

Small Businesses and I/UCRC's: a Win-Win?

Bob De Saro

ERCo

Energy Research Company

ERCo

- Founder and President of Energy Research Company (ERCo) - 1991
- Founding Industrial Member of The Center For Resource Recovery and Recycling (CR3)
- ERCo Develops and Sells Industrial Instruments for Process Control
- Formed Joint Venture, Melt Cognition, for Commercial Sales of Diagnostic Instruments and AIM to Metals Industry (ERCo, MS LLC, and wTe)

CR3

- WPI, CSM, KU Leuven
- Diran Apelian, Brajendra Mishra, Bart Blanpain

CR3

- **Alcoa**
- **AMRT**
- **Constellium**
- **ERCo**
- **General Motors**
- **Global Tungsten & Powders**
- **Group Machiels**
- **Hydro**
- **H.C. Starck**
- **Indium**
- **Infinium**
- **Metallo- Chimique**
- **Persimmon**
- **Phinix/nanoRanch**
- **Surface Combustion**
- **Umicore**
- **Veolia**
- **Victaulic**

CR3

- Well Organized
- Well Run
- Efficient
- Results Oriented
- Everyone Listens and Adapts
- (Well, Almost Everyone)

Why I Joined CR3

- Personal Relationship with Center Director
- Saw Opportunity – Birds of a Feather
- NSF Funding to Offset Dues First Two Years
- Access to CR3's Sister Centers: ACRC and CHTE
- Access to Companies and Resources
 - Greatly Improved Chances of Winning R&D Projects
 - Enhanced ERCo's Core Technologies
 - Uncovered Many Opportunities With Center Members

CR3 Membership Benefits to ERCo

- The New Friendships Made and the Old Ones Reinforced
- CR3 Successes Are Part of My Legacy

Networking – THE KEY

- Meet A-List Industry Folks at the Top of Their Game
 - Advisory Board
 - Joint Proposals
 - Cross Fertilized

Project Spinoffs

- NSF Fundamental Research
 - ERCo Discovered a Fundamentally New Spectroscopic Technique.
 - WPI Constructed a Mathematical Model to Describe the Physics
- DOE's ARPA-E Project
 - Aluminum Integrated Minimill to Transform the Secondary Aluminum Industry
 - Cornerstone Project for DOE
 - Three CR3 Projects Supported Both the Proposal Effort and the Subsequent Work.
- Member Company Projects to Apply Our Technologies to Their Problems

IP

- Two Center Projects to Understand and Solve A Significant Technical Problem with One or ERCo's Product
- Market Study – Which Intertwined with ARPA-E Project

Student Interns

- Outstanding Quality
- REU Means Outstanding Cost As Well
- Also Qualifies as Required Cost Sharing to DOE Project

Benefits to CR3 from ERCo Membership

- Companies Big and Small Get to Network With Me.
- We have Provided Our Core Technology To A Number Of Projects At No Cost.
- Provide Our Lab And Equipment For Use At No Cost.
- Provide Time And Labor as FG Leader and PSC Chair.
- Member Companies Get Funding from Successful Joint Proposals
- Center Uses My Administrative Skills
- Actively Involved In All Meetings

How Small Companies Can Benefit

- Technology Match
- Personal Chemistry Match
- **You Only Get What You Put In** - It's Not the Host but the Guests

The Downside to CR3 Membership

- Annual Membership Fee - \$33,000
- Cost to be Active Member
 - Attend Formal Meetings - \$13,000
 - Labor to Support CR3 Projects - \$40,000
 - Annual Subtotal Costs to ERCo - \$86,000
 - Off line Focus Group Meetings - \$?
 - Addressing Other Members' Requests - \$?
 - Administration Duties - \$?

Small Businesses Dropout Rate is High
This is Unacceptable

What Can be Done?

- Better Technical Match
- Better Personal Match
- Small Business Employees **MUST** Get Involved in Center –
There are no Shortcuts Here
- Dues Structure Must Change
 - Allow Small Business In-Kind for at Least Part of the Dues
(Will Also Assure Involvement)
 - Other?

