

# ***Headquarters U.S. Air Force***

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*Integrity - Service - Excellence*

## **U.S. Air Force Energy Program**



**Mr. Mike McGhee  
Acting SAF/IEE  
10 September 2009**

**U.S. AIR FORCE**

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***The United States Air Force Exists to DOMINATE  
Air, Space, and Cyberspace for America***

***The mission of the  
United States Air Force is  
to fly, fight and win...  
in air, space, and cyberspace***



***Global Vigilance, Global Reach and Global Power***



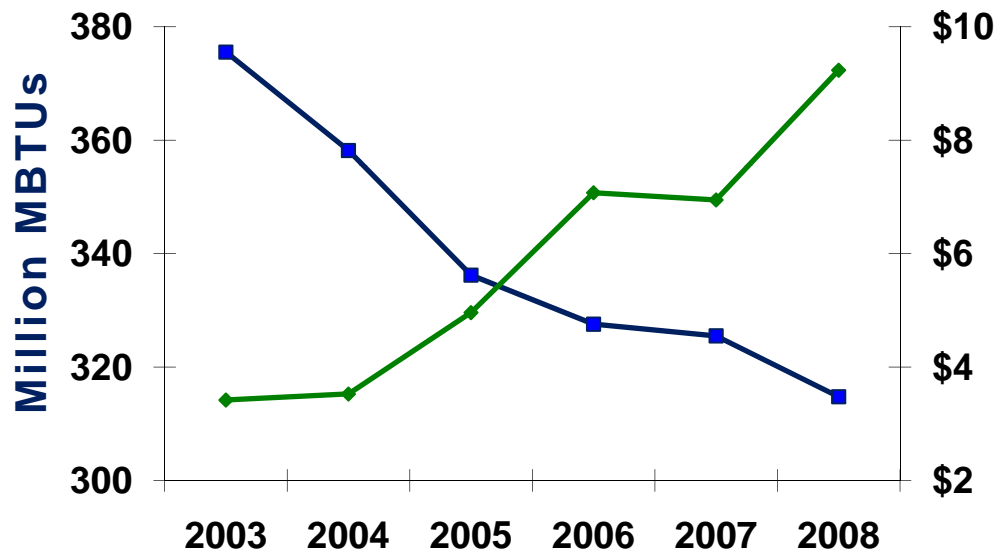


# Air Force 2008 Energy Use

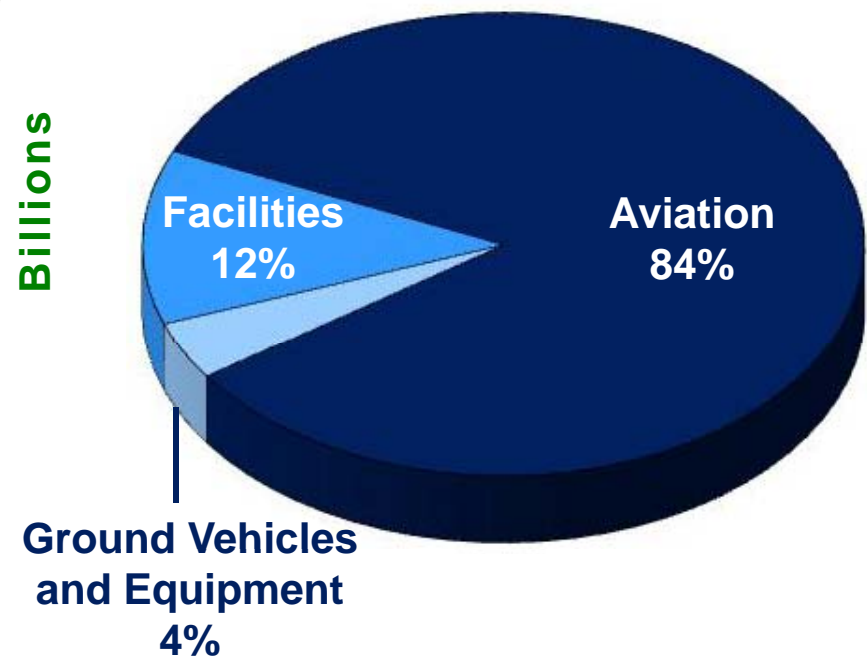
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## Over \$9 billion spent for energy in 2008

Energy Cost and Consumption Trends



Energy Cost Breakdown



***Energy consumption is decreasing  
While costs are increasing***

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# ***Achieving Air Force Energy Security***

## **Energy Strategy**

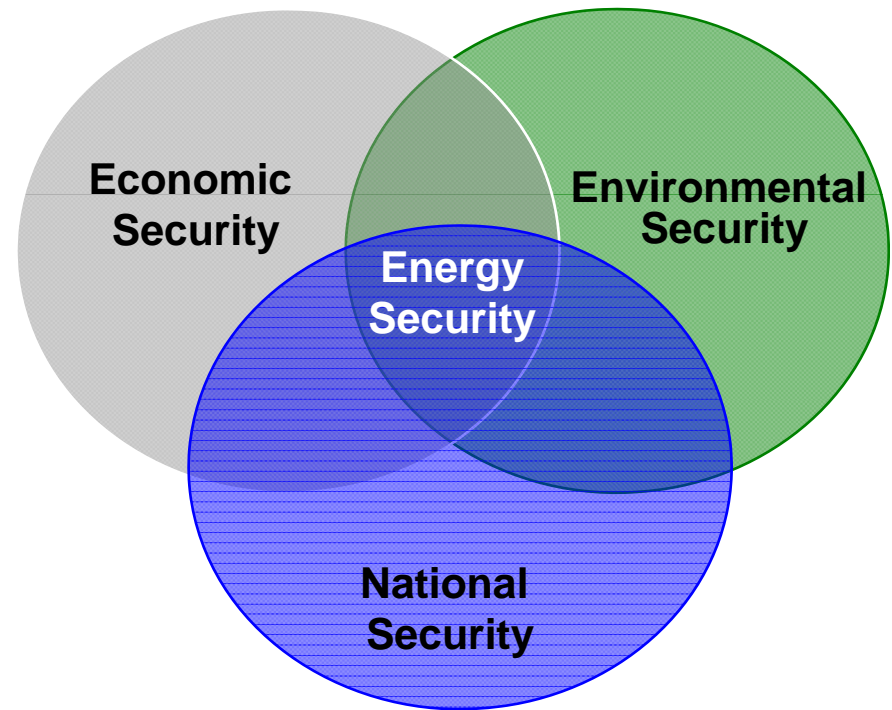
***Reduce Demand***

***Increase Supply***

***Change the Culture***



## **Energy Security**



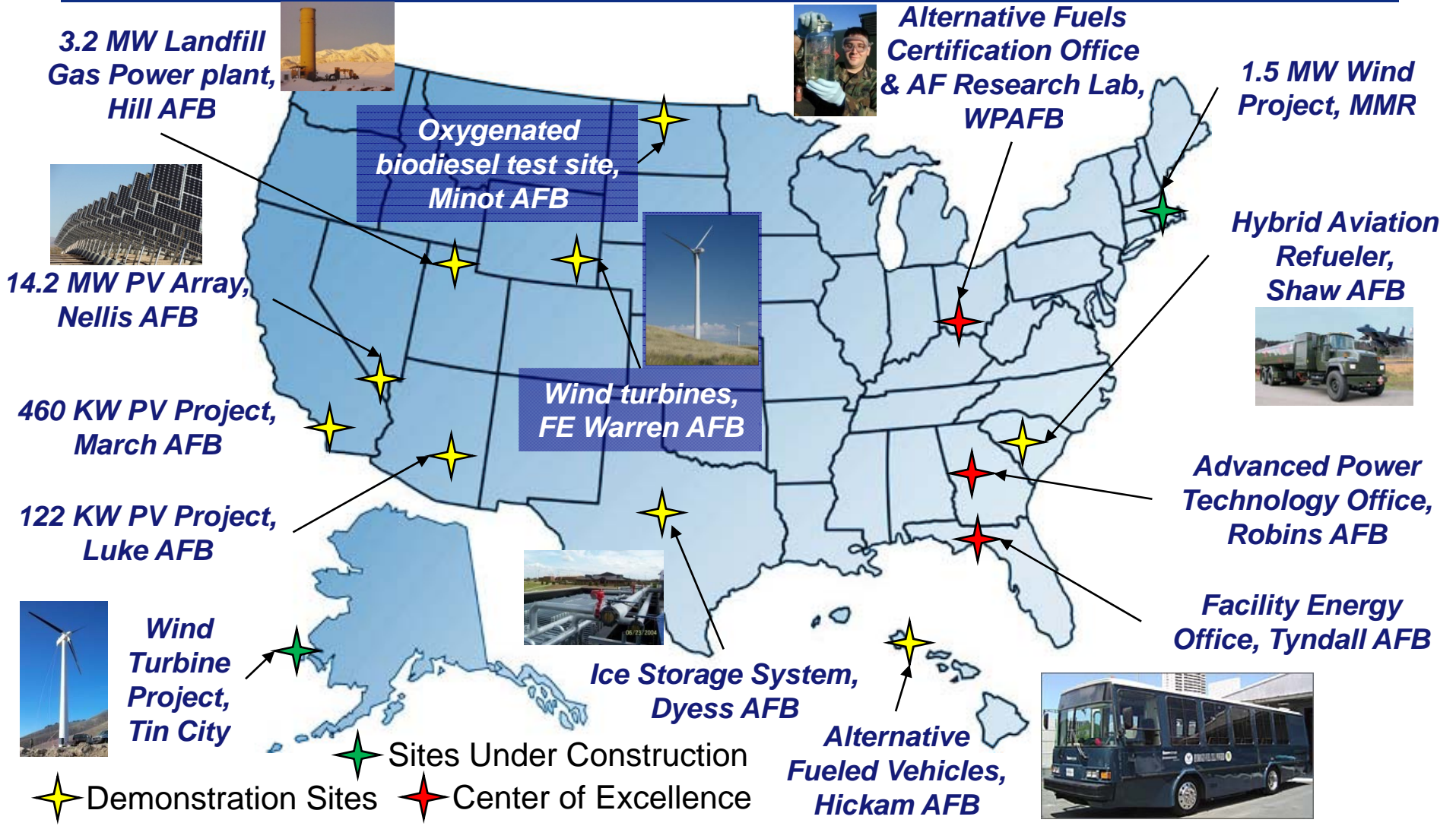
***Executing the AF Energy Program Increases  
Our Energy Security***

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# Air Force Energy Initiatives are Many and Varied



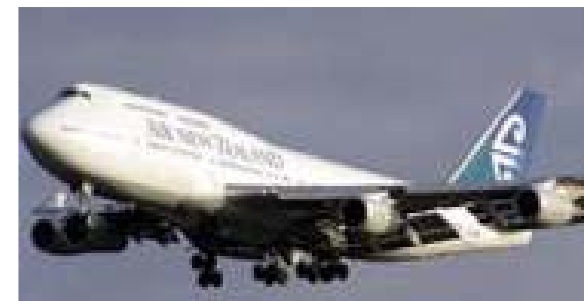
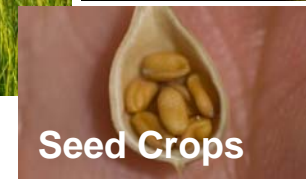
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# Increase Supply: Biomass-Derived Fuel Blend Certification

- Identifying and characterizing biomass jet fuel
  - Foundation for next certification step
- “Hydrotreated Renewable Jet” (HRJ)
  - Rapid certification possible due to composition similarities to Fisher-Tropsch
  - Reduce lifecycle greenhouse gases (joint FAA/DOE/EPA studies underway)
  - Testing DARPA 100% biojet candidates
  - Evaluating Syntroleum/Tyson “yellow grease” HRJ
- Other biomass-derived fuels
  - Non-food seed oils (near term)
  - Halophytes, algae (far term)
  - Cellulosic materials (far term)



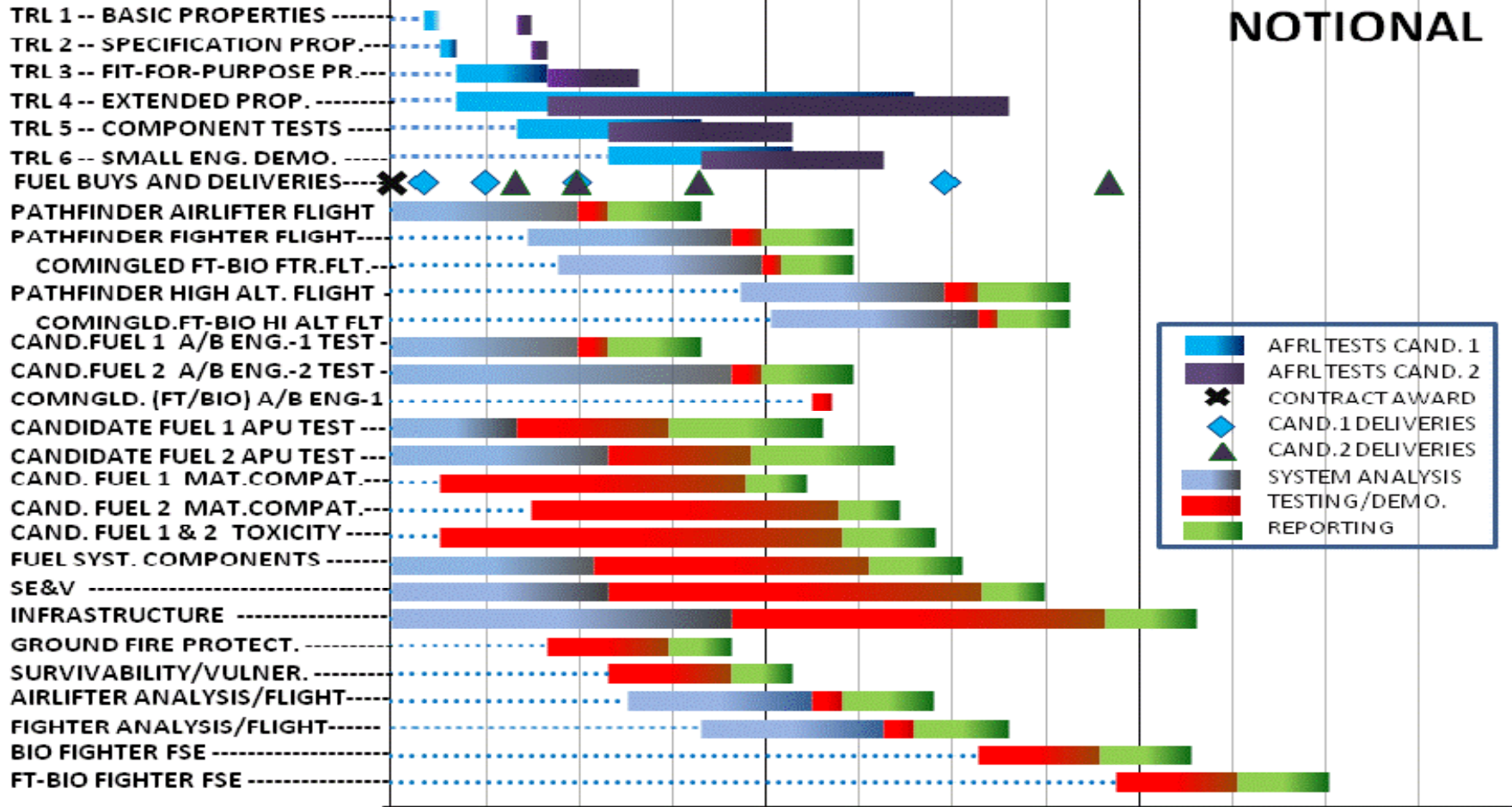
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# Increase Supply: Preliminary Aviation HRJ Certification Schedule

## GEN.2 (HRJ) BIOFUELS



**NOTIONAL**

1-Oct-09

1-Oct-10

1-Oct-11

1-Oct-12

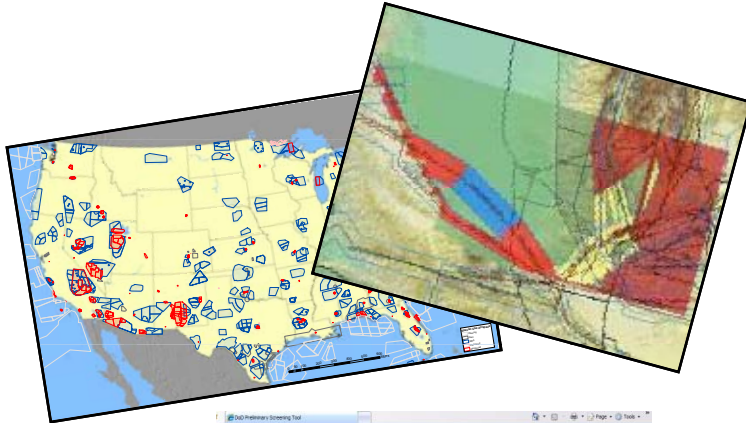
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As of 23 Jul 2009



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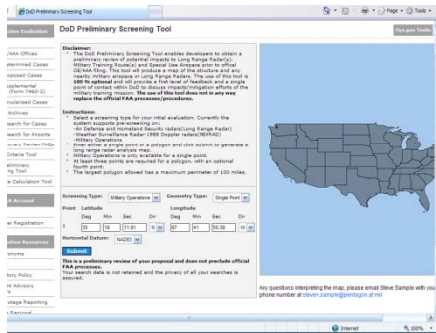
# Evaluating Renewable Energy Projects Mission Impact



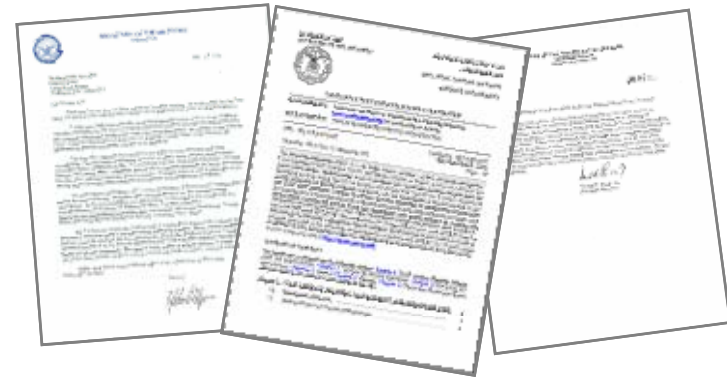
Maps and Data Layers



POC Lists



Policy & Guidance



FAA Site:

[www.oaana.faa.gov](http://www.oaana.faa.gov)

**Even off-base projects can impact the mission - all parties benefit by collaborating early!**

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<http://www.safie.hq.af.mil/>

