



## Summary Description

### **“Renewable Energy in America: the Call for Phase II”**

The American Council On Renewable Energy (ACORE) is calling for new national goals and a new public policy framework called “Phase II” for renewable energy in America.

This is the first major advancement from the research, development and demonstration (RD&D) program that was started by then-President Jimmy Carter when he created the US Department of Energy in 1977. But far from saying that RD&D is over, ACORE is calling for RD&D budgets to increase by 2x to 3x, to handle the needed support for a “utilization” strategy across the US, similar to what is occurring today in Germany and Japan. Indeed, the program defined by President Carter -- to develop technology options with which our country can address its energy challenges -- has worked. It is time to declare an interim success on the 30-year, \$14 billion investment in renewable energy technologies, and chart a new course for widespread utilization (“Phase II”) of renewable energy in America.

#### **AMERICA’S ENERGY CRISIS OF THE 1970’s**

Beginning in the late-1960s, there was an increasing concern among national thought leaders about US energy supply, in concert with concerns about the environmental impacts of our production, processing, conversion, and consumption of energy, especially for electric power and transportation. The Ford Foundation sponsored a study that concluded in 1972 that the nation needed to heed the warning signs and take immediate action on oil imports, energy efficiency, renewable energy, and environmental stewardship.

The oil embargo of 1973 got the nation’s attention, and a 30-year period of energy-related legislation and investing in new energy technologies began.

#### **AMERICA’S RESPONSE: PHASE I**

Phase I is now defined, in hindsight, as the 30 years from 1974 to 2003, starting with the oil embargo and energy crisis, leading to calls for energy independence, federal government leadership, passage of a series of energy-related laws, formation of the US Department of Energy (DOE) and National Renewable Energy Laboratory (NREL), and funding of a technology RD&D program for the purpose of creating new energy technology options for the country.

#### **Energy-Related Legislation in Phase I**

There was a flurry of energy-related legislation in the 1970s, followed by a major energy bill every ten years or so and a series of energy and tax legislation, including:

- 1974 Solar Energy Research Act
- 1974 Geothermal Energy RD&D Act
- 1974 Solar Heating and Cooling Demonstration Act

1978 Solar Photovoltaic Energy RD&D Act  
1978 Public Utility Regulatory Policies Act (PURPA)  
1978 Energy Tax Act  
1980 Wind Energy Systems Act  
1980 Biomass and Alcohol Fuels Act  
1992 Energy Policy Act  
1999 Energy Efficiency and Renewable Energy Development  
1999 Increased Use of Bioenergy  
1999 Energy for the New Millennium: National Photovoltaics Program  
2000 Biomass Research & Development Act  
2002 Economic Security and Recovery Act  
2002 Farm Security and Rural Investment Act

### **Investment in Research, Development and Demonstration during Phase I**

During the period 1973-2002, the US has invested \$99.2 billion dollars in energy research, development and demonstration (RD&D), including \$49.1 Billion for nuclear power, \$24.8 Billion for fossil fuels, \$14.2 Billion for renewable energy, and \$11.1 Billion for energy efficiency (Source: Congressional Research Service).

The \$14.2 Billion dollars of investment in renewable energy RD&D included programs for solar heating & cooling, solar thermal-electric, solar photovoltaics, wind power, geothermal energy and power, hydropower (river and ocean), and biomass (bioenergy, biofuels and bioproducts), plus related investments in power systems, energy storage, and energy efficiency.

### **Declaration of Success in Achieving the Original Objectives of Phase I**

ACORE believes that, while there is much more technology to be developed, the goal of creating an initial inventory of new technology options for the nation has been achieved. We have developed and demonstrated a set of technology options including but not limited to the following:

- **Solar hot water**, solar space heating, solar space cooling, and passive solar design techniques for residential and industrial applications;
- **Solar photovoltaic** systems for utility wholesale power generation, grid-connected distributed power on residential and commercial buildings, and off-grid power;
- **Solar parabolic trough collectors** for large-scale wholesale power generation;
- **Large-scale wind turbine-generators** for wholesale power generation, and smaller-scale wind turbines for distributed generation;
- **Hot dry rock and advanced technologies for geothermal power generation**, and ground-source heat pumps for end-use energy;
- **Advanced, highly efficient hydropower turbines** for large-scale, small-scale, mini- and micro-hydro facilities;
- **Biomass and waste-fired power plant boilers**; and
- **Biofuels** including corn-based ethanol and biodiesel fuel from waste oil.

These technologies and systems (and others) have been invented, researched, developed, demonstrated, and/or proven with support from the US DOE program, often with leadership and funding through NREL and other national labs such as Sandia, Livermore, and Berkeley, as called for originally by Presidents Gerald Ford and Jimmy Carter. While there is a tremendous amount of continuing RD&D to be done to advance the performance, extend the lives, raise the reliability, and lower the costs of these and other new technologies that can address America's energy challenges, ACORE believes that it is time to declare success on the development of these technology options, and call for "Phase II" with a new and exciting focus on putting the technologies to use across our society.

## THE CALL FOR PHASE II

Phase II will focus on getting a return to the taxpayers for their 30-year investment. How? Through public policies that support putting the technology options into use throughout our society, with benefits for national energy supply, national security, environmental quality, lower risk of climate change, better human health, economic growth, investment opportunities, and jobs. There are several implications of shifting to a new phase:

- **New goals and objectives will need to be set.** Utilization is fundamentally different than creating technology options. New goals imply the need for new policies, even a fundamentally new approach to public policy at all levels -- federal, state and local. And new ways of getting the public and private sectors to work together more effectively.
- **All parties must be willing to embrace change and new proposals.** What worked in Phase I might not be right for a Phase II world. All parties should be given the opportunity to rethink their policy positions and prepare thoughtful responses to creating a new and different Phase II. This may take time, even a year, to adequately address the issues, assemble input from the many affected stakeholders, develop consensus, and bring new plans forward. There are lessons to be learned and considered from state and local governments that have begun Phase II-like policies, and from abroad, from countries like Germany and Japan, where governments adopted a Phase II-like approach several years ago.
- **Leadership might be shared with other organizations and agencies.** When shifting into a new phase, the question is asked: which is closer to the market -- federal or state government? Which should lead? Which should support? How? What are the new roles for DOE, EPA, DOD, Interior, Agriculture, Education, and other agencies in a "utilization" or "procurement" phase? Will the budgets be higher or lower? Which incentives will work best? What about financing? Education and training? Other programs? The call for Phase II offers each player the opportunity to carry on with current policies if that makes sense, or promote new policies free from what might have applied in Phase I. Certainly, a key element of Phase II thinking is stability of policy, allowing young industries to take shape, grow, and become competitively strong in a stable public policy environment..

## ACORE INITIATIVES FOR PHASE II

The concept for Phase II has been under discussion within ACORE since it declared, at the opening of its "Power-Gen Renewable Energy" conference and trade show in Las Vegas on March 1, 2004, that this is the "Start of the Commercial Age" of Renewable Energy in America. The audience interrupted spontaneously with applause.

It was clear to all that a nerve had been struck, and for months following, leaders from all corners of the renewable energy community have been saying: "Yes, it is time for change, for something

fundamentally new, for a policy framework that is oriented to success in the marketplace, about putting the technologies into use.”

ACORE is seeking to attract a broad base of support for the Phase II proposal from the Congress, Administration, State and local governments, nonprofit groups, research institutes, think tanks, trade associations, labor unions, consumer groups, the education community, the financial community, and industry. With that support, ACORE is planning two initial activities that will need sponsorship: a book and a national conference.

### **The Book “Renewable Energy in America: the Call for Phase II”**

This new report, to be produced by ACORE in collaboration with Worldwatch Institute and possibly other key organizations, will lay out a vision of the role that renewable energy can play in the U.S. economy in the decades ahead. *Renewable Energy in America; the Call for Phase II* will be published in November 2004.

The Report will proclaim that the three-decades-long Phase I of research and development of renewable energy technologies has succeeded in delivering an array of viable technologies, and that Phase II—focused on widespread utilization of the technologies—should begin.

### **The Policy Forum: “Renewable Energy in America: the Call for Phase II”**

ACORE is convening a two-day event, December 6-7, 2004, to call the question for Phase II, to rally support for it among renewable energy organizations, and to begin to persuade members of the legislative and executive branches of the federal government that this path is needed, necessary, doable, beneficial, and right. The summit meeting will be in two parts:

- December 6: there will be a Phase II reception in the evening at the Capital Hill Club.
- December 7: there will be the main forum event “Renewable Energy in America: the Call for Phase II” from 9 AM to 3 PM in the Cannon Caucus Room, followed by a second evening reception at the Capital Hill Club.

The format of the main event is a 300-400 person policy forum, with the nation’s top speakers and a senior group of delegates from government policy, industry, finance, and other sectors of the energy community. The conference is being planned in five parts:

- **Opening:** Setting the stage for Phase II by defining the national energy situation and key issues: energy supply, national security, economic growth, investment opportunities, jobs, the environment, climate change, lifestyle, and health for this and future generations.
- **Renewable fuels and national security:** Defining the technologies that are available to build a renewable fuels production capacity in the US, and the policy framework for successful deployment of renewable fuels.
- **Renewable electricity and the environment:** Defining the technologies that are available today for renewable electric power generation, and the policy framework for successful deployment of renewable sources of electricity.
- **Policy framework and issues for Phase II:** Characterizing the policy challenges and key issues for Phase II. Policies that work – for solar, wind, hydro, geothermal, and other renewable electricity. Policies that work for corn- and cellulose-based ethanol, biodiesel, and other renewable fuels.

- **Closing – the call for Phase II:** Visions of what Phase II is, and can be, and must achieve. Proposals for bold strategies. Motivation for action and commitment.

The Energy Efficiency and Renewable Energy (EERE) Caucus of the Senate and House of Representatives has agreed to co-convene the conference with ACORE. In addition, ACORE is reaching out to the many trade associations and nonprofit groups that have a stake in renewable energy to work with ACORE on the conference. ACORE will be promoting the Phase II program – the book and conferences -- to the government, corporate, financial and professional sectors for financial sponsorships.

### **Phase II Policy Development Program in 2005**

Continuing in 2005, ACORE will be working to organize its members into sector committees to work on Phase II, assess the issues and requirements from their points of view, bring new policy proposals forward, and develop consensus. ACORE's eight membership circles are:

- **End Users** – transportation, utility, industry, commercial, and residential
- **Renewable Energy Industries** – components, systems, and services
- **Financial Institutions** – lending, investment, and insurance
- **Professional Services Firms** – law, finance, engineering, architecture and consulting
- **Education:** universities, primary/secondary, and technical
- **Nonprofit Sector** – NGOs, research organizations, and laboratories
- **Associations** - trade, professional, labor, and consumer groups
- **Government** - federal, state and local.

At the end of 2005, ACORE is planning the followup conference on Phase II. Whereas the 2004 conference is a one-day event to call the question and rally commitments to pursue Phase II as a new policy framework, the 2005 conference is envisioned as a three-day event at which the many stakeholder groups can come together to report on their plans and proposal for Phase II. ACORE also is seeking foundation support for this 2004-2005 in-depth process.

### **ADDITIONAL INFORMATION**

For additional information about Renewable Energy in America: Phase II, please contact any of the following:

#### **ACORE:**

Rob Pratt, Chairman, 508-870-0312, or email [robpratt@masstech.org](mailto:robpratt@masstech.org)

Michael Eckhart, President, 202-429-2030 or email at [MEckhart@AmericanRenewables.org](mailto:MEckhart@AmericanRenewables.org)

Jodie Roussell, Associate, 202-283-1123 or email at [Roussell@AmericanRenewables.org](mailto:Roussell@AmericanRenewables.org)

#### **REIA Conference Co-Chairs:**

Roger Ballentine, Green Strategies, Inc., 202-293-1123 or email [Roger@Greenstrategies.com](mailto:Roger@Greenstrategies.com)

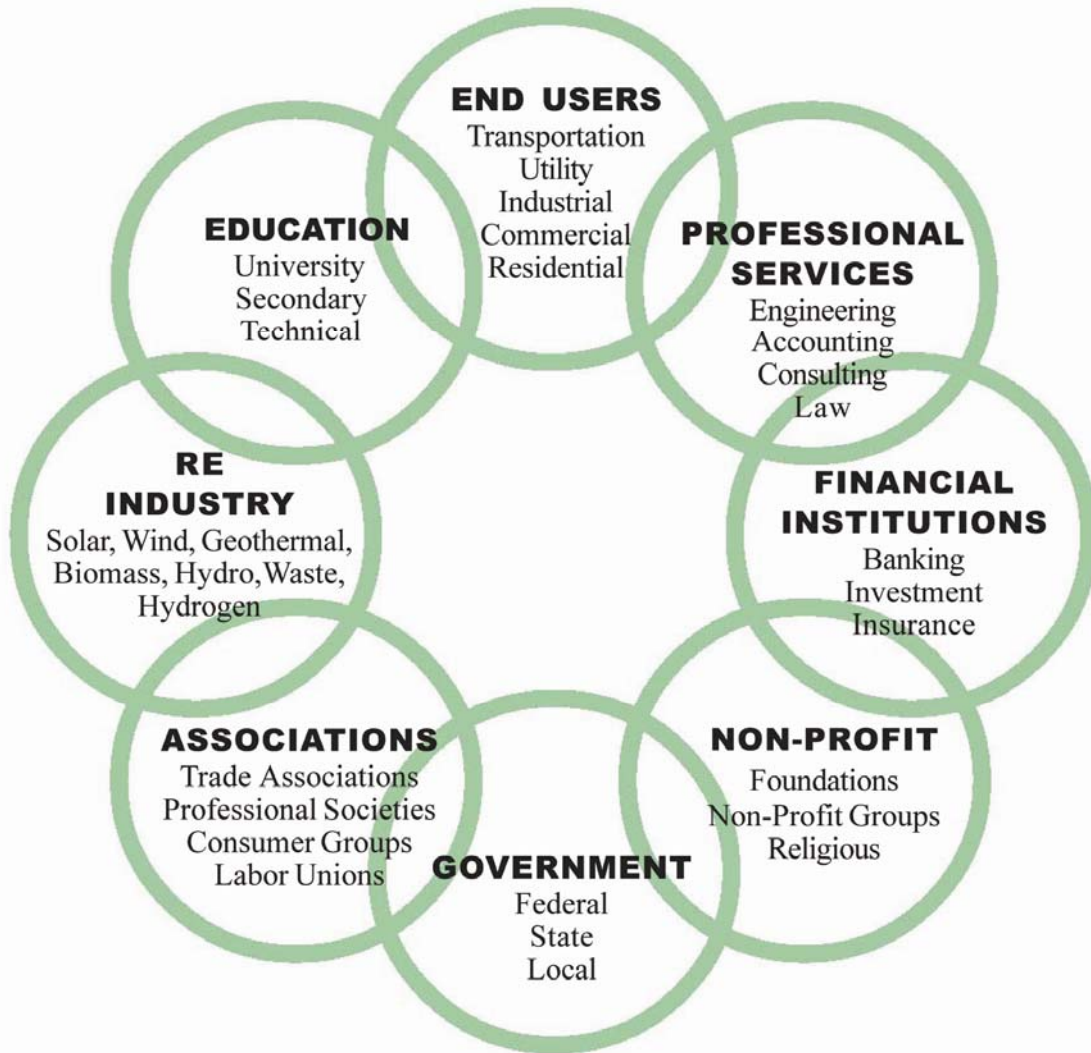
Hank Habicht, GETF and Capital E, 703-379-2713 or email [hhabicht@getf.org](mailto:hhabicht@getf.org)

Dan Reicher, New Energy Capital, 802-496-3529, or email [dreicher@newenergycapital.com](mailto:dreicher@newenergycapital.com)

#### **REIA (Book) Editorial Board Chairman:**

Christopher Flavin, Worldwatch Institute, 202-452-1992 or email [cflavin@worldwatch.org](mailto:cflavin@worldwatch.org)

## ACORE's Membership Scope



# ACORE Membership List

September 1, 2004

1. Advance Capital Markets
2. Advanced Alternative Energy Corporation
3. Airtricity Inc.
4. Alliance to Save Energy
5. American Bioenergy Association
6. Arare Ventures
7. Arizona Public Service
8. Austin Energy
9. B.O.R. International
10. Baker & McKenzie
11. Bingham McCutchin LLP
12. BP Solar
13. C2HMHill
14. California Consumer Power Authority
15. California Energy Commission
16. Canadian Association for Renewable Energies (CARE)
17. Capital E
18. Catalytics, Inc.
19. Chicago Climate Exchange
20. Clark Communications LLC
21. Clean Energy Commercialization
22. Clean Energy Group
23. Clean Energy Incubator
24. CLF Ventures, Conservation Law Foundation
25. Cohen & Company, LLC
26. Colorado Springs Utilities
27. Crossroads Energy
28. CUNY - Bronx Community College
29. Davenport Finance Company
30. Davis, Joseph & Negley
31. Distributed Energy Financial Group, LLC
32. DTE Energy
33. Dunev Capital LLC
34. E3 Consulting
35. Eastern Research Group
36. Edison Electric Institute
37. EIF Group
38. Energy Energy Company
39. Energy & Environment Study Institute
40. Energy & Environmental Ventures
41. Energy and Security Group
42. Energy Financing, Inc.
43. Energy Innovations Inc.
44. Energy Strategy Associates
45. Environment 2004
46. Environmental Enterprises Assistance Fund
47. EPRI
48. ERG, LLC
49. Evergreen Solar, Inc.
50. Ewing Bemiss & Co
51. Firestar Engineering
52. Fredrikson & Byron, P.A.
53. Gas Technology Institute
54. GE Wind Energy
55. Gemstar Group, Inc.
56. Geothermal Energy Association
57. Global Energy Network Institute
58. Green Strategies, Inc.
59. Hafslund USA
60. Hawaiian Electric Company, Inc.
61. Homeland Energy Resources Development
62. Honolulu Seawater Air Conditioning, LLC
63. IF, LLC
64. Independent Energy Corporation
65. Innovest Strategic Value Advisors
66. International Center for Sustainable Development
67. Interstate Renewable Energy Council
68. Jasper Energy LLC
69. KeySpan Energy
70. Konarka Technologies, Inc.
71. Laidlaw Energy Group Inc.
72. Learn On Line, Inc.
73. Liberty Energy
74. Mainstay Energy
75. Marathon Capital
76. Market Street Energy Company, LLC
77. Marshall Street Management
78. Massachusetts Technology Collaborative
79. McConnell Energy Solutions
80. McKenzie Bay International Ltd.
81. McToy International Ltd.
82. Midwest Research Institute (MRI)
83. Milbank, Tweed, Hadley & McCloy LLP
84. Morgan Lewis and Bockius
85. Morse Associates, Inc.
86. National Grid USA
87. National Hydropower Association
88. Natsource
89. Natus Technologies Corporation
90. Navigant Consulting, Inc.
91. New Alternatives Fund Inc.
92. New Jersey Economic Development Authority
93. New Uses Council
94. Next Wave Energy, Inc.
95. Northern Power Systems
96. NMH Executive Search Limited
97. NRECA
98. Nth Power
99. NYSERDA
100. O2 Diesel
101. Oak Ridge National Laboratory
102. Page & Associates
103. Pennsylvania Dept of Environmental Protection
104. P/V Enterprises
105. Pacific Capital Resources, LLC
106. Pacific Solar Company
107. PennWell Communications
108. Perseus LLC
109. Philadelphia Gear Company
110. Pillsbury Winthrop LLP
111. Power Equipment Associates
112. Power Generating Inc.
113. PowerLight Corp.
114. Price Companies, The
115. Princeton Energy Resources International
116. Prometheus Institute for Sustainable Development
117. Puerto Rico Electric Power Authority
118. Red Circle Systems Corp.
119. Renewable Energy Development Institute
120. RenewableEnergyAccess.com
121. Rockefeller Brothers Fund
122. RWE Schott Solar Inc.
123. Sacramento Municipal Utility District
124. Salt River Project
125. Sandia National Laboratories
126. Sea Breeze Power Corp.
127. Shell Solar
128. SmartPower Connecticut
129. Solar Electric Power Association
130. Solar Energy Industries Association
131. Solar Household Energy Inc.
132. Solar Integrated Technologies
133. Solar International Management, Inc.
134. Solar Outdoor Lighting Inc. (SOL)
135. Solar San Antonio
136. Southern California Public Power Authority
137. Spheral Solar Power Inc.
138. Stoel Rives, LLP
139. Sustainable Energy Fund
140. Taylor Recycling Facility LLC
141. Technology Transition Corporation
142. Tennessee Valley Infrastructure Group
143. Texas Renewable Energy Industries Association
144. U.S. Conference of Mayors
145. U.S. DOE
146. U.S. EPA
147. UPC Wind Management LLC
148. UPC Wind Partners LLC
149. Vencon Management, Inc.
150. Verdant Power
151. Verde Investment Group LLC
152. We Energies
153. Weinberg Associates
154. West Penn Power Company
155. Western GeoPower Corporation
156. 3 Tier Environmental Forecast Group Inc.