Appalachian Ohio Energy Economic Development Summit

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Project Finance Basics
Development and Funding Cycles
Specifics on
  - Renewable Fuels Investments
  - Wind Investment
  - “Clean Tech” Interest
Roadblocks to the Finish Line
Project Funding Basics

Early Stage
Angels
Friends and Family

Emerging Companies
Bank Loans - Require Collateral and Cash Flow
Private Equity/ Venture Funding
Strategic Partnerships
Private placement of debt – requires security
(revenue or collateral)

Established Companies
Initial Public Offering
RD Cubed + Commercialization

Technology Funding Lifecycle

RESEARCH  DEVELOPMENT  DEMONSTRATION  DEPLOYMENT  COMMERCIALIZATION
Flow of Funds

- **Research**: Cash flow from university grants and other sources
- **Development**: Funding gap
- **Demonstration**: Market pull
- **Deployment**: Returns to investors generated by commercial revenues
Funding available from Wall Street for biofuels plants has slowed
- Concern regarding consistent returns and over building

Project finance for renewable power (wind, biomass, photovoltaic etc) financiers are selective and are looking for SIZE.

Equity investment in growing clean tech companies – venture funds have emerged and are looking for opportunity
Investors Want to Know the Risk

- **Risk** is how investors price
  - More risk higher price

- **Risk** is how investors perceive
  - Reward

- **Risk** is how investors purchase
  - See price

- **Risk** is how investors protect
  - Barriers to Entry
Roadblocks

**UNDERCAPITALIZATION**