



Energy Efficiency Directive

Article 14

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Article 14(5)

- *Member States shall ensure that a **cost-benefit analysis** in accordance with Part 2 of Annex IX is carried out when, after 5 June 2014*
 - a) A new thermal electricity generation installation** with a total thermal input exceeding 20 MW is planned, in order to assess the cost and benefits of providing for the operation of the installation as a high-efficiency cogeneration installation;*
 - b) An existing thermal electricity generation installation with a total thermal input exceeding 20 MW is substantially refurbished,** in order to assess the cost and benefits of converting it to high-efficiency cogeneration*



Article 14(5) cont

- c) **An industrial installation with a total thermal input exceeding 20 MW generating waste heat** at a useful temperature level is planned or substantially refurbished, in order to assess the cost and benefits of utilising the waste heat to satisfy economically justified demand, including through cogeneration, and of the connection of that installation to a district heating and cooling network
- d) **A new district heating and cooling network** is planned or in an existing district heating or cooling network a new energy production installation with a total thermal **input exceeding 20 MW** is planned or an existing such installation is to be substantially refurbished, in order to assess the cost and benefits of utilising the waste heat from nearby industrial installations.



What Article 14(5) means for Local Authorities

- Local Authorities will issue permits for installations satisfying the above definitions in the range

$20 \text{ MW} \leq \text{Thermal Input} \leq 50 \text{ MW}$

- Environment Agency, SEPA or NIEA will issue permits for installations satisfying the above definitions in the range

$\text{Thermal Input} \geq 50 \text{ MW}$



What Article 14(5) means for Local Authorities

- The operator of the installation will approach the Local Authority/EA/SEPA/NIEA with their permit application.
- The LA/EA/SEPA/NIEA must first decide whether the installation is exempt from the Cost Benefit Analysis (CBA) or is subject to it.
- Exempted installations may include:
 - i. Electricity generation installations acting as peak load or back-up which are planned to operate less than 1,500 hours per year.
 - ii. Nuclear power installations
 - iii. Installations that need to be located close to a CO₂ geological storage site
- If the installation is subject to the CBA requirement, then the operator will carry out the CBA, as is currently the case.
- The LA/EA/SEPA/NIEA will then review the results of the CBA as part of the installation's permit application process



- **Installations may also be exempt from the CBA if:**
- i. The distance between it and a heat user or a waste heat source is greater than a certain threshold value
 - ii. The quantity of heat demanded by a heat user is below a certain threshold value
 - iii. The quantity of waste heat available for recovery at an installation is below a certain threshold value

The values and methodology used in determining these thresholds, are included in the upcoming DEFRA public consultation on Article 14 of the Directive. Comments on them are welcome.



Relevance of Article 14(5) for operators of installations

- **The CBA will be based upon a life-cycle cost analysis (i.e. Discounted Cash Flow) and not simple payback**
- **Installations not exempt from the CBA will have to fill out a CBA spread-sheet collecting information on costs and benefits associated with the modification to be scrutinised by the permitting body**
- **Modifications to existing installations and planned new installations found to have a Net Present Value (NPV) greater than zero, will be expected to proceed in the way identified by the CBA.**