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# ***Navy Shore Installation NAS Sigonella***

***September 2023***

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# Overview



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# “The Hub of the Med”

**Strategic Situation: We are competing against a revanchist Russia, rising China, and VEOs from the Arctic to South Africa**

## NAVEUR/NAVAF Priorities

- Operate at and from the Sea
- Increase Warfighting Readiness
- Improve Capabilities of our Allies and Strengthen Partnerships

- NAVEUR/AF Bases
- ▬ Russian Activity
- ▬ Chinese Activity



NAS Sigonella is a unique **operational platform** ashore that enables U.S., allied, and partner nation forces to be where they are needed and when they are needed to ensure security and stability in Europe, Africa, and Southwest Asia.

# Who We Support...



## US NAVY (non-inclusive)

- **CTF-67: (C6F Maritime Patrol and Maritime Domain Awareness)**
  - **VP:** P-8A Squadron rotational deployment, OPCON to CTF67
  - **AIMD/ASD:** Intermediate depot support for CTF67
  - **VUP-19 :** USN MQ-4C Triton; OPCON to CTF-67 (IOC 2022)
- **Navy Munitions Command:** Theater weapon storage and VLS QRTs
- **US Naval Hospital:** Primary Hospital supporting clinics in Souda Bay and Bahrain
- **CNE Det MAST:** Deployable COOP C4I Team for CNE/CNA/C6F
- **NCTS:** Full spectrum theater comm support; MUOS site (Niscemi)
- **Fleet Logistics Center (FLC):** Logistics HQ for CNE/CNA/C6F
- **Exec Transport:** C-20
- **VR Detachment (Reserve):** C-40 and C-130 (rotational), OPCON to C6F/CTF-63
- **NASSIG Air Ops:** C-26s TACON to C6F/CTF-63
- **NAMRU-3:** BUMED Infectious Disease Research HQ for Europe and Africa

## US ARMY

- Joint Tactical Ground Station/JTAGS
- Veterinary/Public Health Services

## US AIR FORCE

- 7th Reconnaissance Squadron (RQ-4)
- 324<sup>nd</sup> Expeditionary Reconnaissance Squadron (MQ-9)
- AMC Terminal
- Security Police

## USMC

- **MARFOREURAF**  
Detachment Sigonella

## Defense/Joint/NATO

- SOCOM/JSOC
- DLA
- NATO Allied Ground Surveillance (RQ-4)

*Due to its strategic location at the crossroads to multiple combatant commands, NAS Sigonella supports a diverse range of missions, including all services, DOD, and Allied forces. Missions and space requests continue to grow ...*



# NAS Sigonella Background

## • **Current Status**

- NAS Sigonella (NAS 1, NAS 2 and Niscemi Navy Radio Transmitter Facility) shore power supplied via commercial power grid. Experiencing disruptions due to fluctuations to commercial power and issues with internal medium voltage infrastructure.
- Industrial Control System (ICS) partially implemented on base. No current infrastructure or software in place to mitigate cybersecurity threats.
- TTX completed on 31<sup>st</sup> May 2023

## • **On-Going Energy and Water Projects to Address Current Challenges (ESF)**

- ERCIP P-1017 (FY14):
  - \$2.54M project converts heating and domestic hot water systems from diesel fuel to natural gas and constructs major utility infrastructure upgrades for natural gas distribution systems at NAS 2. Estimated completion date – Dec 2024, saving 2,179 MBtu/yr with a 5-year payback.
- ERCIP P-1016 (FY13) & P-1021 (FY15):
  - Two combined ERCIPs in one project worth \$1.5M convert NAS 1 & 2 reclaimed water to irrigation water reducing potable water usage (for irrigation) by 90%. Estimated completion date – Dec. 2023, saving 19 MGal/yr with a 10-year payback.
- FY22 NAS Sigonella Upscale & Repair existing PV Carport:
  - \$280K project will repair and upscale existing PV system in NAS 1. Estimated completion date – April 2024, currently in progress.
- FY24 New PV carport and existing PV Farm Weapons expansion project
  - still in scope development phase. Planned for award via existing ESPC scope increase in FY24 by EXWC.
- FY24 Smart Grid Project P-139:
  - \$8.9M project implementing smart grid and SCADA upgrade for medium voltage distribution system – mitigates fluctuation and micro-outages. Planed in FY25, currently in design stage.

## • **Supported Command Missions and Expected Growth**

- CTF-67, Deployed VP (P-8A) and VR (C-40) Squadrons, NCTS, USAF RQ-4 and MQ-9 Squadrons, Army JTAGS, NATO AGS (RQ-4). Installation population: 5,000 U.S., Joint, and NATO forces plus dependents; 900 local national employees
- NATO runaway expansion work in progress, USN Triton MQ-4 new platform to arrive in FY23

## • **Installation Energy Manager (IEM) Status**

- Foreign national IEM, currently CEM, CEA and CMVP certified - Not eligible for SIPR account.

# NAS Sigonella Dashboard

## Baseline, Current, Goal & Projection



Area	Criteria/Description	Baseline	Current (FY23 – Q3)	Goal	Projection ("Best-Case")
<b>Energy Efficiency</b>	Tailored Reduction (GOALS)	210,065 MBTU (FY 15)	216,404 MBTU	(176,036) MBTU	197,869 MBTU (FY25)
	Energy Intensity Reduction	69.63 MBTU/KSF (FY 15)	69.36 MBTU/KSF	(56.87) MBTU/KSF	63.42 MBTU/KSF (FY25)
<b>Water Efficiency</b>	36% Redux Water Use	356,100 KGAL (FY 07)	237,871 KGAL	(227,904) KGAL	180,010 KGAL (FY24)
<b>Renewable Energy</b>	Prod/buy 25% by 2025	0% (MBTU) (FY 15)	11% MBTU	47,613 MBTU/ 25% MBTU	15% (MBTU) (FY24)
	30% hot water solar	50% (FY 19)	50% demand in new build	> 30% demand in new build	50% demand in new build (FY20)
<b>Reliability</b>	SAIFI	2.85 (FY18)	0.07 outages per customer	< 1 outages per customer (new req.)	0.56 outages per customer
	SAIDI	704.55 (FY18)	20.82 minutes per customer	60 minutes per customer (new req.)	60 minutes per customer
	Availability	99.9986% (FY18)	99.8793% of time	99.98%	99.98% of time
<b>Resiliency</b>	P-602 Min Res. Stdbdy Crit	16% (FY18)	56% fac compliant	100% fac compliant	100% (FY25)
	Comp w UFC 4-010-06, FRCS	Non-compliant	Partial compliance	100% Comp	Partial compliance by 2023
	Supply Chain Material Management Policy	Non-compliant	Partial compliance	100% Comp	Partial compliance by 2023
	Compliance DFARS Clause 252.204-7012	Non-compliant	Partial compliance	100% Comp	Partial compliance by 2023
	DoD Cyber Security 8500	Non-compliant	Partial compliance	100% Comp	Partial compliance by 2023
<b>Facilities and Utilities Infrastructure</b>	AMI – Electrical	0% consumption metered w/ AMI	94% consumption metered w/ AMI	85% consumption metered w/ AMI	97% consumption metered w/ AMI (FY23)
	AMI at Navy Piers	N/A	N/A	N/A	N/A
	AMI – Water	0% water intensive fac metered w/ AMI	26% water intensive fac metered w/ AMI	100% water intensive fac metered w/ AMI	100% water intensive fac metered w/ AMI (FY25)
	AMI – Natural Gas	0% NG consumption metered w/ AMI	100% NG consumption metered w/ AMI	85% NG consumption metered w/ AMI	100% NG consumption metered w/ AMI (FY22)
	AMI – Steam	N/A	N/A	N/A	N/A
	Facility Condition Rating	96 (FY19)	95	Average Facility CR > 60	95 (FY24)
	Infra Condition Rating	87 (FY19)	72	Average Infra CR > 60%	75 (FY24)
Energy/Water Audits	57% fac audited (FY 20)	61% fac audited	75% fac audited	75% fac audited (FY24)	
<b>Non-Tactical (Fleet) Vehicles Petroleum Use</b>	≥ 20% Redux Petrol Use	No installation-level data available	No installation-level data available	No installation-level data available	No installation-level data available
	10% Increase Alt Fuel Use	No installation-level data available	No installation-level data available	No installation-level data available	No installation-level data available
<b>Energy Management</b>	Installation Energy Boards	Quarterly (FY18)	Quarterly	Meet Quarterly	Quarterly (FY23)
	Installation Energy Instruction	every two years (FY18)	Annually	Review Annually	Annually (FY23)
<b>Energy Awareness</b>	Weekly/Monthly/Annual Engagements	Quarterly (FY18)	Monthly	Monthly	Weekly/Monthly (FY23)

Yes Gap

Controlled UNCLASS

Unknown

No Gap



# Top 5 Priority Gap Summary

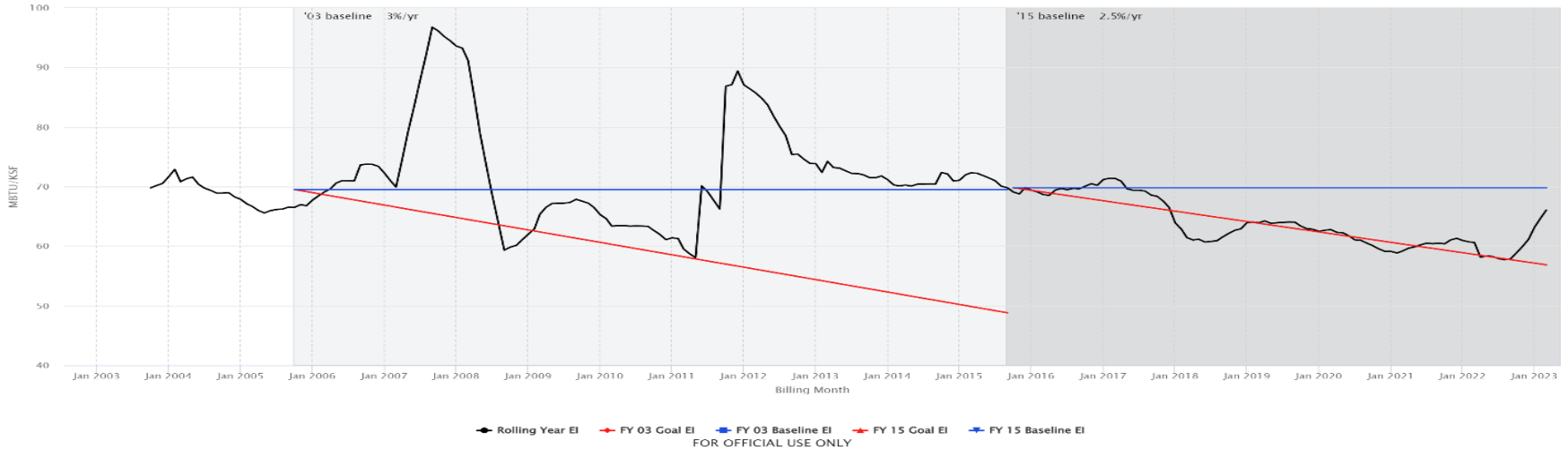
## Energy Security Gaps

Installation Gap Priority	Gap Identified (FY)	Gap Type (Resiliency, Reliability, Efficiency)	GAP #	Mission (EMIG GAP – Regional Review: Region Scoring Sheet tab, Column A)	Number of facilities affected by a gap (EMIG GAP – Regional Review: Region Scoring Sheet tab, Column F / DUERS)	Description (EMIG GAP – Regional Review: Installation Data tab/EMIG Mission Data Sheets)
1	2018	Electrical <u>Reliability</u> & Resiliency SAIDI & SAIFI indexes	G14127	NAS Sigonella tenant commands, potentially impacting missions ISO C6F and C5F strategic LOE	All NAS 2	Number of electrical power interruptions per year is far greater than 1 per customer and longer then 60 minutes annually.
2	2018	Electrical Reliability & Resiliency SAIDI & SAIFI indexes	G14431	NAS Sigonella tenant commands, potentially impacting missions Fire Department and PW	Utilities – Water Plant NAS 2	Power provider voltage fluctuations are causing outages impacting mission critical Tenant Commands, jeopardizing equipment at the Water Treatment Plant.
3	2019	Renewable Energy	G14840	Potential cost savings	Whole Installation	NAS Sigonella is far from reaching the 25% energy from renewable goal as per EISA 2007 and NDAA 2010. Sigonella is planning to implement a COA with the following projects to achieve the Energy Renewable goal: CNREURAFCENT-00490 NAS Sigonella ESPC, now in performance. CNREURAFCENT-00491 NAS Sigonella B452, B453, 719, 723, 722 NET ZERO for DLA, now in performance. CNREURAFCENT-01665 NAS Sigonella Upscale & Repair existing PV Carport, in progress CNREURAFCENT-01575 NAS 2 Sigonella PV carports and ground installation, in planning phase
4	2019	Energy Efficiency	G14842	Potential cost savings	Whole Installation	Since FY 2023, Sigonella is not meeting the energy savings goal. This is mainly due to the spike in the diesel fuel consumption. In order to meet the goal the base plan to implement this COA by the following projects: CNREURAFCENT-00487 NAS Sigonella Natural Gas Conversion in NAS 2 ERCIP (ECD Dec. 2024) CNREURAFCENT-06042 NAS Sigonella Large Decarbonization NAS 2 – in planning phase
5	2019	Water Efficiency	G14841	Potential cost savings	Whole Installation	NAS Sigonella is close to achieve the water goal. Water efficiency goal will be achieve with the completion of the following projects: CNREURAFCENT-00486 NAS Sigonella Irrigation Reclaimed Water from WWTP NAS 1 ERCIP CNREURAFCENT-00488 NAS Sigonella Irrigation Reclaimed Water from WWTP 2 ERCIP CNREURAFCENT-04939 AMI potable water expansion UEM is also working to repair all existing water leaks in the main water distribution system.



# Energy & Water Consumption Chart

DUERS Energy Intensity Progress



DUERS Water Intensity Progress



\*Installations to pull data from NSGEM: <https://agp.navfac.navy.mil/ges/neip/nsgem/>





# Energy Reduction – NAS Sigonella

Energy Intensity Graph - Installation Group  
62995 NAS SIGONELLA IT - UIC Prefix N (Navy Shore)  
1st Quarter FY 2023: January 2022 through December 2022

Current Progress: -7.90%

\*\*CUI\*\* : Goal: Reduce 2.5% Annually, Baseline Year: FY2015

Current Quarter Reduction Goal: -18.1%

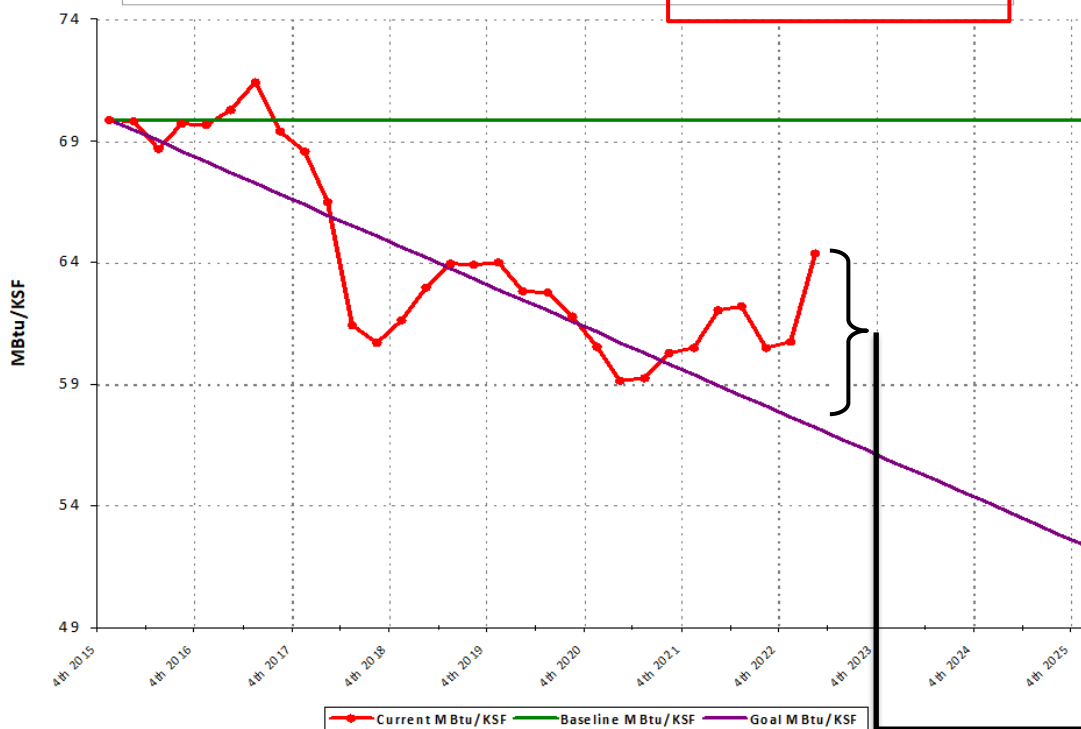
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### Energy Reduction Progress

Current MBtu/KSF = 64.36

Baseline MBtu/KSF = 69.88

4th Quarter 2025 Reduction Goal: -25%



NAS Sigonella FY23 - 1st Qtr		
Top 10 facilities energy consumers		
Fac. No.	Cost Est.	MBTU
Hospital - NAS 1	\$285,218	2,199
MWR MIDTOWN COMPLEX	\$351,192	1,326
BEQ - 170	\$557,033	1,153
COMMISSARY	\$677,363	995
NEX	\$317,255	964
DODDS ELEMENTARY SCHOOL	\$344,779	589
SATCOM BUILDING	\$504,358	496
CHAPEL	\$72,643	493
AIMD - building 426	\$318,500	449
UP LIFT STATION 1	\$301,742	425

-56% ↓  
130% ↑  
90% ↑  
4% ↑  
10% ↑  
71% ↑  
224% ↑  
1037% ↑  
-19% ↓  
-19% ↓

**\*\*\*Key Takeaway\*\*\***  
*Sigonella is behind plan on Energy Intensity Reduction targets. Current progress is ~8% below 2015 baseline but should be at - 18.1%.*

**NOTE:** Significant reduction strategies have been implemented at Sigonella by ESPC project. Missing reduction goals due to estimated diesel fuel usage.

\* Chart demonstrates comparison between the 1st Quarter of FY23 with 1st Quarter of FY22.



# Water Reduction – NAS Sigonella

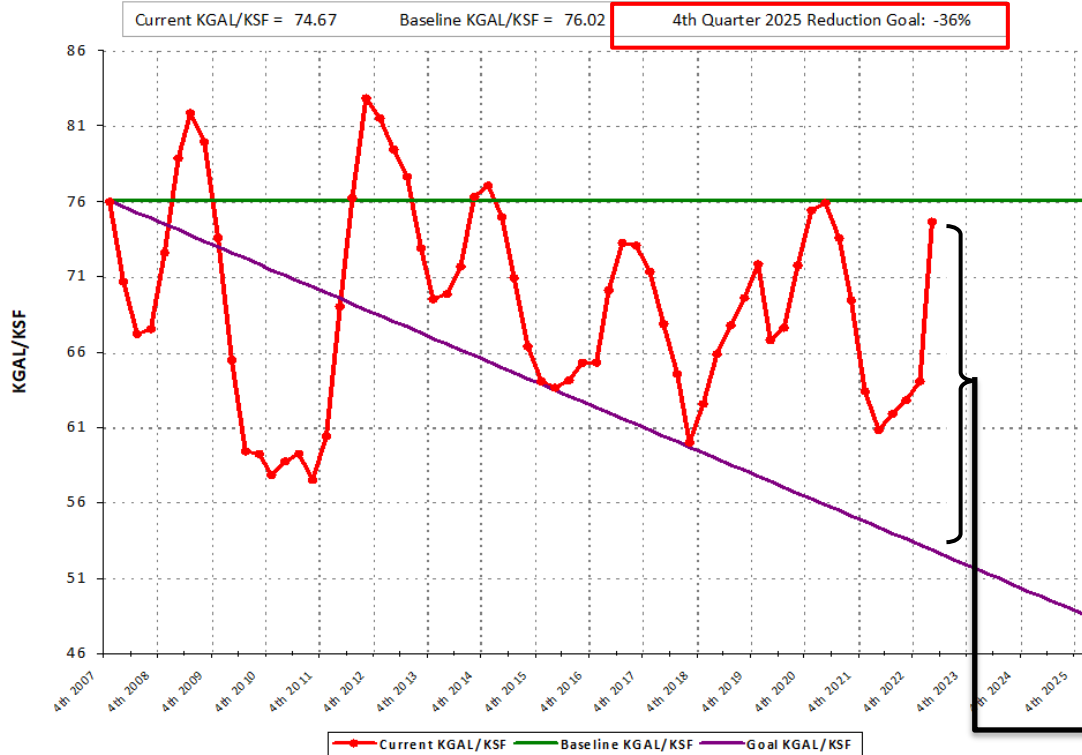
Potable Water Intensity Graph - Installation Group  
 62995 NAS SIGONELLA IT - UIC Prefix N (Navy Shore)  
 1st Quarter FY 2023: January 2022 through December 2022

Current Progress: -1.79%

\*\*CUI\*\* : Goal: Reduce 2% Annually, Baseline Year: FY2007

Current Quarter Reduction Goal: -30.5%

### Water Reduction Progress



NAS Sigonella FY23 - 1st Qtr			
Top 10 facilities water consumers			
Fac. No.	Cost Est.	kGal	
Hospital - NAS 1	\$201,327	3,084	41% ↑
WATER RESERVOIR FIRE PROTECT - B425	\$113,954	2,501	512% ↑
BEQ - 623	\$94,815	2,081	1217% ↑
BEQ - 557	\$118,136	1,810	92% ↑
IRRIGATION ON NAS 2	\$81,478	1,788	47% ↑
BEQ - 170	\$72,318	1,587	-12% ↓
Irrigation in front B273	\$75,781	1,161	63% ↑
Navy Lodge -B313	\$71,452	1,095	88% ↑
FIRE TRUCK RE-FILL NAS 2	\$33,041	725	2039% ↑
NAS 1 SEWAGE PLANT - B229	\$17,189	377	12070% ↑

**\*\*\*Key Takeaway\*\*\***  
**Sigonella is behind plan on Water Intensity Reduction targets.**  
**Current progress is ~2% below 2007 baseline but should be at -30.5%.**

\* Chart demonstrates comparison between the 1st Quarter of FY23 with 1st Quarter of FY22.

# Questions?

