

CHPQA

CHPQA Benefits and Certification

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Talk Coverage

- Quick Review (Benefits; Roles & Responsibilities; Certificates)
- CHPQA Procedures:
 - Forms,
 - Web Site,
 - GNs,
 - Timescales for submission
- Topical Issues.

Fiscal Benefits for Good Quality CHP

- CCL Exemption
 - on both fuel input and electricity output
- Business Rates Exemption
- Hydrocarbon Oil Duty Relief
- Carbon Allocation under EU-ETS Phase II (*Separate CHP sector*)
- Access to Enhanced Capital Allowance
- 1 ROC/MWh for electricity from EfW (*New Benefit from 1 April 2006*)
- 2 ROCs for dedicated biomass CHP (from 2009)

CRC ?– Currently under consideration.

Why CHPQA?

- A rigorous system is needed to:
 - ensure incentives are targeted fairly
 - only benefit Schemes making significant environmental savings
- CHPQA provides the **methods** and **procedures** needed to assess and certify the quality of the full range of CHP Schemes
- It is a tool for measuring the Quality of CHP Schemes.

'Good Quality' CHP Threshold Criteria

For Existing Schemes:

- Quality Index (QI) ≥ 100 and
- Power generation efficiency of $\geq 20\%$

For New Schemes:

- Quality Index (QI) ≥ 105 and
- Power generation efficiency of $\geq 20\%$.

CHPQA QI Formulas

The general definition for QI is

$$QI = (X \times \eta_{\text{power}}) + (Y \times \eta_{\text{heat}})$$

Where Power Efficiency (η_{power}) = $\text{CHP}_{\text{TPO}}/\text{CHP}_{\text{TFI}}$

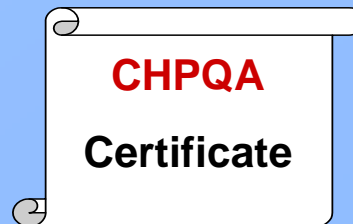
and Heat Efficiency (η_{heat}) = $\text{CHP}_{\text{QHO}}/\text{CHP}_{\text{TFI}}$

QI Definitions for Various Sizes and Types of CHP Scheme

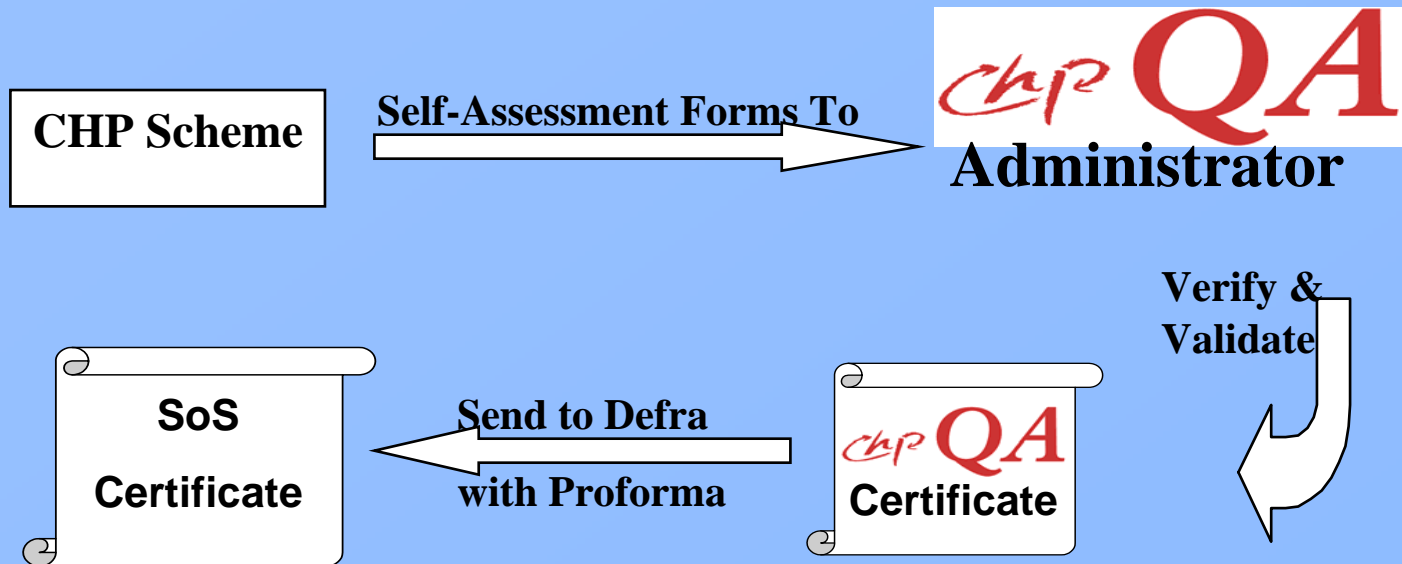
| Size of Scheme (CHP _{TPC}) | QI Definition |
|---|---|
| ≤ 1 MW _e | QI = 230 × η _{power} + 125 × η _{heat} |
| > 1 to ≤ 10 MW _e | QI = 220 × η _{power} + 125 × η _{heat} |
| > 10 to ≤ 25 MW _e | QI = 205 × η _{power} + 125 × η _{heat} |
| > 25 to ≤ 50 MW _e | QI = 190 × η _{power} + 125 × η _{heat} |
| > 50 to ≤ 100 MW _e | QI = 185 × η _{power} + 125 × η _{heat} |
| > 100 to ≤ 200 MW _e | QI = 180 × η _{power} + 125 × η _{heat} |
| > 200 to ≤ 500 MW _e | QI = 170 × η _{power} + 125 × η _{heat} |
| > 500 MW _e | QI = 160 × η _{power} + 125 × η _{heat} |
| Special Cases | QI Definition |
| Fuel Cell Schemes | QI = 180 × η _{power} + 125 × η _{heat} |
| Reciprocating Engine Schemes (including those in Combined Cycle Applications) ≤ 25 MWe | QI = 200 × η _{power} + 125 × η _{heat} |
| Transitional arrangements for existing Steam Turbine and Reciprocating Steam Engine Schemes to April 2005 | QI = 240 × η _{power} + 125 × η _{heat} |
| Alternative Fuel Schemes ¹ | |
| Alternative Fuel Gases ² | QI = 240 × η _{power} + 125 × η _{heat} |
| Biogas, Waste gas or Waste heat | QI = 300 × η _{power} + 140 × η _{heat} |
| Biomass or solid or liquid Waste | QI = 400 × η _{power} + 140 × η _{heat} |

Certification by CHPQA?

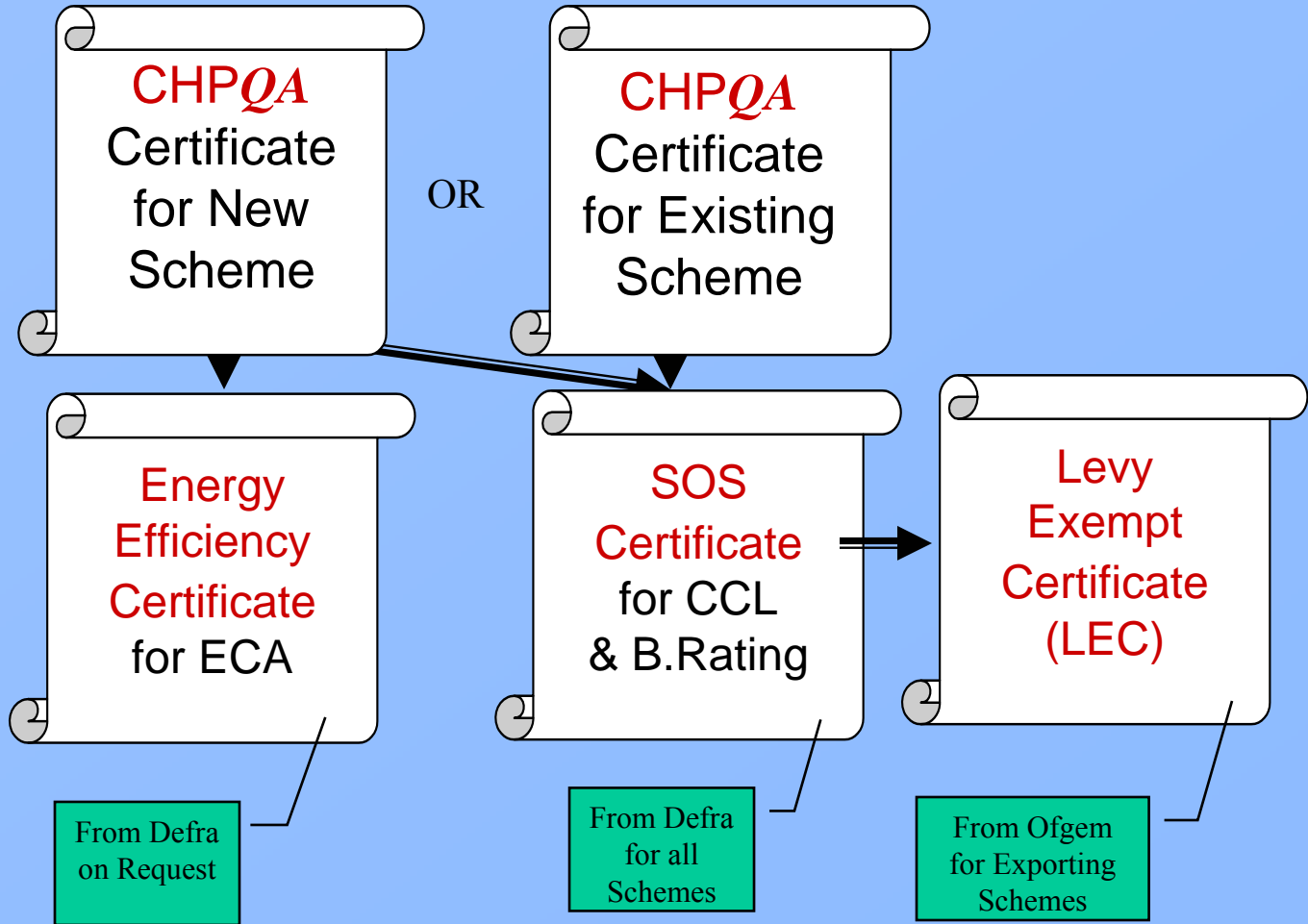
- A CHP scheme claiming any of the fiscal benefits for GQCHP would have to be certified by the CHPQA programme.



Self-assessment and Certification



Certificates for Claiming Benefits



Roles and Responsibilities

- CHPQA Administrator/Managed by AEA
Energy and Environment
- Defra
- Other Government Departments
 - HM Revenue & Customs
 - VOA
 - BERR
- Ofgem and Ofreg- for issuing LECs.



CHPQA

CHPQA Procedures

- CHPQA Forms
- CHPQA Web Site
- CHPQA Documents
- Timescales for submission.

CHPQA Forms

CHPQA Forms to be submitted:

- **F1**...only if RP or company name has changed
- **F2 and F2(s)**..only if Scheme boundaries or monitoring arrangement have changed
- **F4** all existing Schemes not eligible to use **F4(s)**
- **F4(s)** all eligible existing Schemes < 2 MWe
- **F3** all new and upgraded existing Schemes not eligible to use **F3(s)**
- **F3 (s)** all eligible proposed, under construction and newly commissioned Schemes < 2 MWe.

CHPQA Forms

- CHPQA Forms available to download as both Microsoft Word or PDF
- Electronic submission available (Full Presentation later...).

chp QA

CHPQA Existing Website

CHP QA - Quality Assurance for Combined Heat and Power - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Go Links

Address <http://www.chpqa.com/index.htm>

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chp QA QUALITY ASSURANCE FOR COMBINED HEAT AND POWER

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WELCOME

The CHPQA programme is carried out on behalf of the Department for Environment, Food & Rural Affairs, in consultation with the Scottish Executive, the National Assembly for Wales, and the Northern Ireland Department of Enterprise, Trade and Investment.

for more information on those involved please visit the useful [contacts section](#)

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Local intranet



CHPQA CHPQA Website

<http://www.chpqa.com>

- Primary source for CHPQA information
 - CHPQA Documents
 - Guidance Notes
 - CHPQA forms
 - News
 - Useful Contacts
 - FAQ's
 - Contact us.

CHPQA Documents

Documentation available to download as PDF's

- CHPQA Standard (Issue 1 & 2)
- CHPQA - the Government's decisions following consultation
- CHPQA Consultation - the DETR's draft proposals.

Guidance Notes

- Guidance notes available to download as PDF's
- Online electronic submission provides direct links to appropriate guidance notes for a particular section.

Who can use the UNIT List?

Only CHP units meeting the following criteria:

- CHP Scheme with TPC < 500kWe,
- Only include a single prime mover,
- Using Natural Gas fired engines
- No in-built facility to dump heat,

*Make sure that **Engine spec** used from Unit List match details on your F2*

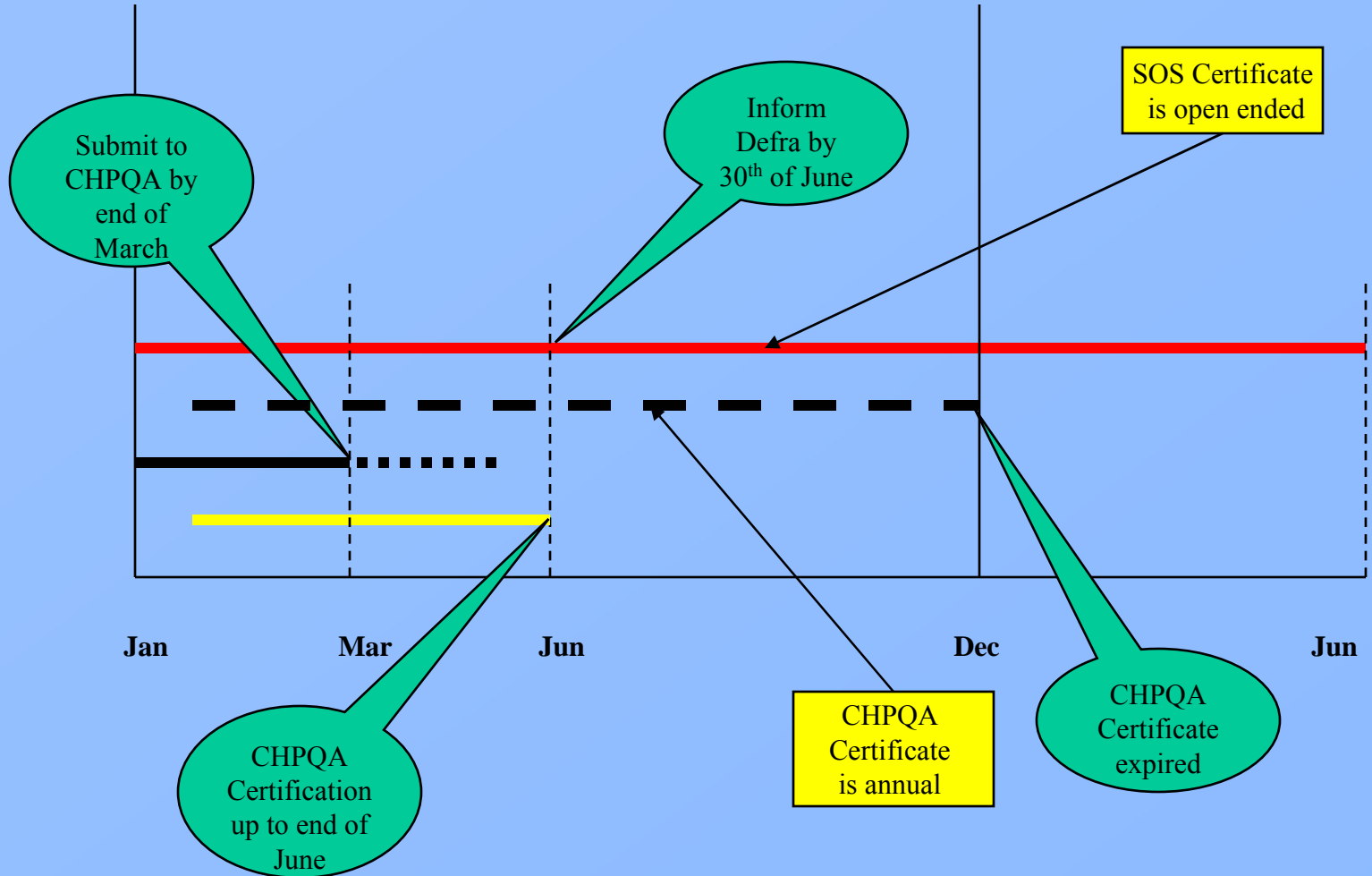
CHPQA Unit List

| Manufacturer | Model | Engine | Total Power Capacity kW | Max Heat Output kW | Fuel Input kW (GCV) | Power Efficiency [%] | Max Heat to Power Ratio | Max Thermal Efficiency | Max Overall Efficiency |
|--------------|---------------------|------------------------|-------------------------|--------------------|---------------------|----------------------|-------------------------|------------------------|------------------------|
| COGENCO | Nedalo | MAN E2866E | 90 | 136 | 300 | 30 | 1.51 | 45% | 75% |
| | CGC 0105 | MAN E0836 LE202 | 105 | 133 | 314 | 33 | 1.21 | 42% | 74% |
| | Nedalo | MAN E2866E302 | 112 | 177 | 373 | 30 | 1.58 | 47% | 77% |
| | CGC 0130 | MAN E2876 E302 | 130 | 201 | 421 | 31 | 1.55 | 48% | 79% |
| | CGC 0140 | MAN E2876 TE302 | 140 | 207 | 444 | 32 | 1.48 | 47% | 78% |
| | Nedalo | MAN E2842E | 168 | 261 | 542 | 31 | 1.55 | 48% | 79% |
| | CGC 0198 | MAN E2876 LE302 | 198 | 233 | 599 | 33 | 1.18 | 39% | 72% |
| | Nedalo | MAN E2842E302 | 211 | 321 | 681 | 31 | 1.52 | 47% | 78% |
| | CGC 0237 | MAN E2842 E312 | 237 | 359 | 742 | 32 | 1.51 | 48% | 80% |
| | Nedalo | Perkins 4006TESI LC | 306 | 469 | 1020 | 30 | 1.53 | 46% | 76% |
| | CGC 0307 | Perkins 4006 | 307 | 435 | 990 | 31 | 1.42 | 44% | 75% |
| | CGC 0312 | MAN E2842 LE302 | 312 | 433 | 990 | 32 | 1.39 | 44% | 75% |
| | CGC 0380 | MAN E2842 LE312 | 380 | 500 | 1142 | 33 | 1.32 | 44% | 77% |
| | Nedalo | Perkins 4008TESI LC | 409 | 633 | 1363 | 30 | 1.55 | 46% | 76% |
| | CGC 0490 L | CAT G3508 LE | 490 | 679 | 1491 | 33 | 1.39 | 46% | 78% |
| ENER'G | ENER-G 30 | | 33 | 55 | - | - | 1.67 | - | - |
| | CPL 4Fg | Ford BSD444 | 38 | 70 | 152 | 25 | 1.84 | 46% | 71% |
| | CPL 6NFg | Ford BSD666 | 54 | 97 | 200 | 27 | 1.80 | 49% | 76% |
| | ENER-G 60 | MAN | 60 | 90 | - | - | 1.50 | - | - |
| | CPL 6Fg | Ford BSD678 | 75 | 130 | 259 | 29 | 1.73 | 50% | 79% |
| | CPL 6Mg | MAN E2866E | 90 | 136 | 300 | 30 | 1.51 | 45% | 75% |
| | ENER-G 95 | MWB G6R183A | 95 | 160 | 300 | 31.7 | 1.68 | 53% | 85% |
| | ENER-G 110 | MWB G6R183A | 110 | 181 | 347 | 31.7 | 1.65 | 52% | 84% |
| | CPL 6Pg | Perkins 2006 | 110 | 180 | 393 | 28 | 1.64 | 46% | 74% |
| | CPL 6M+g | MAN E2866E302 | 110 | 177 | 367 | 30 | 1.61 | 48% | 78% |
| | ENER-G 122 | MWB G6V183A | 124 | 196 | 391 | 31.7 | 1.58 | 50% | 82% |
| | CPL 8Pg | Perkins 2008 | 145 | 265 | 518 | 28 | 1.83 | 51% | 79% |
| | ENER.G 150 | MWB G8V183A | 152 | 231 | 486 | 31.3 | 1.52 | 48% | 79% |
| | CPL 12Mg | MAN E2842E | 168 | 261 | 542 | 31 | 1.55 | 48% | 79% |
| | ENER-G 185 | MWB G12V183A | 185 | 280 | 576 | 32.1 | 1.51 | 49% | 81% |
| | CPL 12M+g | MAN E2842E302 | 206 | 321 | 665 | 31 | 1.56 | 48% | 79% |
| | ENER-G 206 | MWB G12V183A | 206 | 324 | 642 | 32.1 | 1.57 | 50% | 83% |
| | CPL 12Pg | Perkins 3012 | 220 | 385 | 880 | 25 | 1.75 | 44% | 69% |
| | ENER.G 225 | MWB G12183A | 225 | 358 | 701 | 32.1 | 1.59 | 51% | 83% |
| | ENER-G 300 | MAN | 300 | 445 | 1111 | 27 | 1.48 | 40% | 67% |
| ENER-G 305 | Perkins 4006TESI LC | 306 | 469 | 1020 | 30 | 1.53 | 46% | 76% | |
| ENER-G 405 | Perkins 4008TESI LC | 409 | 633 | 1363 | 30 | 1.55 | 46% | 76% | |
| ENER-G 500 | CAT 3508LE | 500 | 658 | 1515 | 33 | 1.32 | 43% | 76% | |
| AIRCOGEN | Nimbus63 | GM 7400 | 63 | 120 | 223 | 28 | 1.90 | 54% | 82% |
| | Nimbus104 | MAN E0836 LE202 | 104 | 127 | 310 | 34 | 1.22 | 41% | 75% |
| | Nimbus200 | MAN E2876 LE302 | 200 | 233 | 592 | 34 | 1.17 | 39% | 73% |
| | Nimbus238 | MAN E2842 E312 | 238 | 359 | 734 | 32 | 1.51 | 49% | 81% |
| | Nimbus309 | Perkins 4006TESI 140HC | 309 | 405 | 946 | 33 | 1.31 | 43% | 76% |

Certification Timetable

- CHPQA Certificates cover a **calendar year** and expire at the end of December
- SoS (CHP Exemption) certificates are **open ended**
- entitling Schemes to continue claiming fiscal benefits,
- provided that a valid CHPQA certificate is **sent to Defra by no later than end of June every year.**

Certification Timetable



Where do you go from here?

- All CHPQA Certificates issued in 2007 will expire on 31st of December
- SOS certificates are open ended
- entitling Schemes to continue claiming exemption,
- provided that a valid CHPQA certificate is sent to Defra by the end of June 2008 (together with completed pro-forma).

Where do you go from here?(cont.)

- New applications should be submitted to the CHPQA Administrator between 1st January and 31 March 2008
- Based on 2007 actual data:
 - Electricity generated
 - Heat utilised (actual)
 - Fuel used
- If all is in order new certificate will be issued no later than middle of June 2008.



chp QA

CHPQA Contact details

Contact the Administrator:

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