2008 Solar Annual Review Meeting

Session: CSP Advanced Systems
Company or Organization: SkyFuel, Inc.
Funding Opportunity: CSP Advanced Systems Solicitation

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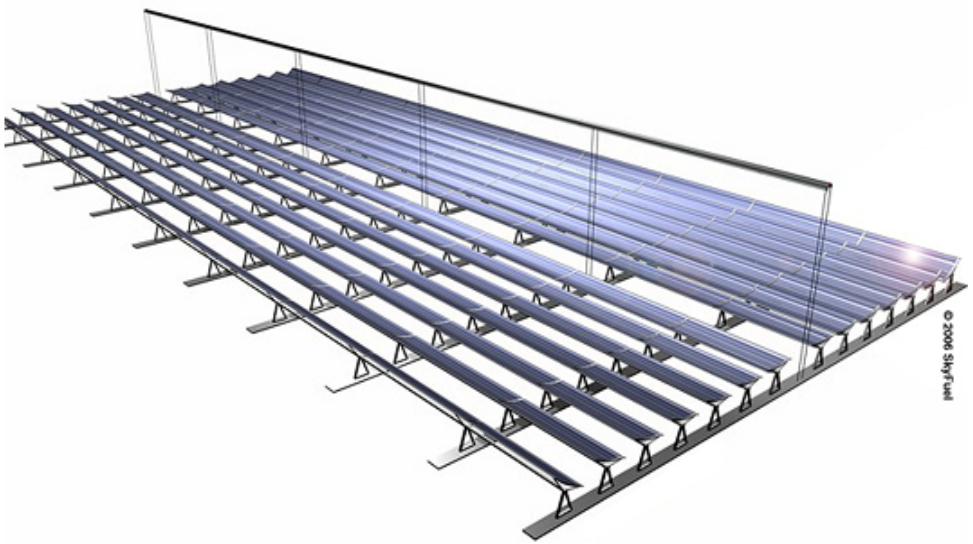
Project Description

"Commercial Development of an Advanced, High-Temperature, Linear-Fresnel Based Concentrating Solar Power Concept"



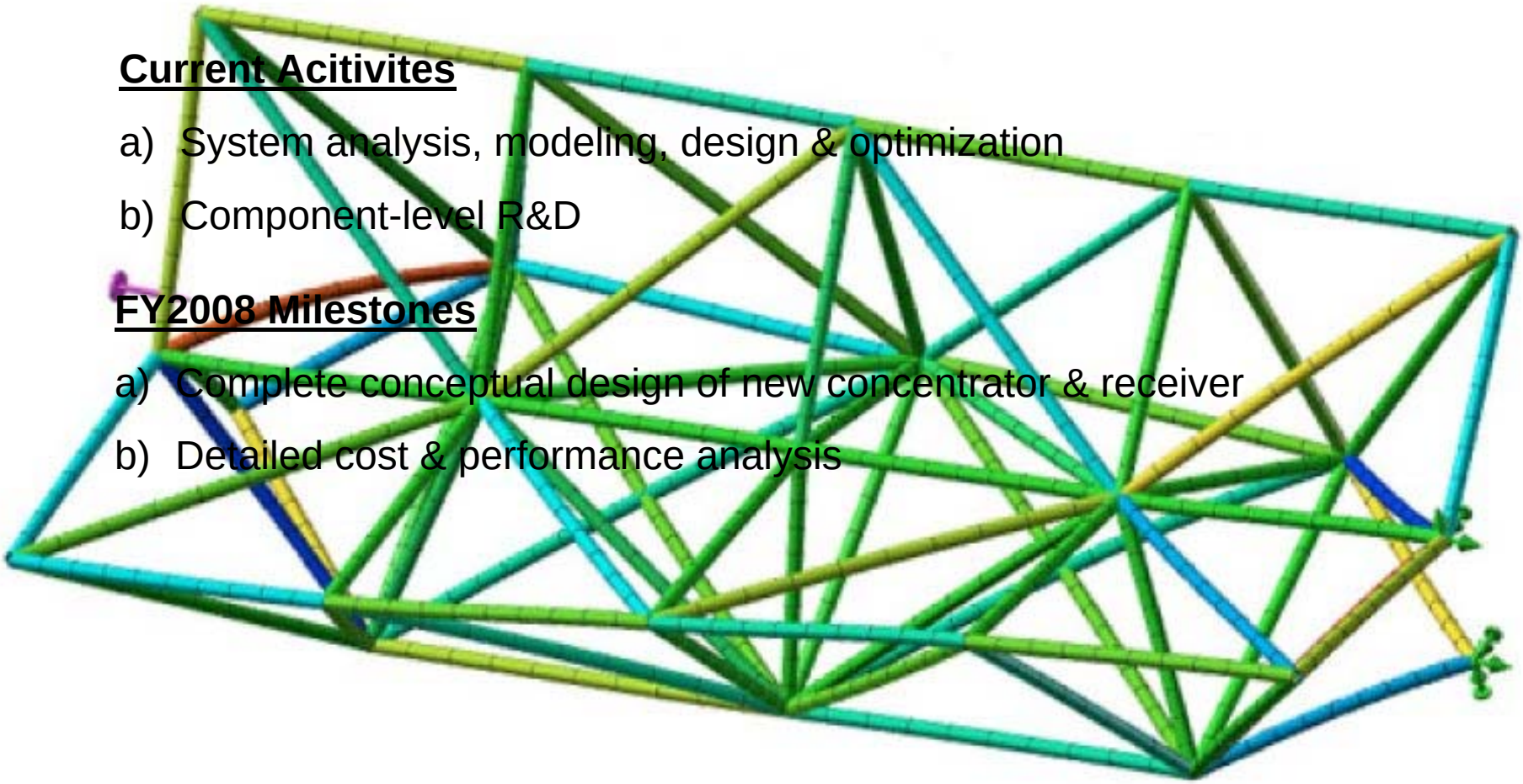
Project Description

a) High-Temperature Linear Fresnel

b) Molten Salt Heat Transfer Fluid (storage)

c) ReflecTech Mirror Film

Current (FY2008) Activities



Current Acitivites

a) System analysis, modeling, design & optimization

b) Component-level R&D

FY2008 Milestones

a) Complete conceptual design of new concentrator & receiver

b) Detailed cost & performance analysis

Budget & Personnel

Key Personnel

- Randy Gee, CTO
- David Kearney, Senior Technical Advisor
- Andrew McMahan, VP Technology
- Adrian Farr, VP Research & Development

Budget

- Approximately 2 FTE during Phase I
- Escalating to ~5 FTE for future phases
- Working with key consultants and subcontractors in the areas of:
  - Optical design
  - Molten salt system design
  - Wind Engineering
- Total Phase I Budget: $550,000

SkyFuel			
Project Beginning Date	**FY07 Budget**	**FY08 Budget**	**Total Budget**
3/1/08	$0	$320,000	$320,000

Relationship to Program Goals

"…to make CSP cost competitive in the intermediate power markets by 2015 (~7¢/kWh with 6 hours of storage) and in baseload power markets (~5¢/kWh with 16 hours of storage) by 2020."

SkyFuel Methods

- High Temperature (relative to other linear Fresnel designs)
- Dramatic Reduction in Reflector Cost
- Direct Thermal Energy Storage

Accomplishments to Date

a) Negotiate DOE Contract

b) Assembled and Organized Project Team

Upcoming Activities (Q3, Q4)

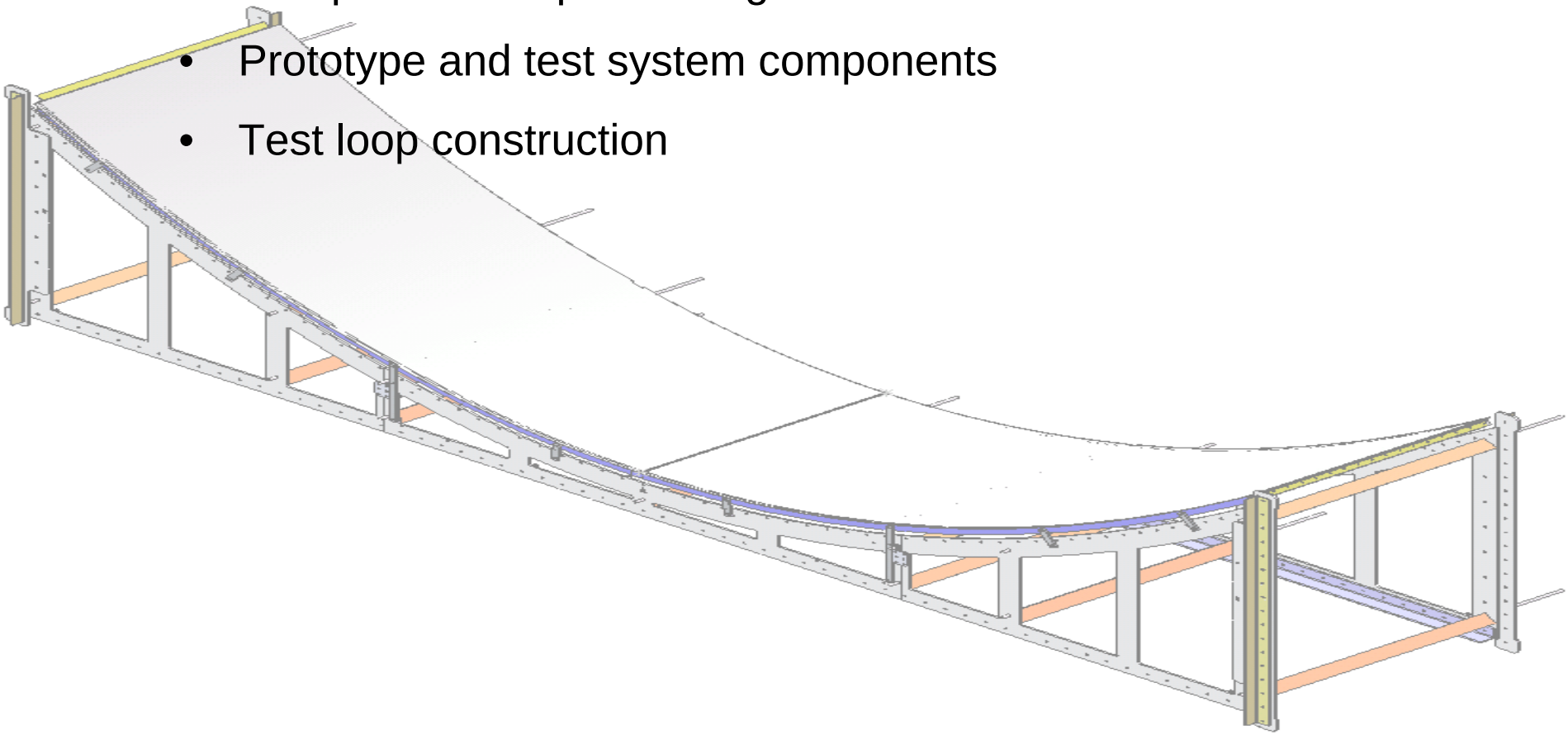
Continue Phase I activities:

- Develop wind-load design constraints
- System-level computer simulation and optimization
- Component-Level engineering, research & development
  - Reflectors
  - Receiver

Future Activities

Prototyping, Testing & Refinement (FY2009)

- Complete conceptual design and evaluation
- Prototype and test system components
- Test loop construction



Future Activities

Demonstration & Commercialization (FY2010 & Beyond)

- Solar as the premiere source for intermediate and peaking generation in the American Southwest