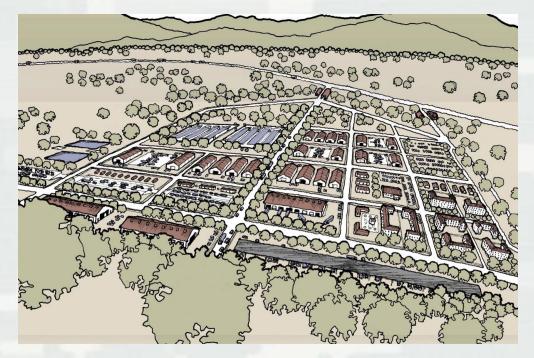
## **Installation Energy Master Plan**



# **Installation Energy Planning**

- Sustainability/Energy Planning
  - Core Strategy of installation Master Planning
- Guiding principles in the planning and development of installations
- Federal, and DoD directives guide comprehensive
   solutions





# Sustainability/Energy Planning

# National Defense Authorization Act 2013

- ...ensure all installations must have an installation master plan that addresses environmental planning, sustainable design and development, sustainable range planning, real property planning and transportation planning...
- National Defense Authorization Act 2014
  - ...consider for compact and in-fill development, horizontal and mixed use development, that considers the full life-cycle costs of planning decisions and capacity planning through use of growth zones

Sustainable design and development calls for effective use of ENERGY as well as water, waste And storm water management



# **Sustainability/Energy Water Planning Master Planning Guidance DOD/Service**

#### May 2012 UFC 2-100-01 Installation Master Planning

■Sustainable Planning

Natural and **Cultural Resource** 

Preservation

Defensible Planning

Healthy Community **Planning** 

Area Development Planning Construction

■Network Planning

■Form-Based Planning

Capacity Planning

■Facility Standardization

■Plan Based Programming

Sustainable Planning Principles

**Build more compactly** 

Focus on infill development

Use vertical and horizontal mixed

use Plan for transit-oriented

development

Design with multi-story

Support energy-efficiency

What is the Quantifiable Sustainability Effects (energy, Water, waste, storm Water)?

What is the minimum risk to the installation's strategic infrastructure and networked assets that support the critical missions.

Where risk exists, the plan must have contingencies to mitigate or remediate the risk

Imbedded in the planning Process and reflected in products

Vision Plan

Installation **Development Plan** Area development Plan (s)

**Area development Plan (s)** 

Installation **Planning Stds** 

Installation **Development Program** 

Executive Summary





# **Sustainability/Energy Planning Master Planning Guidance DOD/Service**

### May 2012 UFC 2-100-01 Installation Master Planning



Defines overall strategy for development including Energy considerations Enables district
Sustainable
development
solutions that
include
compact
development,
& network
planning

Establishes building, site and network standards for the built environment.

Identifies
energy
investments
that are
defined from
master
planning
process.

Summarizes
Plan goals
and
objectives
and
Implementat
ion actions.





## Installation Energy Plans (IEP's) for DoD Installations

- 31 March 2016, the Office of the Assistant Secretary of Defense Memorandum
- IEPs are to be an integral part of updating installation master plans to meet the requirements of Unified Facilities Criteria UFC 2-100-01, Installation Master Planning.
- Developed in coordination with other installation plans
- Identify NEPA requirements
- Discussions of energy requirements, conservation potential, mitigation measures, and natural or depletable resource



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON. DC 20301-3400

MAR 3 1 2016

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)

ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND ENERGY)
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOT PIELD ACTIVITIES

SUBJECT: Installation Energy Plans

The Department of Defense (DoD) continues to make progress toward reaching our energy goals with installation energy efficiency efforts contributing to DoD avoidance of approximately \$1\$ billion in new operating costs since 2009. In today's resource constrained environment, the Department must continue to find creative ways to drive additional efficiencies in energy use and roduce costs. A larger coordinated effort is needed to gain sprengy between current energy initiatives and future planned energy projects to maximize energy use and cost reductions. By leveraging improved access to meter and energy data, we can drive a more integrated and systematic approach to energy management through informed energy planning. Effective immediately, it is the Department's policy to require installation-level energy plans for all DoD Components to support this concept.

Currently, DoD Components are updating their installation master plans to meet the requirements of the Under Secretary of Defense (Acquisition, Technology and Logistics) memorandum, Installation Marter Planning, of May 28, 2013, by October 1, 2018. The Installation Energy Plan (IEP) should be an integral part of this effort. Thus, within one year of the date of this memorandum, each DoD Component will brief my office on their prioritized plan for the implementation of this policy. Within three years of the date of this memorandum, energy plans, signed by the base commander, should be completed for installations that together compose 75 percent of each component's installation energy consumption. Attachments I and 2 provide a high-level overview of the suggested IEP development process and a general reference list of DoD energy management and master planning guidance documents.

Additionally, the Deputy Assistant Secretary of Defense (Installation Energy) shall establish metrics to evaluate the implementation of this policy. This policy and developed metrics will be incorporated into Unified Facilities Criteria under Series 2 Master Planning

- UFC 2-100-04 Area Development Planning (Pre-Final Development)
- IEP identified as Stand-Alone planning product as the Master Planning Products





# **Installation Critical Infrastructure Planning Resiliency and Readiness**

- Installations: Hosts critical infrastructure to organize, train, equip, deploy and conduct combat operations by land forces.
- Current Situation: Significant Infrastructure Risks and Increasing Threats

Guidance

Energy Security: Title 10 U.S. Code, Section 2924 (3)A added in NDAA FY

2012

Energy Resilience: DoDI 4180.11 (December 11, 2009, Change 1, March

16,2016

Army Directive: 2017-07 (Installation Energy and Water Security Policy, 23 February 2017)

requirement to secure critical missions by providing necessary energy and water for minimum of 14 days and to sustain all installation missions by assuring access to resource supply, improving infrastructure condition and

remeting access to resource supply, improving intrastructure condition

romoting robust system operations.

# Planning Initiatives to integrate Energy and Water **Planning**

Installation Energy and Water Plans

Planning products that identify an installation's plan to assure critical mission infrastructures are secured to meeting established readiness goals.

Installation Energy Plans

Planning products that identify an installation plan to sustain and efficient and resilient water and energy infrastructure

Sustainability Component Plans

Planning products that identify a comprehensive plan to address energy, water, waste and storm drainage impacts to assure base-wide resilient and ready installation development today

# Inter-relationship between Installation Master Planning Planning for Resiliency and Readiness



Installation Energy and Water Plan (critical Infrastructure)





Sustainability Component Plan



Vision Plan Installation development Plans (ADP's)

Installation
Planning Stds

Installation
Development
Program

Exec Summary





## **Installation Energy Plans: Take Aways**

Comprehensive collaborative planning process ensures energy and water considerations are imbedded in base planning.

Installation Energy and Water Plans focus on critical mission essential installation assets

Installation Energy Plan(s) are extensions of current installation master planning practices, policies and guidance

Use of planning level modeling of impacts wonderful way to understanding impacts of potential decisions.

Master Planning Core-competencies, comprehensiveness and education and training essential

## **Sustainability Component Plan Training**

Master Planning Training Courses Developed (DOD Master Planning Institute/PROSPECT)

Course 258 Master Planning Energy and Sustainability addresses the SCP/IEP process in accordance with the Master Planning: next offering 13-16 March 2018 New Orleans LA

Course 163. Master Planning Sustainability and Resiliency Addresses how to use Modeling tools (NZP tool) to assess different Energy, water, and waste 24-26 April 2018, Champaign IL

Contact: Registrar, USACE Learning Center (256) 895-7425 / (256) 895-7422 / (256) 895-7437 / (256) 895-8086

Tuition Based: Open to All Federal Employees, consultants, state and local employees, universities