Colocation Budget Proposal

In conjunction with the ITC Strategic Plan
Topics

- What Colocation needs from the ITC
- ITC Strategic Plan - Colocation section review
- Budget overview - FY12 vs. FY13
- What changes & how it works
- Challenges
What Colocation Needs from the ITC

- An objective review of the Colocation budget proposal, including productive input on ways to improve the proposed funding strategy.
- ITC endorsement of the Colocation budget proposal to present to the Presidents Council for approval.
ITC Strategic Plan Review - Colocation Strategic Objective

• Consolidate & share computing resources for cost effectiveness, efficient utilization of networking, physical plant services, and other support staff services.

• Centralize computing infrastructure to reduce carbon footprint - primarily through energy efficiency improvements for buildings and computer facilities.

• Improve knowledge of computational assets & associated infrastructure requirements which will facilitate strategic planning for the future.
ITC Strategic Plan Review - Colocation Guiding Principles

- **Energy Efficiency** - Colocation management focuses on energy efficiency, reducing operational expenses.

- **Economies of Scale** - Colocation facilities provide optimal computing infrastructure to all UCAR divisions without a duplication of effort in designing, developing, and maintaining divisional computer rooms that do not scale.

- **Consistent Management** - Shared resources require consistency in policies, procedures, standards, SLA’s, and an appropriate management process to make sure these practices are followed.

- **Design for Extensibility** - Protect the organization’s investments in creating colocation facilities by selecting appropriate locations that facilitate long term project planning in terms of both physical space and utilities.
ITC Strategic Plan Review - Colocation Strategic Challenges

- **Cultural Change** - Colocation represents a significant change in how computer room spaces are provisioned and managed.

- **Facilities Capacity** - Current room capacity is highly constrained. COLO management teams will need to be creative in meeting institutional needs.

- **Develop Policy & Procedure** - Colocation needs an effective management plan without introducing unnecessary bureaucracy and overhead.

- **Tracking Tools** - Effective mechanisms for tracking equipment & infrastructure utilization to ensure long term planning, viability, and sustainability of Colocation facilities.
Colocation Budget

- In order for Colocation management teams to appropriately address the ITC Strategic Plan Objectives, Guiding principles and strategic challenges, a new operational budget must be developed and implemented.
Computing Infrastructure - FY12 / Total = $741K

FY12 Funding - Funding Divisions

- Salaries & Benefits - COLO
- Material, Purchased Svcs - CISL
- Material, Purchased Svcs, Travel - COLO
- Purchased Services - RAL
- Purchased Services - F&A IT
- Purchased Services FM&S
- Depreciation & Interest (CISL)
- Unassigned

* Does not include Bluefire Operating or Project related expenses.
Computing Infrastructure FY12

- Salaries & Benefits (COLO) / ($165K)
  - 2 FTE

- Materials, Purchased Services, Travel (COLO includes FL2-3095, CG2-2042, FL0-0110, and parts of ML-29) / ($48K)
  - Software, Communications, Supplies, Rack Hardware, Rack PDU’s, Training

- Materials, Purchased Services (CISL / ML Computer Room) / Estimated $361K

- Purchased Services (RAL) / ($10K)
  - UPS Maintenance Serving FL2-3095

- Purchased Services (F&A IT) / ($10K)
  - UPS Maintenance Serving CG2-2042

- Purchased Services FM&S / ($10K)
  - Generator Maintenance Serving FL2-3095

- Depreciation & Interest (CISL) / ($136k)
  - Mesa Generators 1 & 2 - Final Payment FY2014

- Unassigned / ($10K)
  - UPS Maintenance Service for UPS C (warranty expired), serving RAL & Colocation services in ML-29
Proposed Colocation Budget FY13 / Total = $828K

FY13 Funding - Proposed Funding Divisions

- COLO
  - Salaries & Benefits (COLO)
  - Depreciation & Interest (COLO) - NEW
  - Materials, Purchased Services, Travel (COLO)
- FM&S
  - Materials & Purchased Services (FM&S)
  - Depreciation & Interest (FM&S) - Generators
  - Unassigned - FM&S Maintenance Stores

- $251,243
- $158,417
- $4,500
- $136,166
- $29,260
- $247,933
- $29,260
What Changes from FY12 to FY13?

- **(NEW) Colocation - ADD / 1 FTE, FY13** ($82.5K - Salary + Benefits)

- CISL shifts (Direct Funds) from Mesa Computer Room Operations to NWSC, including utility expenses.

- Colocation (Indirect Funds) assumes control of specific expenses related to all COLO Operations including Mesa Computer Room, previously CISL, RAL, F&A IT (Direct Funds) / ($111K)
  - Software, Supplies, UPS Contracts, DC monitoring system, DC Hardware

- FM&S (Indirect Funds) assumes control of specific expenses related to Mesa Operations, previously CISL (Direct Funds) / ($387K)
  - Generator 1 and 2 Depreciation & Interest, Gen Fuel, Gen maintenance contracts, Utilities, other minor maintenance services.

- **(NEW) Colocation - Equipment Purchases / ($5K - Depreciated)**
  - Floor Mount Power Distribution Units
  - Battery Monitoring systems
  - DC Monitoring points

- **UNRESOLVED - FM&S Maintenance Stores for All Colocation Facilities (COLO or FM&S - ?)**
  - Corrective Maintenance / (Estimated - $14K)
  - Preventative Maintenance / (Estimated - $12K)
  - Emergency Maintenance / (Estimated - $3K, with issues)
Challenges

• UNRESOLVED - FM&S Maintenance Stores for All Colocation Facilities (COLO or FM&S - ?)
  • Corrective Maintenance (Estimated - $14K)
  • Preventative Maintenance (Estimated - $12K)
  • Emergency Maintenance (Estimated - $3K, with issues)
    • Potential for unexpected expensive repairs

• Mesa Computer Room - 24x7 Operations Support Staff
  • Requires 5 FTE - Additional $320k to Salaries & Benefits
Questions?

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Copy of Presentation:
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https://wiki.ucar.edu/display/colocation/Presentations