**Thermal Energy**

**(TE01)**



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| **Fact Sheet TE01: Use renewable/sustainable energy solutions such as solar water heaters (SWH)** |
| **Overview** |
| *Objective* | Using solar thermal energy for water heating in different purposes |
| *Action* | Install solar water heatersReplace electric water heaters with solar water heaters |
| *Key Challenges* | Initial High CAPEX, available area for system installation (i.e. empty roofs) |
| **Process** |
| *Complexity* | Moderate – system’s calculations and implementation |
| *Equipment & Material*  | Solar heating panels (collectors), tanks, pipes |
| *Human Resources* | A solar water heaters firm (Engineers and technicians for design and installation)Technicians for periodic maintenance |
| **Considerations** |
| *Regulatory Aspects* | None, no regulations support installing solar water heaters in Egypt |
| *Economic*  | Moderate CAPEX, Low OPEX, Moderate savings – depends on every system/Hotel separately (hard to be generalized) |
| *Advantages* | * Reduction in gas/electrical bill.
* Reduction in CO2 emissions
* Replacing convenient methods with up-to-date technologies.
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| *Disadvantages* | High initial CAPEX |
| **Impacts** |
| *Environmental* | Environmentally friendly approach, pollution reduction as a result to CO2 reduction |
| *Employment Opportunities* | Moderate – technical labors |