**Thermal Energy**

**(TE13)**



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| **Fact Sheet TE13: Optimize boilers systems by blowdown optimization** |
| **Overview** |
| *Objective* | Maximizing boiler’s efficiency and reducing the thermal energy used and water consumption using automatic blowdown control system. |
| *Action* | Optimizing the flow rate of blowdown in the boiler by adjusting blow down valve |
| *Key Challenges* | Initial CAPEX |
| **Process** |
| *Complexity* | Moderate – system’s calculations and implementation |
| *Equipment & Material*  | Correct blowdown automatic valve, TDS control and feedback system. |
| *Human Resources* | Engineers & technicians  |
| **Considerations** |
| *Regulatory Aspects* | None |
| *Economic*  | High CAPEX ,Low OPEX, high savings – depends on every system/Hotel separately |
| *Advantages* | * Decreasing water’s consumption and monthly bill.
* Decreasing Natural gas / Diesel monthly bill.
* Reduction in CO2 emissions.
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| *Disadvantages* | Initial High CAPEX |
| **Impacts** |
| *Environmental* | * Pollution reduction as a result to CO2 reduction.
* Reduction in water consumption
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| *Employment Opportunities* | Moderate – technical labors |