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***

Bottom Line for Naval Aviation…

- ***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

Aviation Energy Panel

- **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**