



WORKFLOW AND DATA REQUIRED FOR THE DEVELOPMENT OF THE WASTE HEAT RECOVERY PROJECT

| PROJECT PROCESS STEPS | DATA NEEDED | | |
|--|---|---|---|
| | Heat source data | Technologies | Final user characteristics |
| 1. Pre-feasibility study analysis of WH recover possibilities | <p>Available average power value</p> <p>Available average temperature value</p> <p>Continuous or discontinuous emission profile</p> | <p>Nominal power</p> <p>Technical constrains</p> <p>Nominal efficiency</p> <p>Cost curves</p> | <p>Average energy demand/loads</p> <p>Hourly heating demand profile</p> <p>Continuous or discontinuous demand</p> |
| 2. Feasibility study | <p>Daily average power profile</p> <p>Average temperature value</p> <p>Available waste heat hours (according to the hours of the day)</p> <p>Continuous or discontinuous emission profile</p> | <p>Nominal power</p> <p>Technical constrains</p> <p>Nominal efficiency</p> <p>Cost curves</p> | <p>Daily average demand/load profile of a typical day</p> <p>Hourly demand</p> <p>Final user technical constrains</p> |
| 3. Preliminary design | <p>Hourly power average profile of a typical day</p> <p>Available average temperature value</p> <p>Annual plant stop periods</p> | <p>Nominal power</p> <p>Technical constrains</p> <p>Nominal efficiency</p> <p>Cost curves</p> | <p>Hourly load average value of a typical day</p> <p>Detailed user technical constrains</p> |
| 4. Final design | <p>Daily power availability per hour in a typical year</p> <p>Daily average temperature availability per hour of a typical year</p> <p>Detailed annual plant stop periods</p> | <p>Nominal power</p> <p>Technical constrains</p> <p>Efficiency variation following load variations</p> <p>Cost curves</p> | <p>Daily load average value per hour in a typical year</p> <p>Detailed user technical constrains</p> |