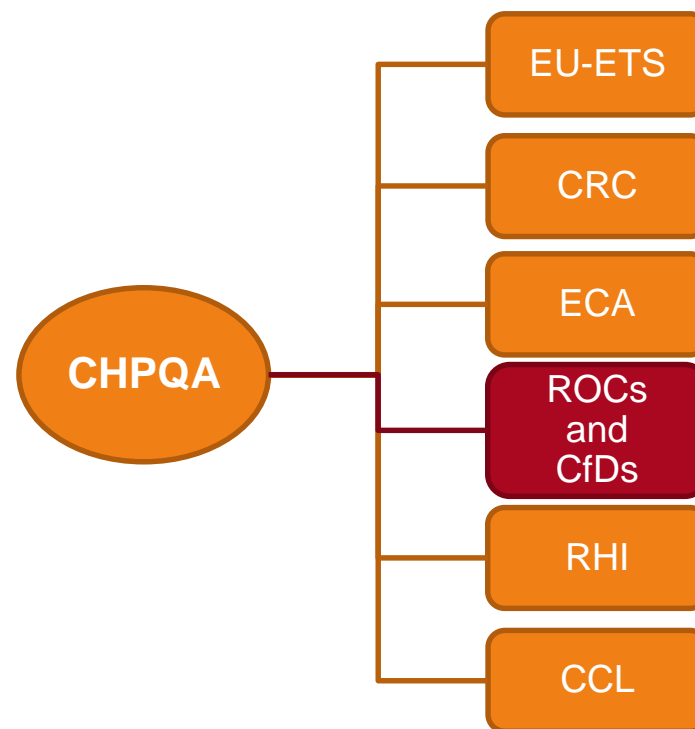
If certificate is revoked, applicant will have to contact HMRC to return any claimed benefits



CHP & ROCs

Current arrangement:

- GQCHP fuelled by biomass can get 2.0 ROCs/MWh (0.5 ROC uplift)
- 1.0 ROC/MWh for EfW Good Quality CHP
- 1.0 ROC for Co-fired CHP
- See CHPQA Guidance Note 44 (Issue 4).



Only for schemes certified as GQ CHP



Latest RO Review for 2013-2017

- The 0.5 ROC CHP uplift will continue to be available for plant accredited up to March 2015 (Sept 2015 in NI).....**Extended to March 2017 but only if technology and / or fuel source does not, and never has, met the RHI eligibility criteria.**
- Between April 2013 and March 2015, operators will have a one-off choice between claiming the RO CHP uplift or the RHI
- The CHP uplift will be grandfathered **but operators will still need to retain annual certification with CHPQA**
- **Support for EfW CHP will remain at 1 ROC until March 2017 - EfW CHP under RO cannot claim RHI**
- The upper limit for RO support will reduce from 2 ROCs to 1.8 ROCs for 2016/17 new accreditations..... more later...



Contracts for Difference (CfD)

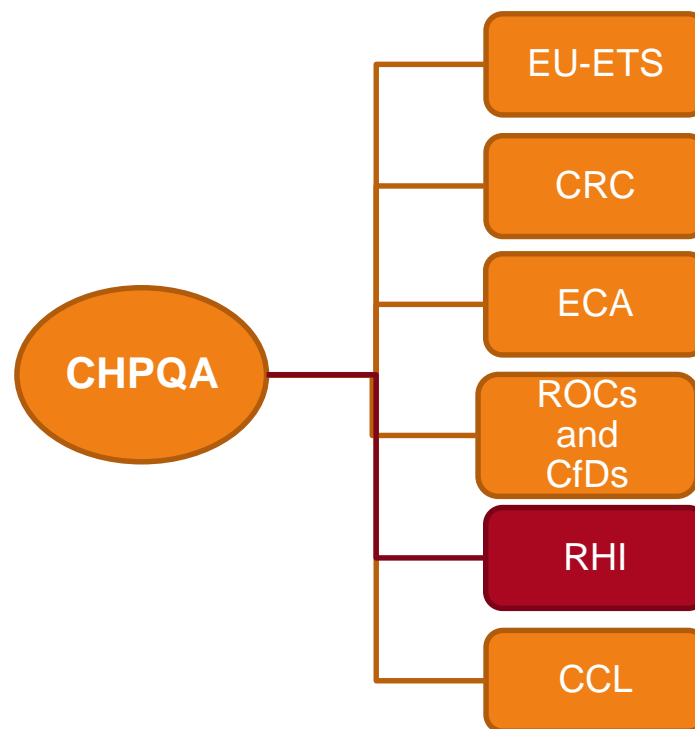
- The CfD regulations came into force in GB on 1st August 2014* and will replace the RO for all new projects from 1st April 2017.
- Biomass Power Stations have to be CHP to qualify for CfD
- See CHPQA Guidance Note 44 (Issue 5).
- Further details later.....

- *CfD regime is now in place in Great Britain,
- For Northern Ireland it will commence in 2017



Renewable Heat Incentive

- Non-domestic scheme launched in November 2011
- Provides support for variety of renewable heat technologies, including
 - Biomass (including biomass in MSW)
 - Biogas
 - Geothermal
 - Heat pumps,
 - Solar thermal
- Support extends to eligible heat-only (see RHI guidance)
- Tariff for large biomass boilers is 2p/kWh
- A specific tariff for biomass fuelled GQCHP of 4.1p/kWh (only for heat via engine/turbine)
- CHP must have been commissioned on/after 4th December 2013

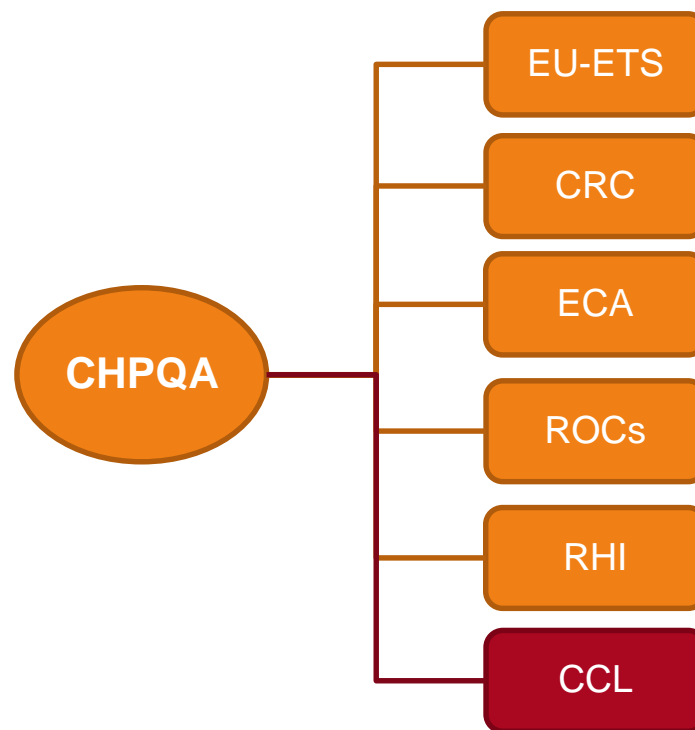


➤ CHP can only claim ROC uplift or RHI not both



CCL: 'Main' and 'CPS'

- GQCHP is exempt from the main rates on CCL on fuel and on electricity **used on site or directly supplied**
- CPS rates on fuel came into effect from 1 April 2013
- GQCHP certified with CHPQA are exempt from CPS rates on fuel that is attributable to the scheme's "Qualified Heat Output (QHO)" ... *fuel for heat*
- **New incentive**recent announcement is to extend this exemption to fuel for QPO used on site....
- This will come into effect from 1 April 2015
- Full presentation later





To summarise...

To obtain any of the fiscal benefits available for GQCHP the Scheme must be certified by CHPQA and must have a valid Certificate

Submission any time from 1 Jan 2015

Thank You