

Kafa'a Project Consultancy Study on Energy and Water Efficiency on PDO contractor community in Fahud

Challenge:

- Essential but limited resources like energy and water need conservation for long-term use.
- Require understanding current practices to find impactful improvements across multiple PDO contractor.
- Conducting walkthroughs across multiple campsites is challenging but necessary to assess real practices.

Objective:

- To implement audits by walkthrough surveys to gather the present scenario and practices used at some Fahud campsites of PDO contractors.
- To create practical recommendations based on the energy and water usage at the audited sites which are classified into residential, workshops, and offices.
- To develop awareness programs and standard guidelines for energy and water conservation at the PDO contractor campsites.

Insights:

- More than 50 companies with more than 100 meters total have been analyzed for energy & water efficiency over the past three years (2019-2017).
- The difference in energy consumption between the winter and summer analysis varies between 22% to 55% in the highest consumption companies. There is no significant noticeable difference in water consumption between the winter and summer analysis.
- One of the audited company with a CO₂ emission of 4,665.82 metric tons, had the highest CO₂ emission in 2018 due to using 55 heavy trucks.
- In 2018, CO₂ emissions reached a peak of 4,665.82 metric tons, primarily due to the operation of 55 heavy trucks.

Impact:

- Increases Efficiency: Audits enable up to 55% energy savings and better water use.
- Cuts CO₂ Emissions: Actions on high-emission sources reduce CO₂ output.
- Builds Capacity: Training promotes sustainability among contractors.



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