



EcoMotion – Sustainability Solutions

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RESUME OF TED FLANIGAN – MARCH 2017

Work Experience

President and Founder, EcoMotion Incorporated

2001 – present

EcoMotion, Inc. is a California-based energy and environmental action firm incorporated in 2001 with the mission of *the cost-effective greening of cities, corporations, and campuses*. Manage and take orders from a team of ten, highly capable, communicative, and motivated professionals, backed by a stable of 16 experienced consultants. EcoMotion has a reputation for effective problem-solving, communications, creativity and innovation, dedication, and helping clients take action. Specialty services include climate awareness and action, smart energy management, program design, serving in an Owner’s Rep capacity for clients and their projects through project implementation, and solar plus storage consulting. Inspire and guide a breadth of services and activities – from strategy, design, planning, and implementation – to comprehensive outreach, study tours, newsletters (*EcoNet News and the new EcoStream*), podcasts, video productions, climate rallies, and more. EcoMotion catalyzes action and celebrates successes.

Independent Energy and Environmental Consulting

1996-1998; 1999-2001

Research, analysis, communications; energy efficiency and green energy program designs; strategic planning. Select clients: The International Finance Corporation of The World Bank, Massachusetts Electric, Sacramento Municipal Utility District, and the cities of Burbank and Pasadena. Strategic services for E-Source, Snohomish Public Utilities District, NEES, Boston Edison, and Northeast Utilities, and LivingWise. Prior to moving to Los Angeles served as an independent consultant for the Northwest Power Planning Council; the Texas State Energy Conservation Office; the City of Phoenix; the National Rural Electric Cooperative Association in Washington, DC; the Catalyst Financial Group; E-Source; Xenergy; the Center for Renewable Technology and Sustainable Development; and U.S. Department of Energy. Consulting encompassed research and video, written, and oral presentations on competitive utility services, performance contracting, and green energy.

Managing Director, The Energy Coalition

2001 – 2005

The Energy Coalition focuses on alternative and effective delivery of energy efficiency services to “underserved” power consumers, notably low-income, single and multi-family residential, senior

communities, students and their families and schools, small businesses, and municipal governments. Primary responsibility for utility strategies, external communications, and the PEAK Student Energy Action program that includes an in-depth curriculum, unique simulation software, and interactive web site. The Energy Coalition is the facilitating manager of the Community Energy Partnership, a project that links cities and their constituents with utilities and the State of California to foster smart energy management and community energy responsibility. Also developed the Business Energy Coalition in San Francisco that linked 34 major downtown facilities into a coalition of responsible energy users, responsive through curtailments during peak periods.

Director of Energy Efficiency, Los Angeles Department of Water & Power

1998

Hired by the legendary S. David Freeman to craft a new set of innovative efficiency programs for the Department's 1.3 million customers. Guided a team of 30 professionals and a \$15 million budget towards a comprehensive set of "bill reduction" services for residential, small and large business customers. Projects initiated included low-income direct installation program for energy and water efficiency, new small business efficiency incentives, efficiency financing for all customers, a revised ESCO support services program, internal housekeeping through the planned retrofit of the Department's main office building, and a reinvigorated corporate recycling program to fulfill the state-mandated 50% diversion rate by the year 2000.

Director and Founder of IRT Environment Incorporated

1986 – 1996

IRT Environment, Inc., is an energy and environmental information company focused on publications, presentations, consulting, video productions, and The Results Center. Editor of *The Energy Newsbrief*, a biweekly energy and environmental news brief that served utility executives and decision-makers in energy industries throughout the U.S. and Canada with a "timely review of strategic energy and environmental issues facing the world today."

Director, The Results Center

1991 – 1996

The John D. and Catherine T. MacArthur Foundation and The Energy Foundation supported Ted Flanigan and the development of The Results Center, a project of IRT Environment, to track highly successful energy efficiency programs in North America. The Results Center was used to jump-start effective energy efficiency services and to refine existing programs through the power of positive example. Charter Members included EPRI, Tokyo Electric, Pacific Gas & Electric, Hydro-Quebec, New England Electric System, Conservation Law Foundation, and the Natural Resources Defense Council. The Center published 126, 24-page profiles with over 100 leading utilities and agencies, produced 40+ Program Snapshots, published eight co-authored Special Reports, provided Technical Consulting Support for members, and produced the monthly *Energy Efficiency News & Views*.

Energy Program Director, Rocky Mountain Institute

1986 – 1990

Worked with Amory and Hunter Lovins on utility strategies and government energy policies. Lectured extensively domestically and abroad on the technical potentials for and the benefits of energy efficiency. Developed and managed COMPETITEK (now E-Source), the Institute's electric utility consulting service focused on researching advanced techniques for electric efficiency. Interacted with over 170 member organizations located in 40 countries including the U.S., Canada, USSR, Denmark, Italy, Sweden, and China. Responsibilities for hire/fire, research scheduling, marketing, and consulting service coordination which included an annual members' forum held in Aspen, Colorado. Routinely interacted with the press and public on energy issues. Served as Director of the Institute's Water Program in 1988.

Assistant Strategic Planner, New York Power Authority**1985 – 1986**

Worked on the development of strategic planning tools and processes for senior management of this electric utility with annual revenues in the billions of dollars. Tracked its operating budget for its consistency with previously stated planning objectives. Responsible for developing an issues database for the planning division, the Chairman, and management. Research focused on planning within New York State and NYPA's unique opportunity to shape New York's electricity future, Hydro-Quebec power imports, the emerging regulatory trends of least-cost planning, cogeneration, energy efficiency, resource recovery, and plant life extension.

Advisory Roles

Board of Directors, TreePeople**2009 – 2014**

TreePeople is Los Angeles's largest non-profit. Served on the Policy and Development Committees to advance TreePeople's mission of creating a vibrant urban forest through stormwater capture and strategic forestation of shade and fruit tree for the multiple air quality, water quality, and quality of life benefits.

Board of Directors, Association of Energy Services Professionals**1994 – 1996**

Elected to this national trade association's Board of Directors. Attended Board meetings in Houston, Dallas, Phoenix, and Washington to review directions, challenges, finances, and opportunities to advance customer efficiency and value. Contributed features to *Strategies* newsletter.

Board of Advisors, Pace University's Center for Environmental Legal Studies**1989 – 1994**

Provided advice on the Center's role as an intervenor in regulatory proceedings in New York State; specifically, DSM, environmental costing, and integrated resource bidding.

Board of Advisors, Lawrence Berkeley National Laboratory**1991 – 1995**

Served on the Board of Advisors for the LBNL's DEEP project. The synergy between DEEP's comprehensive database of DSM programs and The Results Center's select programs created a strong collaboration.

Staff Subcommittee for Energy Conservation, National Association of Regulatory Utility Commissioners**1985 – 1990**

Meetings in New York, Washington D.C. (5x), San Diego, San Francisco (2x), Phoenix, and related EPRI and LBNL workshops. Organized the first national conference on least-cost planning in Colorado in April 1988.

Other Advisory Roles

Served as a special advisor to the Chairman of the Colorado Public Utilities Commission (1986-1990), corporate secretary and strategic advisor for Rising Sun Enterprises (an energy service company that specializes in lighting), a technical advisor to the EarthWays Home demonstration project in St. Louis, an

advisory board member of Energy Expo (later known as the National Marketplace for the Environment), board member of the Environmental Rescue Fund in San Francisco, board member for the Aspen Center for Environmental Studies and Solar Energy International.

Select Consulting

Santa Rita Union School District, Power Outage Protection

Hired to consult for the Santa Rita Union School District in Salinas, California. SRUSD seeks power outage protection by using batteries for emergency back-up. EcoMotion facilitated a strategic approach that melds large solar systems (to provide 100% solar power for each campus), a PG&E rate shift, battery storage, and microgrid controls to enable 7-hour operations during power outages. Project is fully financed with innovative PPA that combines solar and storage (complete with performance guarantees for both, and clearly assigned “Asset Manager” duties for microgrid operations) and will demonstrate value of EcoMotion’s PERCs, Powered Emergency Response Centers

Climate Smart Schools

EcoMotion currently engaged in Climate Smart Schools, partnership with Los Angeles-based climate organization Climate Resolve. Climate Smart Schools has facilitated the effective use of Proposition 39 funding and is representing the energy interests of California charter and public school districts with ~140 campuses. Team has been instrumental in relighting, and retrofitting HVAC and pool systems, on dozens of campuses and also spearheaded ~20 energy storage installations.

City of Santa Monica: Solar Santa Monica

For the past 10 years, EcoMotion has managed Solar Santa Monica, a multifaceted program that provides a breadth of local services, from hundreds of homeowner consultations, to negotiating a PPA for the school district, and introducing feed-in tariff legislation with then-Representative Fran Pavley in the California Assembly. Recently, Solar Santa Monica was awarded by the U.S. Conference of Mayors for its success in raising awareness in Santa Monica, resulting in a ten-fold increase in solar capacity within the City limits since the program began and contributing to the City’s success in eclipsing its own climate protection goals.

City of Palm Desert, The Genesis of PACE

Served as the City of Palm Desert’s energy consultant for five years. Developed the City’s first greenhouse gas inventory, facilitated and crafted the City’s first environmental plan, and served as the project manager for the City after it successfully passed AB 811, creating the legislative authority to roll out the nation’s first PACE program. Wrote the initial program guidelines that were later modified for Sonoma County’s PACE program.

Los Angeles Metropolitan Transportation Authority

For the past six years, EcoMotion has served as the solar consultant to Los Angeles Metropolitan Transportation Authority, involving over 30 work orders. First developed a database of properties, with a ranking system to prioritize solar. Track solar generation, flag issue, and manage a hot line for repairs. Current works involve Community Solar, Bus Yard Solar, and Alignment Solar. Recently, spearheaded

repair of all existing installations, provided the seventh 5-hour, technical training to Facilities Maintenance electricians on maintenance, trouble-shooting, and repair of existing PV at Metro divisions.

Coachella Valley Association of Governments

For the cities of six cities and one tribe in the Coachella Valley, EcoMotion prepared greenhouse gas (GHG) inventories and developed Climate Action Plans (CAPS) to cut footprints. Also developed Energy Action Plans for each cities' and tribal facilities – the cities of Blythe, Cathedral City, Desert Hot Springs, Indian Wells, Palm Springs, Rancho Mirage, and the Agua Caliente Band of Cahuilla Indians. Created and managed the *Green for Life* outreach campaign that included ~20 local interns and was supported by the Emissions Time Bomb display to highlight the climate issue at hand and to develop support for the climate action plans.

Millbrook School, Carbon Neutrality Planner and Owner's Rep for Solar Field

For Millbrook School, first developed a plan for the school to achieve its goals of carbon neutrality by 2020. Then framed up a solar project to power the entire school. Served as owner's rep on a 1.73 MW solar field that powers the entire campus. Helped the School get a \$1.25 million grant from the New York State Energy and Research Development Authority. Solar was fully financed and resulted in first-year savings of ~\$50,000.

Clean Energy Collective, Community Solar

Developed strategies and represented the Clean Energy Collective approach to Community Solar in California. Crafted a white paper that clearly presented the genesis of community solar, and the two predominant program designs featuring contrasting ownership and subscription models. Introduced community solar, its securities and tax nuances to all of California's major utilities including San Diego Gas and Electric, Southern California Edison, Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, and smaller municipal utilities including Anaheim, Pasadena, and Riverside.

Capital Group Companies, Solar Installation – Owner's Rep

EcoMotion served as solar consultant for the Capital Group for a number of years. Did the initial project planning and financial analysis for the Irvine photovoltaic project. Resulted in the largest solar installation in Orange County, California at the time. Served as owner's rep for this 993 kW system. Have monitored its generation; realized a 4.1 year payback. Have also tracked federal, state and local utility incentives for other Capital Group locations included San Antonio, Texas (where we framed up a feed-in tariff project); Indianapolis, Indiana; and Hampton Roads, Virginia.

U.S. Department of Energy, Performance Contracting

Exploration of the key issues and impacts related to performance contracting of energy services and potentials to overcome shortfalls in utility funding of energy services. Contacted leading energy service companies to compile data regarding project realization rates in various monitoring and verification environments; studied measure and savings persistence over time to increase lender confidence and thus lower capital costs.

International Institute for Energy Conservation / United States Agency for International Development

Worked in collaboration with IIEC under contract for USAID to explore exemplary efficiency programs in Asia. Traveled to Asia to research nine Program Snapshots of programs in The Philippines, Korea, China, Indonesia, Japan, Pakistan, Thailand, Singapore, and Malaysia. (1995)

Urban CO² Reduction Project, Greenhouse Gas Inventories

Technical advisor to the International Council for Local Environmental Initiatives regarding the carbon dioxide reduction strategies of 15 major cities in North America and Europe, including Hannover and Saarbrücken, Germany; Copenhagen, Denmark; Bologna, Italy; and Ankara, Turkey. Traveled to Helsinki and Stockholm to strategize with delegates; Conducted briefings on DSM success stories from North America. (1992-1993)

City of Toronto, Alternative and Adopted 25-Year Resource Plan

Advised the City of Toronto on its potentials for energy efficiency as an alternative to Ontario Hydro's 25-year resource. Assessed technical and economic potentials of efficiency technologies and strategies, and suggested implementation strategies based on U.S. success for each the electric, oil and gas, and transportation sectors. Later involved in design charrettes for Toronto Hydro, bringing lessons from America north to Canada.

Pace University Center for Environmental Legal Studies, Performance-Based Ratemaking

Reviewed New York investor-owned utilities' first DSM plans to support Pace's position that New York State's investor-owned utilities ought to be required to invest more aggressively in DSM. Along with Pace Professor Ottinger (later Dean Ottinger), developed a "1-2-3-4-5" plan for required savings for the utilities, enforceable through an overall rate of return mechanism.

City of Burlington, Vermont, Integrated Resource Plan DSM Element

Evaluated and made recommendations on the demand-side management programs of Burlington Electric, specifically in light of the potential for energy efficiency as responsible alternative to further power imports from the James Bay in Quebec. Voters ultimately approved an \$11 million bond to finance energy efficiency in Burlington.

Additional Clients Include

The Pew Charitable Trusts, Pacific Gas & Electric, New England Electric, California Energy Coalition, Conservation Strategies Consortium, Great Lakes Project, TransAlta Utilities, Greenpeace Action, Tellus Institute, Association of Science & Technology Centers, Long Lake Energy Corporation, Urban Consortium, Utility Consumer's Action Network, New York Power Authority, Electric Power Software, Hagler Bailly, Synergic Resources Corp., PSI Energy, Energy Technology Laboratories, City of Austin, Hydro-Quebec, Cathay Bank, LeFiell Manufacturing, Simple Human, City of Beverly Hills, The Energy Coalition, Sonoma County, Irvine Ranch Water District, Anaheim Public Utilities, Burbank Water and Power, St. Josephs College of Maine, Bryant University, Milton Academy, St. Marks School, Shenandoah College, Port of Long Beach, LA Leadership Academy, Santa Rosa Academy, Sycamore Academy, Gorman Learning Center, Capistrano Connections School, and Campbell Union High School District.

Select Presentations

Harvard Law School, Climate Solutions Living Lab

March 2017

Guest Lecturer in the Climate Solutions Living Lab. Focused on *Crafting and Financing Carbon-Free Microgrids* with teams of students from the Law School, Harvard Business School (HBS), the School of Public Health, the Kennedy School, and Engineering and Urban Planning. Lecture/seminar featured case studies from Monterey and Santa Clara counties in California, fully financed microgrids for power outage protection and community resources in prolonged outages.

Microgrids 101, With Case Studies

2017

Presentation on microgrids, their genesis, rise, and potentials for campuses and communities. Focus on the earliest microgrid and the most recent examples that are pushing the envelope and finding ways of benefitting when being tied and islanded from the grid. Case studies from Napa, County; the Bronx in New York City, and Brooklyn, where block-chain technology is enabling community solar and preparing neighborhoods for resilience. Presentation ends with two case studies of 12 microgrids being developed by EcoMotion in Northern California.

The Lithium-ion and Hybrid Building Revolution

2016

The rise of use of lithium-ion batteries in cell phones, computers, and now cars, is giving rise to the development of hybrid buildings, that both draw from the grid and from onsite power stored in batteries. Presentation covers lithium, its unique properties, its multiple uses and vast impact on both the automotive and power sector. Case studies on how batteries can be integrated with solar, and how batteries' benefits can be stacked, creating primary and secondary revenue streams from these valuable assets.

Millbrook School Commencement Address

2007

Commencement speaker for Millbrook School in Millbrook, New York in 2007. Presented the vast arena of opportunity in the green space for young students as they go to college and prepare for professional careers. Discussed the great need for innovations as each of us, and ultimately global society, seeks to increase the quality of life while cutting our carbon footprints and creating sustainable development. Address concludes saluting the graduating class and challenging each student to find a fulfilling career, dedicated to right livelihood.

Asia 2008 Clean Energy Forum in the Philippines

2008

Keynote speaker for the Third Annual Asia Clean Energy Forum, *"The Power of the Increment!"* A variety of energy insights from Iceland, Germany, and at home, on a commuter rail line. Forum hosted by the Asian Development Bank and U.S. AID.

Competitive Energy Services and Strategies

Winter 1996 – 1997

A lecture series developed for the National Rural Electric Cooperative Association (NRECA) presented to utility managers in Atlanta, Georgia; North Carolina; Arkansas; Missouri; and Colorado.

Third Municipal Leaders Summit on Climate Change in Saitama, Japan

1995

Retained as an international expert for this six-day municipal leaders' summit in Saitama, Japan. *Models for Financing and Implementing Municipal Energy Efficiency Financing.*

City of Toronto, Ontario **1994**

Keynote speaker for Green Catalyst's 1994 Design Charette held among key stakeholders to launch a comprehensive, city-wide building energy and water efficiency initiative, *Creating "the Prototype" for Municipal Efficiency*.

German Ministry of the Environment/Organization for the Economic Cooperation and Development **1993**

First European Conference on Least-Cost Planning, *Utilities' Experiences with Least-Cost Planning and Energy Efficiency in the U.S.*, Saarbrücken, Germany.

EarthDay – Chicago **1990**

Earth Day in Lincoln Park, downtown Chicago. Center stage between Senator Paul Simon and Mayor Daly. Fifteen-minute address before a ~20,000 person audience. Subsequent workshop on the *End-use Approach to Energy Planning*.

Massachusetts Institute of Technology **1990**

Keynote speaker *1990 Environmental Colloquium* with Bill McKibben, author of *The End of Nature*. Also conducted a 2-hour career seminar on socially-responsible energy and environmental career opportunities. Cambridge.

French Energy Management Agency **1988**

Lectured and participated in the First European Conference on Energy Management in Sophia Antipolis, France. *The Technical Potentials for Energy Efficiency*.

Alaskan Conference on Affordable Housing and Energy Efficiency **1990**

Keynote Speaker, *Energy Efficiency, the Environment, and Sustainable Economic Development*. Juneau.

International Council for Local Environmental Initiatives, Urban CO² Reduction Project **1992**

The Potentials for Energy Efficiency to Mitigate Carbon Emissions in Major North American and Western European Cities, presented in Helsinki, Finland.

Select Publications

EcoNet News

Developed as "IRT: Issues Review and Tracking in 1984 in New York City, EcoNet was published as *The Energy Newsbrief* from 1985 to 1996. Subscribers have always received enlightening news, seasoned perspectives, clear interpretations and even written and telephone access for further information. Issues featured "The History of Electric Vehicles" and "Oil at the Midpoint." Supplements included *Hydrogen: The Invisible Fire* by Ted Flanigan et al. Today the publication is provided to ~4,000 subscribers monthly in electronic format only as *EcoNet News*.

EcoMotion White Papers and Research Briefs

EcoMotion produces white papers for broad distribution and research briefs for specific clients on a regular basis. Building and Financing Carbon-Free Microgrids, Hybrid Buildings and the Lithium-Ion Revolution, Ancillary Services and Distributed Storage, Energy Savings Agreements, Community Solar, The State of Solar 2013 and 2014.

The Results Center

Launched in 1992, The Results Center produced over three thousand pages of rigorously researched technical documentation. Similarly, staff worked intimately with over three thousand efficiency practitioners and advocates to document 126 Profiles of successful energy efficiency programs including leading energy services from North America and from Sweden, Germany, Denmark, Norway, England, France, and the Philippines.

Oak Ridge National Laboratory

Prepared an assessment of the state of energy management at the nation's 2,000+ publicly-owned electric utilities with a focus on leading municipal utilities' efforts with energy management. Site visits conducted in Seattle, Sacramento, Austin, Burlington, & Waverly, Iowa.

Electric Power Research Institute

Published "50 Successful DSM Programs" in 1994 that presented the tabulated results of The Results Center's first 50 profiles and provided insights and perspectives on DSM in North America with a focus on those ingredients in program design and financing mechanism that led to these success stories.

Additional articles

Have authored dozens of articles on energy efficiency and the environment in trade and popular journals including *The Multinational Monitor*, *The United Nations Development Forum*, *Northeast Sun*, *The Electricity Journal*, *Solar Today*, *Solar Age*, *Northwest Energy News*, and *Public Utilities Fortnightly*. The Results Center, IRT Environment, and Ted Flanigan have also been cited in publications including *The Wall Street Journal*, *The Christian Science Monitor*, *The Utne Reader*, *Whole Earth Review*, *The Quad Report*, *Public Power*, *Nuclear Energy*, *IAEEL Newsletter*, *Home Energy*, *Global Environmental Change Report*, *High Country News*, *The Boston Business Journal*, and others.

Video, Televised, and Podcast Publications

The Westmont Solar Energy Project, Video Producer/Narrator

In 2017, the Westmont Solar Energy Project is the largest rooftop installation in the world (16.5 MW). EcoMotion was hired to produce a seven-minute documentary on the project – including interviews, rooftop and drone footage – to highlight the project's innovations, from its patented, *SolarStrap* racking system to the use and training of veterans, to local support for the City's clean energy goals and feed-in tariff.

TBN Televised Interviews with Reba Toney

Trinity Broadcasting Network is the world's largest faith-based broadcast network, with channels in over 70 countries around the world. Served as guest expert on three half-hour shows: *How Consumers can Help Mitigate the Loss of the San Onofre Nuclear Power Plan through Household Efficiency*, *Updates and the Promises of Electric Vehicles*, and *Climate Change in Practical Terms*.

Podcast: A Conversation with Michael Totten

EcoMotion's first podcast produced by Versatile Productions in Colorado. Half-hour segment involved three-camera shoot for video and audio productions. Conversation covered Michael's early interest in the environment, stemming from his love of the ocean, through his works on Capitol Hill and at Conservation International as its biodiversity/climate expert, now with Jeremy Rifkin on his notion of the Third Industrial Revolution and pilot works in Luxemburg.

Podcast: A Conversation with Jonathan Port

Half-hour segment produced by Versatile Productions rooftop in San Pedro at the Westmont Solar Energy Project. Two camera shoot shows installation of panels as the podcast is being recorded, while Jon Port presents his notions of sustainable development. Fired up in New Zealand in college, the podcast reveals his deep passion for permanent, sustainable development, and how his works with solar are making major contributions.

Climate Protection and "Save a Ton"

Ten-minute documentary that presents EcoMotion's Emissions Time Bomb – a massive, 32-foot in diameter inflatable display --and a skit prepared by EcoMotion interns and staff featuring the struggle between Eco-Man and "The Pollution-ator." The film documents EcoMotion's assembly at elementary and middle schools that raises awareness about climate change and how students, faculty, and administrators can "save a ton" of money and carbon emissions.

The Energy Coalition Videos

Five 12-15-minute documentary videos produced with Versatile Productions that explain unique approaches to community energy management, providing diverse perspectives from utility officials, regulators, and program participants, taped in targeted neighborhoods, schools, and local businesses. 1. *Catalyzing Responsible Energy Action*; 2. *Taking it to the Streets*; 3. *The Energy District Approach*; 4. *PEAK Student Energy Actions*; and 5. *The Community Energy Partnership*.

Sustainable Building in Texas

A 15-minute video featuring sustainable building practices in Texas public facilities. Developed script and interviewed experts throughout Texas and in Kansas City and Denver. Narrated the video which includes footage of eight facilities ranging from the State Capitol to a school to a maximum security prison in Connally, Texas. Video used by the Center for Maximum Potential Building Systems to enlighten the Texas architectural community and to train facility managers there about the potentials of green building.

Transportation 2000, Moving Beyond Auto America

A 28.5-minute video coproduced with Versatile Productions, the U.S. EPA, and Transportation-2000 of Boulder, Colorado. On-camera narrator. Interviews with 20 experts including Ralph Nader plus "cutaways" of bullet trains, "mag-levs", advanced aviation, electric vehicles, and light rail systems from around the world. Distributed nationally; aired on Canadian and British broadcasting networks. Based on *Transportation: The Grand Re*Design* by Ted Flanigan.

Sustaining America's Agriculture, High Tech and Horse Sense

Associate Producer of this 28.5-minute video produced for the U.S. EPA and the U.S. Department of Agriculture with Versatile Productions. Video features concepts and six sustainable farms across the country. Music by the Paul Winter Consort and Jimmy Ibbotson; narration by Raymond Burr.

Negawatts

A 20-minute video that features the technical potentials for energy efficiency in lighting, window glazings, and drivepower situations. Produced for Rocky Mountain Institute. Coproduced with Versatile Productions and the U.S. Environmental Protection Agency Pollution Prevention Office. Screened at the International Environmental Film Festival, 1991.

Education

University of Vermont: Burlington, VT. Master of Science in Natural Resource Planning

GPA 4.0 with Economics Minor. Emphasis on national energy planning. Thesis titled *National Energy Planning: Potentials in Synergistic Interaction*. Courses focused on the economics of energy and the social considerations of effective planning.

Humboldt State University. Arcata, California

BS in Natural Resource Planning, Economics Minor. Presented and got approved a comprehensive recycling plan for the City of Arcata. Interned at the New Alchemy Institute (East Falmouth, MA) working in the "Ark," a unique bioshelter incorporating solar design and intensive food and fish production. Undergraduate studies also at the University of Vermont and University of California at San Diego.

Incidental

The Aspen Institute

Participant in the "Series on the Environment in the 21st Century." Seminars brought together utility representatives, oil company executives, government decision-makers, and leading environmental groups to work together to develop a new environmentally-sensitive and cooperative working relationship. Also periodic observer at the Institute's Energy Policy sessions 1987 – 1998.

Moscow Global Forum on Human Survival

January 1990

Invited as an environmental expert to the Global Forum attended by spiritual and parliamentary leaders from 83 countries. The week-long forum in Moscow was a cultural experience and a valuable model for collaboration at many levels especially between religious and political leaders. Mini-forums focused on the potential for energy efficiency worldwide and particularly in the USSR and developing world.
