

# TROPEC – TASK FORCE TALON 2014 OPERATIONS SUMMARY



**Mission:** Reduce operational energy consumption with an emphasis on utility in tropical environments, while maintaining or improving warfighter capability.

**Goal:** Identify solutions capable of reducing operational energy consumption at PACOM expeditionary basing by 50% from 2012 to 2016.

**Method:** Combine PACOM and Service Component expertise in tropical environments operations with Department of Energy expertise in energy efficiency & demand reductions, and – through a process of technology identification, review and assessment – provide strategy and acquisition professionals with insight and information on material and non-material solutions energy reduction and enhanced capability.

## Task Force Talon, Guam, 2014:

**Background:** The purpose of the Task Force Talon (TFT) Limited Operational Assessment (LOA) was to assess the energy saving and operational performance of a variety of technologies designed to reduce energy consumption or improve the warfighter's operational environment at a forward expeditionary base in a tropical environment.

### Inflatable Maintenance Shelter

Increased covered space available;  
3.5 times the original shelter.



Quick set-up/take-down process. Several shelter panels damaged over six month demonstration. Moderate deterioration of inflatable beams due to climate.

Recommendations:

- Improve durability of the shelter panel material and inflatable beam material
- Improve method of opening bay door

### ECU with Dehumidifier

Effectively reduced relative humidity by 19.6%. Combined power consumption showed no significant increase compared to ECU alone. Significant loss in performance experienced partway through demonstration.



Recommendations:

- Continue development of enclosure to minimize air leaks and/or incorporate into ECUs
- Incorporate troubleshooting checks

### SuperCLU

Reduced energy usage by 32% while occupied and 65% unoccupied for similarly sized shelters while maintaining thermal comfort levels. Glued seams separated during the nine month event due to tropical conditions.

Recommendations:

- Improve leveling procedures
- Fortify joints where water can collect.



### Solar Light Cart

Provided a set and forget/self-sustaining lighting capability to TFT. Long battery life even when poorly orientated. Significant water intrusion occurred in battery compartment.

Recommendations:

- Ruggedize the trailer
- Insure proper orientation.



### Renewable Area Lighting

Useful to conduct urgent maintenance during night-time operations.

Recommendations:

- Weatherproof components
- Ruggedize electrical connectors

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