



Overview of CSP Solar Peer Review

May 24, 2010

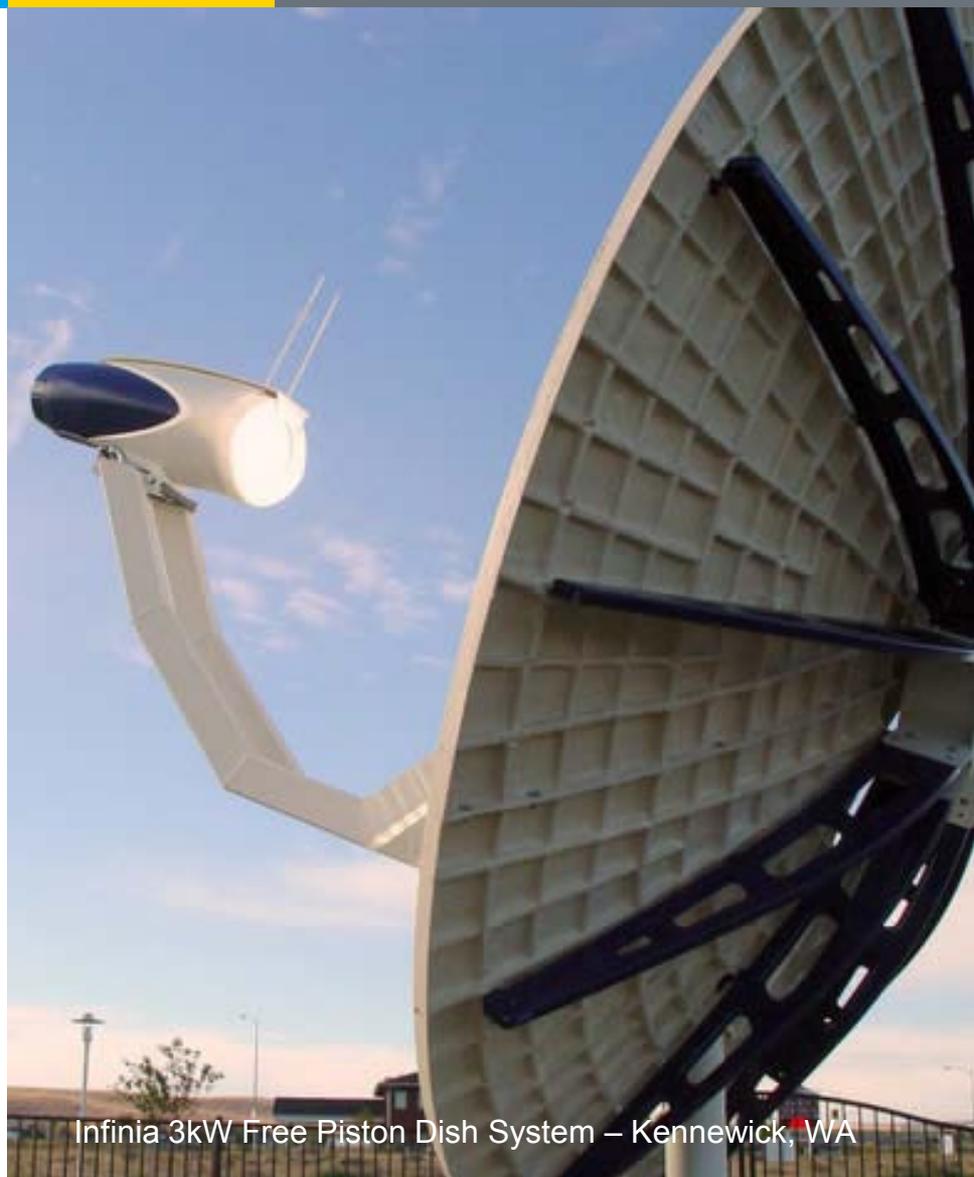
Frank (Tex) Wilkins
CSP Team Lead

Goals

- Competitive in intermediate power market by 2015-2017
- Low cost thermal storage
- Competitive in baseload power market by 2020-2022

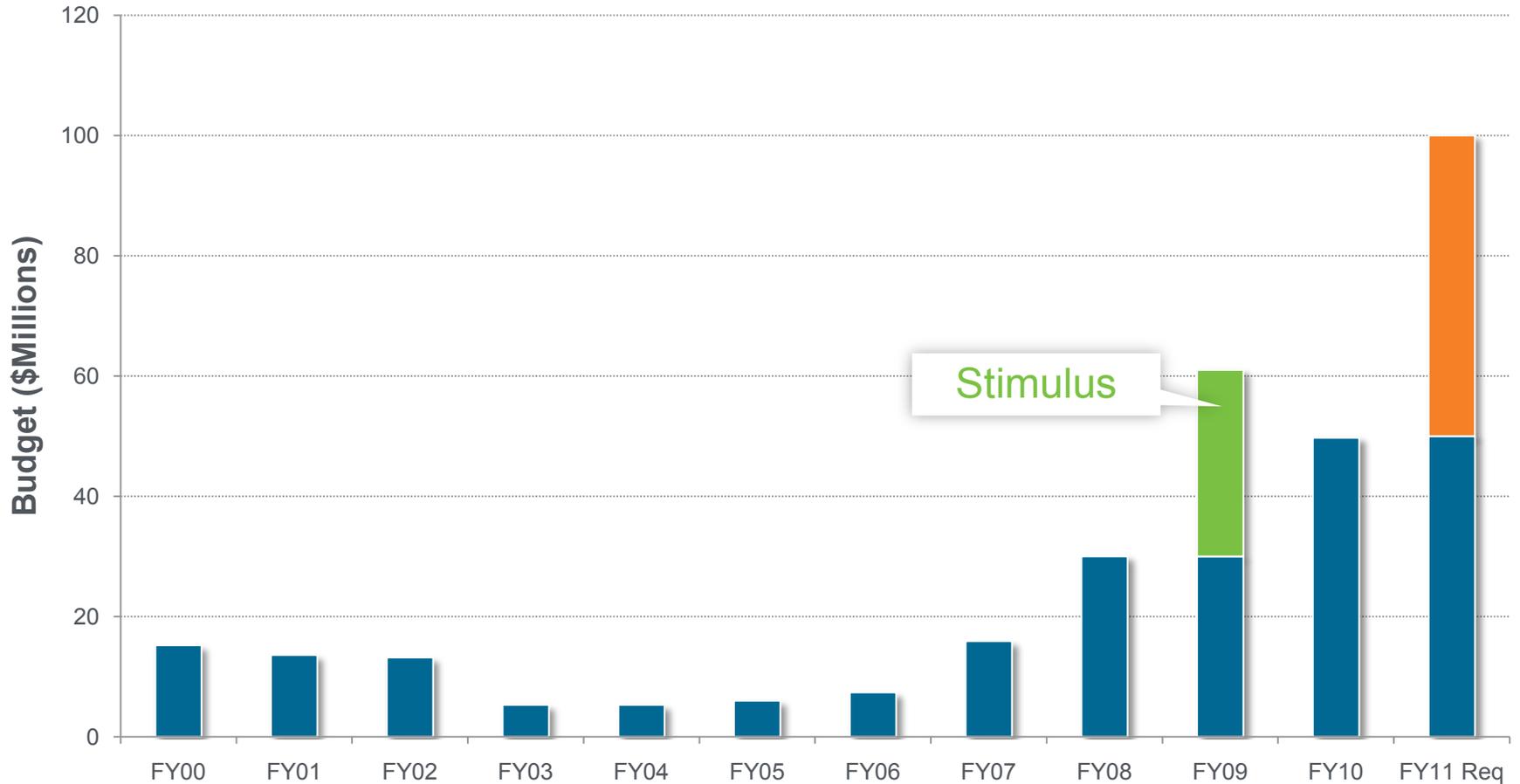
Barriers to Goals:

- **Cost:** without incentives, current cost for large-scale CSP power is too high
- **Environment:** land must be selected to minimize environmental impact
- **Finance:** banks are reluctant to provide loans in current financial market



Infinia 3kW Free Piston Dish System – Kennewick, WA

CSP Budget Dictated Strategy



R,D&D is targeting technical obstacles in an effort to improve performance and reduce costs of CSP through:

Contracted R,D&D

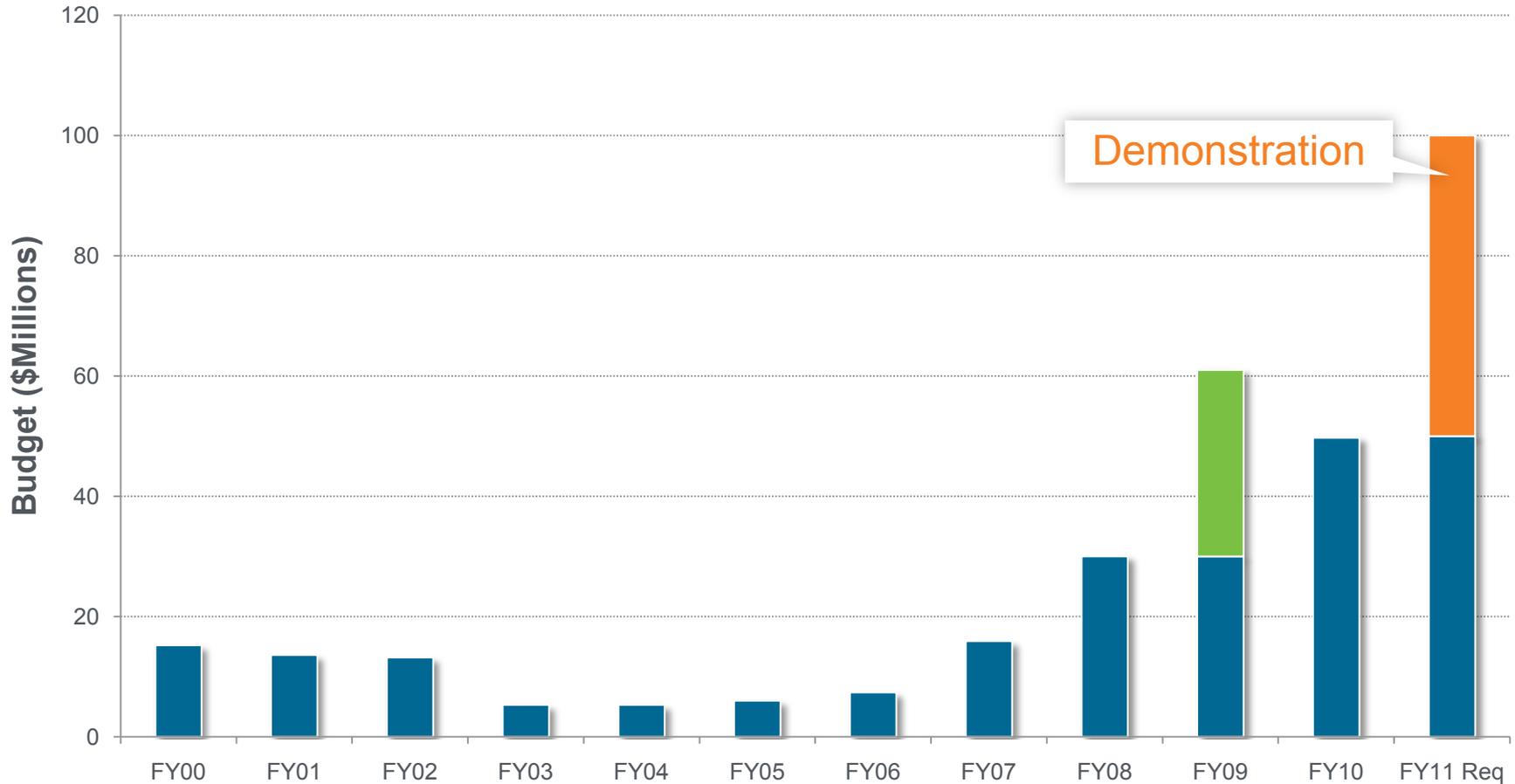
- **CSP** – next generation technology at 9-10 ¢/kWh w/6 hrs storage
*12 contracts (FY08)
- **Storage R&D** – establish a portfolio of options
*15 contracts (FY09)
- **Baseload** – technology at 8-9 ¢/kWh w/16 hrs storage
*13 contracts (FY10)
- **Demonstrations** – demo next generation technology to show it's "bankable"
*(planned FY11)

National Lab R&D

- **Sandia** – point focus R&D lead
- **NREL** – line focus R&D lead
- **NREL/Sandia** – storage R&D co-leads



FY11: Emphasis on Demonstrations



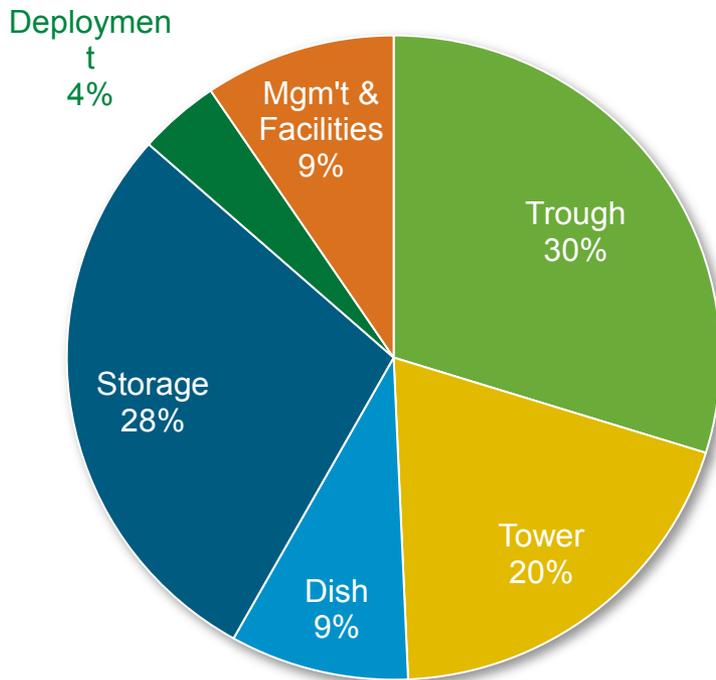
Environmental

- Co-leading a programmatic environmental impact statement with the Bureau of Land Management, providing support to BLM field offices
- **Status** – BLM identified 24 “solar energy study areas,” totaling 676,000 acres - more than 1,000 square miles - that may be technically and environmentally appropriate for utility-scale solar deployment

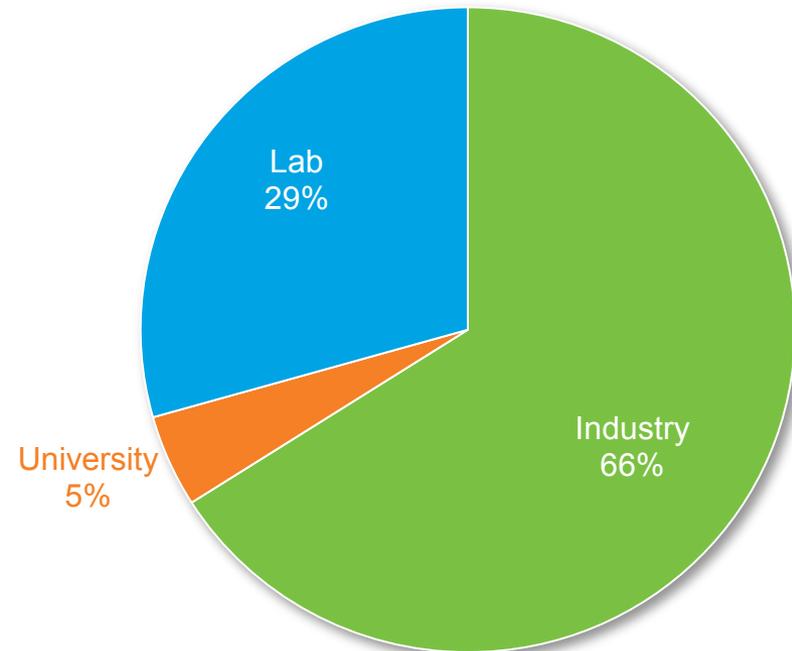
Financial (outside Solar Program)

- DOE Loan Guarantee Program
- Treasury Grant/Investment Tax Credit

Funding by Technology



Distribution by Recipient



Near Term Goals:

- competitive with natural gas in intermediate power market
- utility-scale projects

Long Term Goal:

- competitive with coal (with sequestration) in baseload power market
- more utility-scale projects



Thank You

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

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