



Economics of Controlling Greenhouse Gas Emissions in Arizona



Eric Hedlund, P.E., CPC
Business Summit of the West
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Education

- 166 employees with LEED designation
- Active in preconstruction evaluations of sustainability alternatives
- Very familiar with LEED scoring
- Understand the application process
- Active in commissioning of buildings
- Promoting measurement of “building performance”
- LEED Projects
 - Platinum – AZ Game & Fish Headquarters
 - Biodesign Institute at ASU, Building B
 - Gold – Sundt Corporate Headquarters
 - Biodesign Institute at ASU, Building A
 - Tucson Fire Station 22 & Battalion Chief Headquarters
 - Silver – SkySong Building One
 - SkySong Building Two
 - Walter Cronkite School of Journalism and Mass Communication

Promoting Utilization of Alternate Project Delivery Methods

- QBS procurement methods enhance owner's chances to meet or exceed sustainability goals
- Team approach to design and construction
- Study prepared by the Pankow Foundation
 - Performed by Universities of Colorado, Oklahoma, Michigan State and Penn State

Legislative and Financing Activities

- **DOE - \$750 mil. available to cover cost of loan guarantees for renewable energy (solar) scheduled to start before Sept. 30 , 2011**
 - **Available for “commercial” projects in lieu of just “innovative”**
- **Assemble teams for “bulk” solar opportunities**
 - **Financing**
 - **Regulatory issues**
 - **Acquisition of land (1MW requires 6 acres)**
 - **Transmission capabilities**

Equipment – Road & Off Road

- **Tier 3 emissions control for off road equipment**
 - **Compliance with Cal. Air Resource Board (CARB)**
- **Kenworth hybrid – electric/diesel for mechanic's truck**
 - **Mechanic's equipment and tools all operate electric**
- **Water trucks – independent water pump from truck engine to reduce diesel emissions**
- **Testing hybrid sedans vs. standard gas**
 - **Results not too impressive to date**
- **Pick-up trucks – E85 (Ethanol), fuel not available, can't test mileage**



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