



# Case4: Waste Heat Recovery System

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# Project image

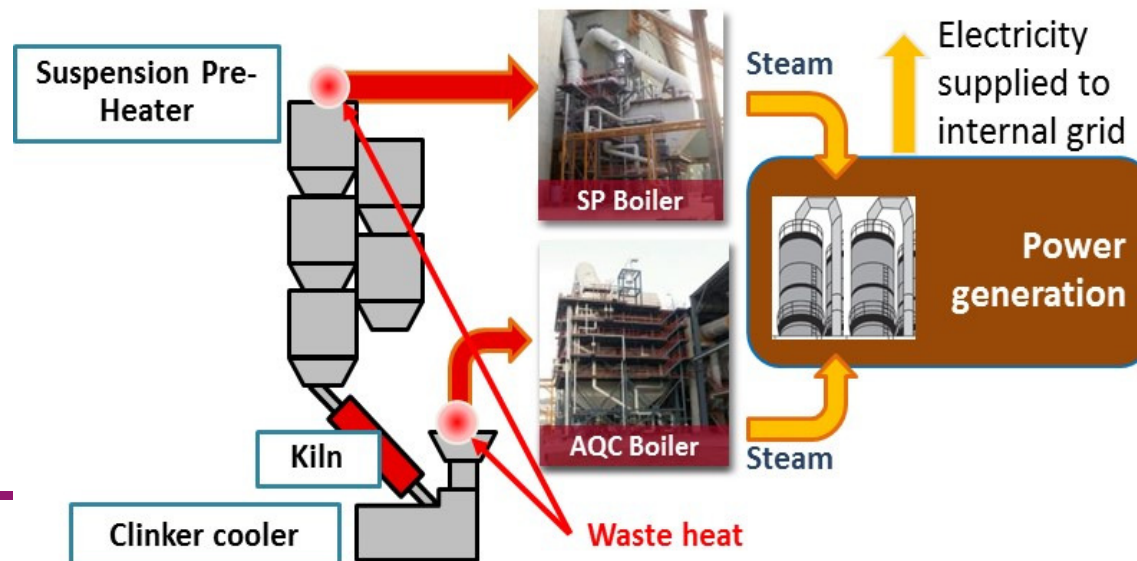


Source: Indonesia JCM website  
<http://jcm.ekon.go.id/en/index.php/content/MjM%253D/gallery>

# Eligibility Criteria:ID\_AM001

## 1st Approve Methodology in Indonesia on 19 May 2014

<b>Criterion 1</b>	The project utilizes waste heat from the cement production facility by waste heat recovery (WHR) system to generate electricity.
<b>Criterion 2</b>	WHR system consists of a Suspension Preheater boiler (SP boiler) and/or Air Quenching Cooler boiler (AQC boiler), turbine generator and cooling tower.
<b>Criterion 3</b>	WHR system utilizes only waste heat and does not utilize fossil fuels as a heat source to generate steam for power generation.



# Eligibility Criteria:ID\_AM001

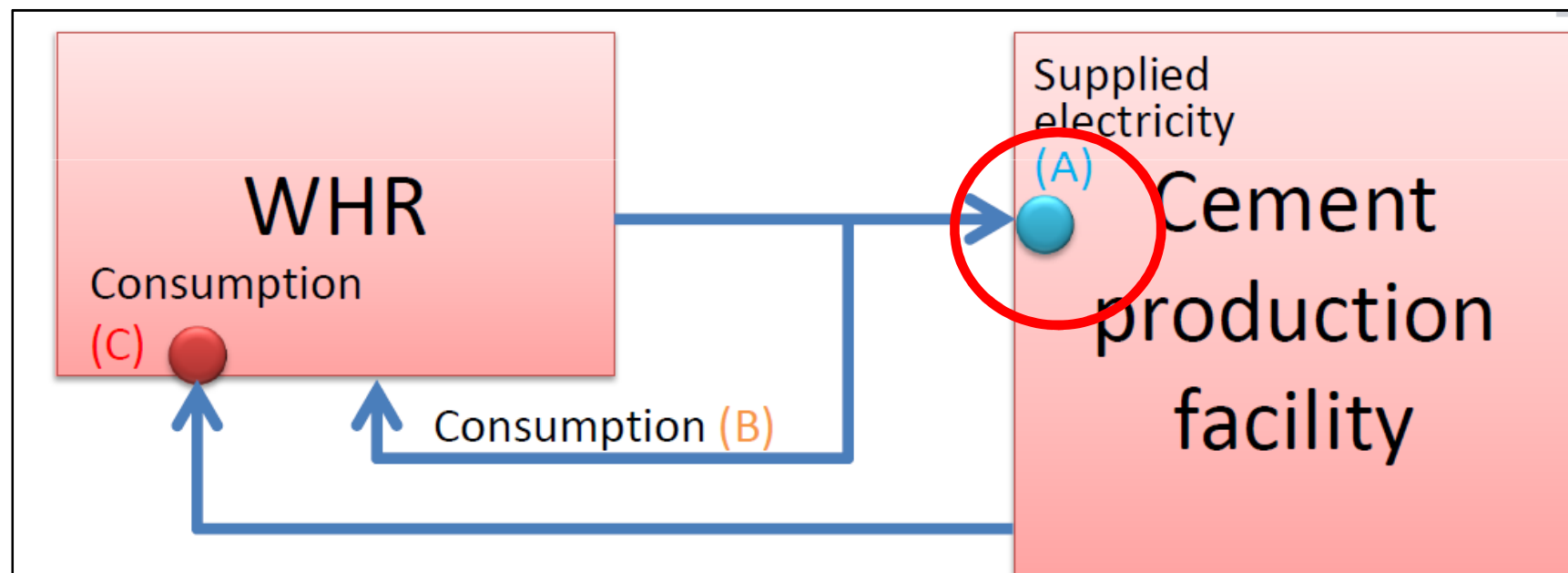
<b>Criterion 4</b>	WHR system has not been introduced to a corresponding cement kiln of the project prior to its implementation.
<b>Criterion 5</b>	<p>The cement factory where the project is implemented is connected to a grid system and the theoretical maximum electricity output of the WHR system, which is calculated by multiplying maximum electricity output of the WHR system by the maximum hours per year (<math>24 * 365 = 8,760</math> hours), is not greater than the annual amount of the electricity imported to the cement factory from the grid system:</p> <ul style="list-style-type: none"><li>➤ During the previous year before the validation, if the validation of the project is conducted before the operation of the project, or</li><li>➤ During the previous year before the operation of the project, if the validation of the project is conducted after the operation of the project.</li></ul>
<b>Criterion 6</b>	The WHR system is designed to <b>be connected only to an internal power grid of the cement factory.</b>

# Monitoring Parameter: ID\_AM001

## Monitoring parameter are only two

- ✓ The quantity of the electricity supplied from the WHR system to the cement production facility
- ✓ The number of days during a monitoring period

### Example:



Source: Additional Information (Power generation by waste heat recovery in cement industry (ID\_AM001))

# Emission reductions under ID\_AM001

GHG emission reduction measures	<b>Waste heat recovery (WHR)</b> system which generates electricity through waste heat recovered from cement production facility. Electricity generated from the WHR system <b>replaces grid electricity resulting in GHG emission reductions of the connected grid system.</b>
Calculation of <b>reference emissions</b>	Reference emissions are calculated from <b>net electricity generation by the project</b> which replaces grid electricity import to the cement factory where the project is implemented during a given time period.
Calculation of <b>project emissions</b>	<b>Project emissions are not considered</b> as the WHR system does not utilize any fossil fuel.

# Emission reductions under ID\_AM001

- The default value for electricity consumed for captive use is set as the **maximum rated capacity** of equipment of the WHR system assuming their operation is **24h/day**.

