IEEE
Power and Energy Society
New Initiatives and Outreach

Presented by
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PES V.P. New Initiatives and Outreach

To
Pacific Northwest Center of Excellence
Education Task Force Meeting
Olympia, WA June 20th, 2012
IEEE

- Institute of Electrical and Electronic Engineers
- "Eye Triple E"
- Worlds Largest Professional Organization
- Advancing technological innovation and excellence for the benefit of humanity
- More than 400,000 members in more than 160 countries
- More than 107,000 student members
- 38 Societies
- Scholarship Plus Program
Power and Energy Society

• Worldwide, non-profit association of more than 29,000 individuals engaged in the electric power and energy.
• Professional Membership $180 per year for IEEE plus $35 per year for PES
• Student Membership $32 per year for IEEE plus $18 per year for PES
• Annual Meeting July.
PES Organization

• Conferences
• Technical Committees
• Membership
• Publications
• Chapters
• Education
• New Initiatives and Outreach
  – Community Solutions Initiative (Underway)
  – Community College Outreach (Proposed)
Community Solutions Initiative

• Co-Chairs: Ray Larsen and Robin Podmore

• Product:
  – Open source designs for affordable sustainable energy solutions
    • CSI Solar Trailer, Wind Turbine, Light Cycle, LightStick
  – Haiti – 15 solar trailers to light 1200 homes
  – USAID proposal to build 300 Solar Trailers in Haiti
  – Searching for partners in Africa and South Asia
  – Budget for 2012 - $60,000
World Poverty Statistics

• Roughly 1.6 billion people, one out of every four people on the planet, do not have regular access to electricity.

• In sub-Saharan Africa, excluding South Africa, 75% of households or 550 million people have no access to network electricity.

• In South Asia places like India, Pakistan and Bangladesh, 700 million people or 50% of the overall population and 90% of the rural population are not on the grid.

• Based on the business as usual scenarios, the International Energy Agency predicts that 1.4 billion people will still lack access to electricity in 2030.
Community Charging Station

- Small-Scale Wind Generation
- Small-Scale Solar Generation
- Pedal Powered Generation

- Charge Cellphones
- Light Homes & Cooking Heat
- Reading Light for Kids
- Power Medical Clinics
Summary of CSI Projects

- 1.5 KW Solar Trailer
- 10 ft. diameter wind turbine
- 6 ft. diameter wind turbine
- 50 watt LightCycle
- 1/5 watt LightStick
- Solar Storage Cooker
1500 KW Solar Trailer
10’ Diameter Wind Turbine
Proposed New Initiative

• Outreach to Community College Energy Programs

• Chair: Barbara Hins-Turner, Pacific Northwest Center of Excellence for Clean Energy

• Product:
  – Increased PES Student membership
  – Energy industry jobs for community college students
  – Increased career transitions from Associates to B. Eng. Degrees.
Reasons to Join PES

• Mentors
• Life Long Friendships
• Career Opportunities
• Travel Opportunities
• Life Long Learning

Mr. William Tinney
BPA Employee / Engineer
Inventor Sparse Matrix Solutions
2011 IEEE Medal in Power Engineering