Argonne NATIONAL LABORATORY

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U.S. Department of Energy

THE UNIVERSITY OF CHICAGO

A U.S. Department of Energy laboratory managed by The University of Chicago

APS/Users Operations Monthly Meeting

September 27, 2006

Introduction

J. Murray Gibson

Agenda

2:30 p.m. – Refreshments

2:45 p.m. – Introduction - Murray Gibson

2:55 p.m. – Brief Update on Upgrade - Rod Gerig

3:05 p.m. – Update on Beamline Construction - John Quintana

3:15 p.m. – High Speed Data Transfer from APS - Ken Sidorowicz

3:30 p.m. – Report from Scientific Software Workshop - Ken Evans

3:45 p.m. – Adjourn

Budget update

- Initial BES guidance gives us $105M (up $10M from 2006)
  - Congress has not passed budget, but House and Senate recommend President's budget level of $107M for APS
- Very positive relative to last year, but we still have budget challenges – power increase of $1.2M (19%), possible ANL overhead increases which limit resources (M&S)
  - Will be hiring in XOR only, trying to capitalize on reorganization efficiencies to reduce a little by attrition in other areas
  - We do have close to full ARIM and Capital (total $8M) for upgrades, and accelerator improvements/maintenance
- 2008 budget discussions hold possible further large increases associated with ACI which we need (our budget should be $130M)
  - APS upgrade offers future leveraging beginning FY09

APS Proprietary Charging formula to be changed 10/1/2006

- Old scheme – based on initial build-up of APS, anticipated full build-out

$$\text{cost/hour/beamline} = \frac{\text{APS Annual Budget}}{(70\text{beam ports})(6000\text{hrs/yr})}$$

  - *Consistent with (loose) DOE guidance for recovery of costs*
  - *Can show ~$20M investment as a result, highlights such as Kaletra®*
- Subject of expected IG audit report
- Time has come to re-evaluate formula with more knowledge of timescale for APS full build-out (similar action taken at ALS a few years ago)

FY'07 $\text{cost/hour/beamline} = \frac{\text{APS Operations Budget}}{(68\text{beam ports})(5000\text{hrs/yr})}$

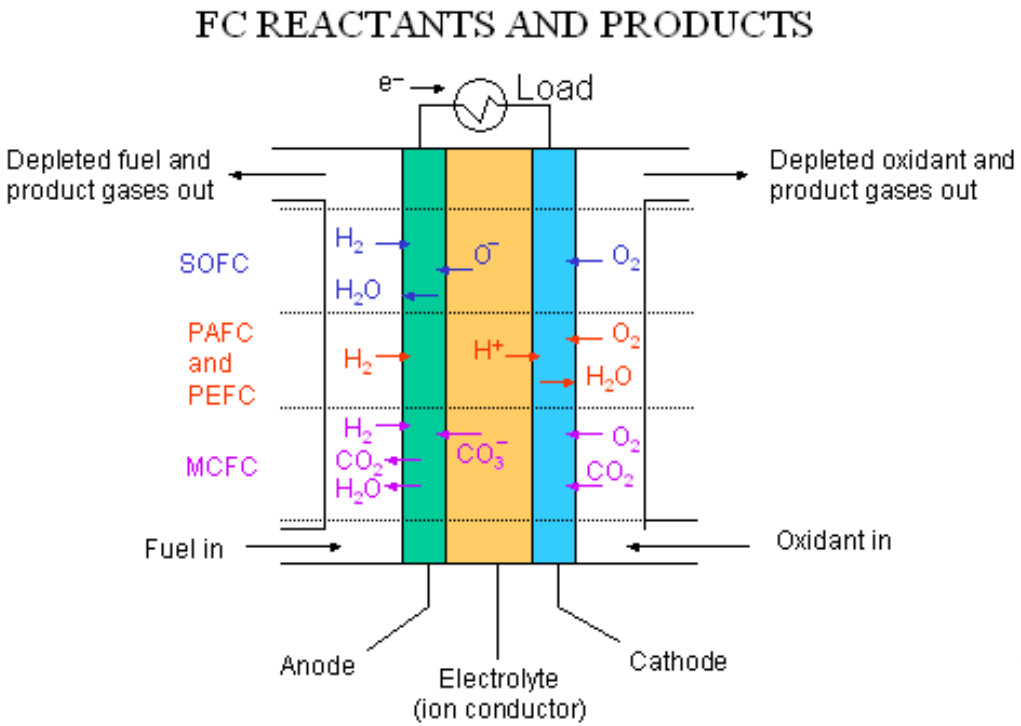
FY'08 $\text{cost/hour/beamline} = \frac{\text{APS Operations Budget}}{(64\text{beam ports})(5000\text{hrs/yr})}$

FY'09 $\text{cost/hour/beamline} = \frac{\text{APS Operations Budget}}{(60\text{beamlines*})(5000\text{hrs/yr})}$

*Actual

- Likely cost per hour for FY2007 up by at least 15%

Di-Jia Liu (CMT) and Jon Almer (XSD-MC) have developed a new and powerful technique for understanding and characterizing chemical profiles in fuel cells and potentially other materials.



Planar SOFC - Courtesy of Siemens Westinghouse Power Corp.

Pacesetter

Jaromir Penicka (AES-SA) performed the geodetic analysis for the implementation of the “Decker” distortion of the APS storage ring while Keith Knight (AES-SA) and Kris Mietsner (AES-SA) almost single handedly performed the distortions. All three have shown exceptional commitment to implement this new lattice in the shortest possible time and access restrictions to the accelerator components. As a result the storage ring stability has seen an approximately 10-fold improvement compared to the previous layout. All of this work was done without interrupting the normal machine operation periods or causing a vacuum leak that could have delayed the operations startup considerably.

Pacesetter for Outstanding LCLS Work

Glen Lawrence (AES-MED) for his creation of all of the Statements of Work for the four major LCLS long-lead procurement packages, and his diligent, professional, and detail-oriented performance in vendor management.

Mark Erdmann (AES-MED) and Tom Powers (AES-MED) for their use of enabling video technology in creating documented undulator assembly procedures that could successfully be followed by non-experts to assemble the LCLS undulators.