



An Energy Efficiency Workshop & Exposition

Palm Springs, California

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***and***

***Set pagers to vibrate***



An Energy Efficiency Workshop & Exposition

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Palm Springs, California

*Project Financing*  
*Appropriations and Private Financing*

A Look Back:

The Fermilab/DOE Experience

Steve Krstulovich – Program

Mgr.



## *Historical Overview*

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- Energy Project Funding Approaches:
  - 1988-94: Direct Appropriations (IHEM)
  - 1994-96: IHEM and some FEECAP
  - 1996-98: Site specific ESPC & some IHEM
  - 1998-2001: UESC/Utility Incentive Program
  - 2001-02: UESC and some IHEM

Fermilab has maintained an aggressive award winning energy program each year



## *Direct Appropriations*

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- DOE project funding 1988-96 “In-House Energy Management Program” (IHEM)
- 30 projects completed – Cost \$9 Million
- Annual Energy Savings \$1.8 Million
- “Buildings” energy down 46% from '85
- Issue 1: Trouble developing new ideas
- Issue 2: Slow Project implementation



## *Operating Funds*

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- ❑ Direct funding 1994-96 “Fermilab Employee Energy Conservation Awards Program” (FEECAP)
- ❑ Employee awards up to \$5K for ideas
- ❑ 126 entries submitted
- ❑ About 20% implemented and awarded
- ❑ Low/No Cost ideas funded promptly
- ❑ Costly ideas await 2-yr IHEM fund cycle



## *ESCo Third Party Financing*

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- ❑ Third Party financing 1996-98 “Energy Saving Performance Contracting (ESPC)”
- ❑ Direct Appropriations curtailed (IHEM)
- ❑ RFP for \$16M Chiller Plant Upgrade
- ❑ 12 responses – wide quality range
- ❑ Legal review questions stalled award – DOE’s “Super-ESPC” program has since streamlined this process



## *Utility Third Party Financing*

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- Third Party financing 1998-02 “ Utility Energy Savings Contracting” (UESC)
- Streamline and simple Vehicle
- Over 100 projects
- About \$60M under contract
- Comprehensive Site Energy Audits
- Submittals on new Limited Direct Appropriations



## *Lessons Learned*

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- ❑ Audits have identified many new ideas
- ❑ Lab personnel are active contributors
- ❑ Financing makes implementation rapid
- ❑ Master-planning with non-limited funds
- ❑ 5-year implementation strategy
- ❑ Value engineered cost avoidances
- ❑ Significant mission support