



SENTECH, INC.

Private Sector Collaboration in Federal and State Technology Transfer

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DOE Perspective on Technology Transfer

- ❖ R&D to reduce cost of technologies
 - ❖ Photovoltaics
 - ❖ Fuel Cells
 - ❖ Combined Heat & Power
 - ❖ Zero Energy Buildings/Homes
- ❖ States provide “deployment” opportunities to demonstrate new technologies
- ❖ Technology manufacturers and system integrators increase capacity and serve markets

States Perspective on Technology Transfer

- ❖ Use new technology as solutions to problems:
 - ❖ Economic Development
 - ❖ Emergency Preparedness
 - ❖ Energy costs/price volatility
 - ❖ Air Quality
- ❖ Federal Government should provide technologies at reduced cost
- ❖ Manufacturers should reduce their prices to meet our requirements

Technology Transfer “Gulf” Exists

- ❖ New technologies are often higher capital cost
- ❖ Most states are not interested in being “first adopters”
- ❖ Technology providers need to make a profit

Creative Ideas to Bridge the Gulf

- ❖ Progressive state policies that recognize all of the benefits of new technologies
- ❖ Creative financing and bulk purchase to reduce first (capital) cost
- ❖ Exercising leadership in creating R&D partnerships
 - ❖ University Centers of Excellence
 - ❖ Technology Suppliers
 - ❖ Leverage State and Federal funding
- ❖ Thorough planning, analysis, and evaluation to select the best opportunities

SENTECH is Implementing these Ideas with States

- ❖ Maryland
 - ❖ *Rebuild Maryland K-12 schools*
- ❖ Hawaii
 - ❖ Hawaii Hydrogen Roadmap/Electricity Reliability
 - ❖ Hawaii Gateway Energy Center
- ❖ Georgia/Center for Transportation and the Environment
 - ❖ *Fuel cell bus project*
- ❖ Tennessee
 - ❖ *Biofuels demonstration project*
- ❖ Alaska
 - ❖ *Distributed energy model to reduce diesel consumption*
- ❖ Texas
 - ❖ *Hydrogen and fuel cells roadmap*



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Appendix

Role of the Private Sector in Advancing Technology Transfer

- ❖ Federal-state-industry consensus building
- ❖ RD&D partnerships
- ❖ Technology commercialization and market introduction
- ❖ Technical analysis and evaluation
- ❖ Program implementation
- ❖ Advocates for policy change, funding, etc.



SENTECH as a Private Sector Example

- ❖❖❖ SENTECH is an energy and environmental management consulting firm in Bethesda, Maryland
- ❖❖❖ SENTECH works with the DOE, EPA, several states, and industry to advance technology transfer
- ❖❖❖ Services include program planning, evaluation, analysis, and implementation; technical support; market analysis; stakeholder coordination; and project development

SENTECH's Building Energy Efficiency Team

- ❖ Working with state and local education institutions to transfer DOE Building America best practices
- ❖ Assisting DOE and EPA in promoting their ENERGY STAR® programs
- ❖ Supporting DOE's FEMP efforts
- ❖ Supported DOE's 2005 Solar Decathlon
- ❖ Planning and implementation of MEA's Rebuild America program for schools



Private Sector-ASERTTI Buildings Technology Transfer Opportunities

- ❖ Working together to reduce costs of emerging technologies
- ❖ Collaborating with Federal agencies on emerging product labeling
- ❖ Deploying technologies into whole communities and urban centers
- ❖ Transferring technology R&D to manufacturers for commercialization





Maryland

- ❖ SENTECH is working with the Maryland Energy Administration under two DOE SEP grants
- ❖ Project focuses on educating and assisting Maryland K-12 school districts on energy efficiency planning, best practices, and technologies



Hawaii

- ❖ SENTECH is leading the development of a sustainable energy public-private partnership in Hawaii
 - ❖ Conducted life-cycle analysis of potential for renewable hydrogen in state
 - ❖ Developed business plan for Hawaii clean energy incubator
 - ❖ Working with industry and government to identify and take advantage of potential clean energy technology deployment opportunities in Hawaii



Georgia

❖ Jon, don't know if this bus goes with this project





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Tennessee



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Alaska



Thank you for your time

❖ We look forward to working with ASERTTI
and its members in the future