

**Thermal Energy**

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

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