Adapting Air Operations to Energy Challenges

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Two Department of the Navy Energy Goals

• Challenges:
  – Each Middle East “Crisis” leads to rising fuel costs
  – Every $1 per barrel increase in oil equates to a $130M increase in the DOD’s Annual Fuel Budget
  – The Pentagon’s petroleum costs more than tripled to $13.7 billion in 2010 from $3.6 billion in 2000
  – The volume of fuel purchased increased 13 percent to 118 million barrels from 104 million barrels during this same time
  – >75% of energy consumed by DOD is Petroleum-Based

• Increase Alternative Energy Use Navy-wide
  – By 2020, 50 percent of total DON energy consumption will come from alternative sources

• DON will demonstrate a Green Strike Group in local operations by 2012 and deploy it by 2016
  – Nuclear ships
  – Surface combatants using biofuels with hybrid electric power systems
  – Aircraft flying on biofuels
Three Energy Goals:
- Reduce Consumption
- Increase Efficiency
- Increase Alternative Energy Sources
Operational Experience

- Expeditionary EA-6B Squadron
- 4 to 6 missions/day, 2.5 to 6 hours each
- Fuel from:
  - Airborne Tankers
  - Overland from FSU and other Neighbor Countries

- Supply
  - Logistics Challenges
  - Security
  - Cost
  - Type
  - Daily Levels???

- Realizing that logistics is still the key to delivery in this scenario, alternative fuel source(s) would provide increased flexibility and reduce some of our dependency on current supply pipelines
• Panelists:
  – Mr. Rick Kamin: Alternative Fuels
  – Mr. Bill Voorhees: Energy Technology Efforts
  – CDR Daniel Orchard-Hays: Fleet Operational Energy Efforts
  – CDR Scott Fuller: Simulators and Energy Impacts