

**Thermal Energy**

 **Solution Card No.5: Optimizing the flow rate of blowdown in the boiler by adjusting Blow down valve**

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| **Inputs** |
| Hotel | \*\*\* |
| Boiler Type | Fire Tube Boilers / Water Tube Boilers |
| Fuel Type | Natural Gas / Diesel / LPG |
| No. Of Units | 1 |
| **Assumptions** |
| Operating Condition | \*\*\* TPH @ \*\*\* bar |
| Exchange Rate | 16 EGP/USD |
| Consumption Profile | \*\*\* hr/day | \*\*\* days/year |
| **Constraints** |
| Fuel Prices | \*\*\* EGP/MBTU (2020/2021) |
| Water Prices | \*\*\* EGP/m3 (2020/2021) |
| **Proposed Solution** | **As-Found** | **Tuned Up** |
| Blow Down Flowrate | \*\*\* ton/hr | \*\*\* ton/hr |
| Blow Down Percentage | \*\*\* % | 5 % |
| OPEX (Fuel & Water) | EGP \*\*\* | EGP \*\*\* |
| Annual Energy Saving | \*\*\* kWh (\*\*\* MBTU) |
| **Economic Features** |
| Average CAPEX | EGP \*\*\* |
| Annual OPEX Savings | EGP \*\*\* |
| Payback Period | \*\*\* year |
| Lifetime | 15 years |
| Annual CO2 Reduction | \*\*\* tCO2 |