



UNIVERSITY OF  
CALGARY



Institute for Sustainable  
ENERGY, ENVIRONMENT  
AND ECONOMY

# Inter-American National Academies of Science (IANAS) – *Energy Program Workshop* –

April 16-19, 2012

**David B. Layzell, Ph.D., FRSC,**  
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*Web Site: [www.iseee.ca](http://www.iseee.ca)*

# Energy for the Unserved

- Topic of Interest for Graduate students
- In ISEEE, at the University of Calgary, it is one of the areas that we focus on.

# IANAS Topics: Energy for the Unserved

## 1. David Irvine-Halliday,

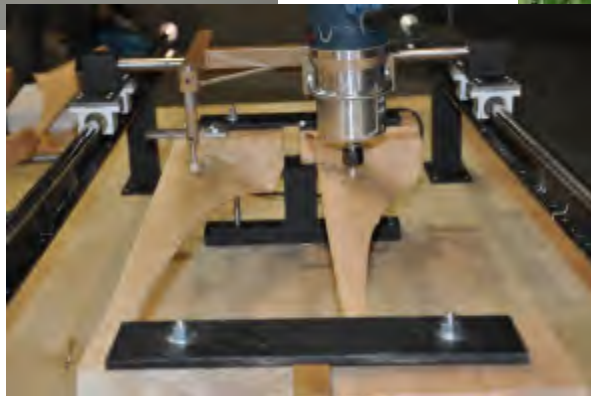
- Electrical Engineering Professor, U of C,
- Solar-LED lighting systems for the unserved
- Founded “Light up the world Foundation
- Founded Visionary Lighting & Energy Pty, Hyderabad, India



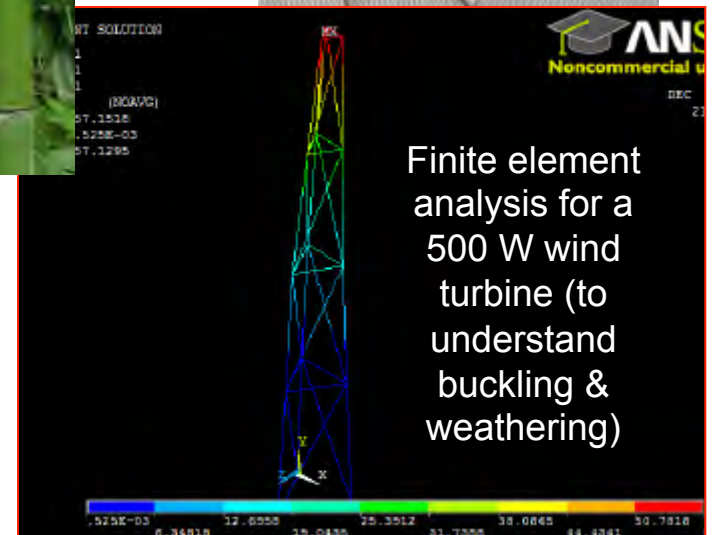
# IANAS Topics: Energy for the Unserved

## 2. David Wood,

- Mech. Eng. Professor & ISEEE Fellow, U of C,
- Develops small Wind Turbines for developing countries;
- Low cost materials; timber for blades, bamboo for towers;



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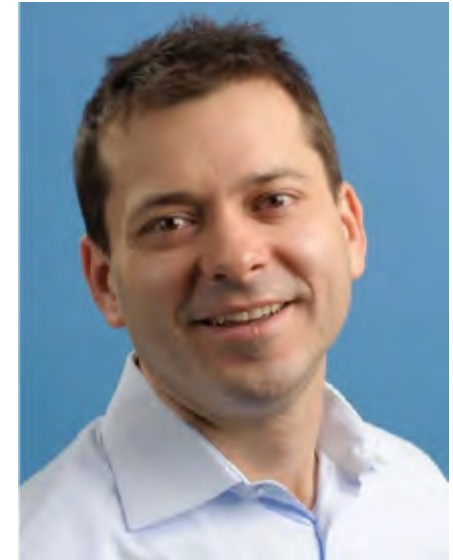
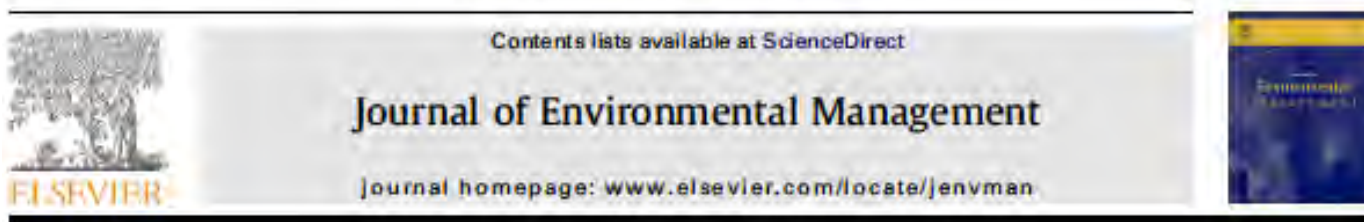


# IANAS Topics: Energy for the Unserved

## 3. Joe Arvai,

- Business Professor & ISEEE Fellow, U of C
- Decision Support Science

Journal of Environmental Management 92 (2011) 363–371



Review

Five propositions for improving decision making about the environment in developing communities: Insights from the decision sciences

Delanie Kellon <sup>a,b</sup>, Joseph Arvai <sup>c,d,\*</sup>

1. Decision-making processes must account for the constructive nature of preferences
2. The basis for development decisions must be realistic and relevant
3. Expand deliberative processes to account for the expertise of local communities
4. Rethink the goals of participatory decision-making processes
5. Avoid decision paralysis

# Related Topic: Energy-Indigenous Environment Interaction

## 4. David Lertzman,

- Business Professor & ISEEE Fellow, U of C,
- Specialty: Energy-Indigenous Environment Interface;
- Doing comparative study of oil/gas company interaction with indigenous people in Ecuador & N. Alberta



*Kistupa Callera, Achuar guide and leader.*



FIGURE FROM #1, #4, PLUS OTHER, 2008  
DOI:10.1016/j.environ.2007.12.002



Little Red River Cree Nation



*Dr. Lertzman with Cree Elder Clifford Ribbonleg of Fox Lake, LRRCN.*