



Workshop Agenda:

Fundamentals of Microgrid Analysis and Design

8:15 – 8:30 **Registration**

8:30 – 9:00 **Introduction and Welcome**

- FEMA introduction
- Sandia introduction
- DOE introduction
- Attendee introductions and areas of interest

9:00 – 10:30 **Module 1 – Electric Power Systems and Energy Surety**

- Overview of the power grid
- Overview of distribution systems
- Energy surety considerations

Module 2 – Microgrids and Energy Surety Benefits

- What is a microgrid?
- Types of microgrids
- Capabilities of advanced microgrids

10:30 – **Break**

11:00

11:00 – **Module 3 – Energy Surety Design**

12:00 **Methodology**

- Metrics and general considerations
- Energy surety conceptual design methodology

Module 5 – Critical Assets and Services

- Identify critical infrastructure
- Think towards resiliency

Module 6 – Design Threats

- Design Basis Threat (DBT) methodology
- Categorize DBTs based on likelihood and impact

12:00 – **Lunch**

13:15

13:15 – **Discussion of Identified Critical Assets and Design Threats** (from workbook)

13:30



13:30 –	Module 7 – Performance Goals	Module 10 – Formulating Design Options
14:45	<ul style="list-style-type: none">• Resilience science and metrics• Quantifying total impact of recovery	<ul style="list-style-type: none">• Clustered assets for potential microgrids• Impact of different microgrid setups
	Module 8 – Performance Risk Analysis	
	<ul style="list-style-type: none">• Risk analysis methodology – energy (RAM-E)• Fuel storage requirements to for DBTs	
14:45 –	Break	
15:00 –		
16:00	Naval Postgraduate School overview of USVI activities	
	<ul style="list-style-type: none">• Interdependence of critical infrastructure systems• Assessing and improving operational resilience• Modeling interplay of electric grid and water systems	
16:00 –	Tool Demos:	
16:45	<ul style="list-style-type: none">• Microgrid Design Toolkit – visual design and trade-space optimization tool for microgrids• FASTMap– web-based infrastructure mapping and impact analysis• ReNCAT – visual mapping to locate clusters of critical assets that are candidates for microgrids	
16:45 –	Discussion and Wrap Up	
17:00		
