Kyoto Basket Attracts Developing Country Interest at COP3

Put forward by the Philippine delegation at COP3, a smorgasbord menu of volunteer green energy initiatives drew considerable interest among developing country delegates and parliamentarians from both North and South.

Entitled Climate Stabilization Strategies: The Kyoto Basket, (the text is on pages 4 and 5) this document was endorsed unanimously by the Global Legislators for a Balanced Environment (GLOBE) on the motion of Philippine Senator Heberson Alvarez, supported by John Gummer, former UK environmental secretary.

Not tied to binding national emission allocations, the Kyoto Basket may provide a basis for common North-South action in the months leading to COP 4. Drafted by the Climate Institute in cooperation with a number of Asian and European parliamentarians and climate experts at Oxford University, the Kyoto Basket envisions a declaration by interested governments of an intention to work toward the goal of the Framework Convention by choosing from a comprehensive list of particular initiatives suited to individual national circumstances.

A declaration based on the Kyoto Basket would not be legally binding and hence would not require parliamentary ratification as would a protocol in most

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Kyoto Meeting Made Strides But Left Many Issues for COP 4

Much was accomplished at Kyoto, and much was left undone. The setting of binding limits is an unprecedented step, and attempting to reduce industrial country emissions nearly 30 percent below the levels currently projected for the year 2010 will be a challenge, particularly to the US. The fact that a protocol was approved at all by the 160 countries present was attributable to the skill of Ambassador Raul Estrada-Ouyuela who bridged a chasm between the US and EU, then derailed a seeming filibuster by some OPEC countries in COP’s concluding all night session. But many issues were left dangling, and there is much to be settled at the next meeting, COP4, in Buenos Aires next November.

The first obstacle to be overcome is a procedural Catch-22. In the waning hours of COP3 weary delegates decided to defer action to COP4 on such crucial issues as emissions trading, compliance mechanisms, sinks and joint implementation. Without some delineation of the emissions trading and sink provisions, it is unlikely that many industrial countries outside Western Europe would consider approving such a protocol. Yet the Kyoto Protocol can be amended only after it has come into force — 90 days after two conditions are met: 55 countries have ratified, and ratifiers include countries producing 55

(Continued on page 10)

Clinton Administration Offers Incentives to Curb Domestic Emissions and Maintain Growth

Domestic action. President Clinton proposed on January 31, 1998 a five-year, $6.3 billion package of tax incentives and research to reduce emissions and address climate change. The program is intended to show that the US can curb heat-trapping gases by conserving energy while preserving economic growth. The approach first outlined in October 1997 consists of three stages: 1) immediate actions to stimulate development and use of technolo-

(Continued on page 10)
The Road from Kyoto to Buenos Aires

Commentary by John C. Topping, Jr.
President of the Climate Institute since its founding in 1986, Mr. Topping, who is co-author of a book on the U.S. Clean Air Act, served from 1983 to 1986 as Staff Director of the Office of Air and Radiation of the USEPA.

In the weeks since the Kyoto Conference there has been a surge of international business sector interest in green energy development. Nowhere has this been more apparent than in the auto industry where the big three US auto makers, perhaps conscious that Honda, Toyota, and Daimler-Benz appeared to be seizing high ground, have begun to bolster their investments in electric, hybrid or alternate fuel vehicles. Meanwhile, the remarkable breakthroughs in the electric power sector with large-scale renewable investments by such giants as Enron, BP, Shell and Tomen Corp. have continued apace with regular announcements of significant scale ventures, both on and off grid.

Outburst of Business Interest

This explosion of corporate interest in green energy development may be driven by several factors — a perception of medium and long-term profitability in sales of such vehicles or technologies, hedging against the possibilities that competitors might get a leg up in potentially lucrative markets, or a perception that greenhouse emissions limitations may cause a fundamental shift in fuel or engine choices. Whatever the cause, this marked change in corporate energy investment may sharply lower the likely costs of measures to protect the climate.

Yet the heartening post-Kyoto developments in the business sector should not obscure the defects that make the Kyoto Protocol unlikely to realize the ambitious goals of the Rio Climate Treaty, unless significant strides are made between now and the November 2 - 13 Buenos Aires COP4 of the Framework Convention.

Lack of Incentives

A major shortcoming of the Kyoto Protocol is its failure to provide near term incentives for green energy development or early emission reductions. Binding targets for industrialized countries in a 2008-2012 time frame are too distant to provide much financial inducement to entrepreneurs to develop greenhouse benign products in 1998 or 1999. The current protocol provides little incentive for emissions reduction within industrial countries before 2008. More glaring perhaps than the absence of early reduction credits is its failure to create even a level playing field for renewables and efficiency applications. OECD country governments now spend roughly seven billion dollars annually on energy R&D, only about a fifth on renewables or efficiency. Regrettably the Kyoto Protocol does little to redress this imbalance or to phase out multi-billion dollar industrialized country subsidies to domestic fossil fuel producers. The Kyoto Basket, a compilation of 28 voluntary initiatives from which countries might elect greenhouse mitigation measures tailored to their circumstances, seeks to create such a level playing field and encourage markets for greenhouse benign energy. Announcement by national governments and international agencies by COP 4 of such initiatives would provide near-term signals not provided directly by the Kyoto Protocol.

A second deficiency of the Kyoto outcome is the lack of a significant inducement to developing countries to institute comprehensive greenhouse mitigation measures. Given the wide disparity between their per capita emissions and those of most industrialized countries, few developing countries can be expected by COP4 to subscribe to legally binding emissions limits which would lock in these wide per capita differentials. Yet there is tremendous room for reductions largely on a no regrets basis in rapidly industrializing countries, particularly if industrialized countries made good on their promises of the 1992 Rio Conference. Reorienting the focus of OECD country energy R&D to encompass the needs of the two billion largely rural dwellers in developing countries, who lack electricity, and active support of solar, wind and biomass investments by international financial institutions would simultaneously achieve development and environmental objectives. Encouragement of high efficiency in electricity consuming products where demand will grow rapidly — e.g. refrigerators, air conditioners and
lighting — will allow countries to avoid billions of dollars in capital investments in new power plants. Thailand's labeling program is a useful model; the Energy Star Program which has spurred US and Japanese firms to remarkable efficiency innovations may be readily adaptable to key developing countries. Once fleshed out, the Clean Development Mechanism set out in the Kyoto Protocol may foster greenhouse benign energy innovation in developing countries.

**Senate Opposition**

Perhaps the largest obstacle to the implementation of the Kyoto Protocol is its current unsaliability in the US Senate where a two-thirds affirmative vote to ratify is required for the US to become a party. Prior to the Kyoto Conference the Senate unanimously passed the Byrd-Hagel Resolution asking that the US not sign a protocol with legally binding emissions limitations unless developing countries agreed to binding limitations within the same time frame. The voluntary commitments provision crafted by the Clinton Administration to assuage US Senate concerns was deleted by COP3 after a fierce attack led by several OPEC nations and other key developing countries and quietly abetted by some US fossil fuel interests who believed its defeat would doom the treaty in the Senate.

Yet Kyoto Protocol opposition in the US extends far past the fossil fuel industry to include the nation's leading labor, business and farm organizations. The common thread among treaty opponents is anxiety over potentially large costs; unionized labor has an additional concern that differential carbon requirements will provide a convenient excuse for employers to shift manufacturing jobs to lower wage countries not subject to emissions limits.

**If US Failed to Act**

US non-participation in an emissions control regime would ensure its failure, causing industrial country parties to shirk their treaty requirements and encouraging developing countries to pay little heed to spiraling greenhouse emissions. If the world is to avoid an environmental replay of the League of Nations experience, both President Clinton and the Congressional leadership will need to show a remarkable deftness and spirit of accommodation.

**The President has one hole card — to propose reform of US environmental laws to permit integrated rulemaking.**

The President has one hole card in this negotiation — the potential to propose reform of US environmental laws to permit integrated environmental rulemaking. Although US environmental laws have afforded a high degree of protection to human health and the natural environment, their arcane nature, excessive rigidity and a structure which pigeonholes problems as air, water and solid waste, costs the US economy billions of dollars annually. Over the next decade potentially significant air quality regulations are likely to be implemented in the US involving fine particles, ozone, oxides of nitrogen, sulfur oxides and mercury. Although these regulations may yield significant health and ecological benefits, their overall costs are likely to run many billions of dollars annually. Moreover, the statutory rigidity of the Clean Air Act makes it very difficult to develop these regulations in an integrated manner to optimize benefits and minimize costs and virtually impossible to mesh them well with significant water and hazardous waste rules.

**Possible Reduction, Less Cost**

By promoting an optimization of air quality and climate protection rules the Administration might achieve reductions in both air pollution and greenhouse gases at less overall cost than would be incurred from air pollution regulations only, without such integration. The President might break the post-Kyoto deadlock by endorsing the idea of an integrated approach to climate change and air pollution and appointing a commission to recommend to the President and Congress necessary Clean Air Act amendments to effectuate such a strategy.

The business community would welcome such a Presidential initiative, both because of the cost savings and the much greater regulatory certainty. If such a commission were to deliberate in 1998 and recommend in early 1999 legislation to authorize a consolidated strategy for pending air quality and climate protection measures, this could be enacted by late 1999. Integration of air quality regulations could free up savings to offset a major portion of US greenhouse mitigation costs.

**Potential for Ratification**

Enactment of such legislation could lay the groundwork for ultimate Senate ratification of an emissions protocol, ideally one incorporating or accompanied by incentives for early reduction, procurement and tax incentives to stimulate renewable, cogeneration and efficiency applications, and incentives to developing countries to install clean energy technology.

Only such an approach has a realistic prospect of effectuating the global emission reductions necessary to stabilize greenhouse concentrations.
Climate Stabilization Strategies: The Kyoto Basket

Signatories shall adopt strategies appropriate to their circumstances designed to contribute to the eventual stabilization of atmospheric greenhouse gas concentrations, in accordance with Article 2 of the Framework Convention on Climate Change. They shall seek to apply such strategies both at national level and through international cooperation, and to develop them further over time in the light of evolving national capabilities and scientific understanding of climate change and its consequences. They shall make particular efforts to adopt steps chosen from the following basket of options, recognizing that while few of the strategies listed will be appropriate to all parties at present, each one is or could be made available to at least some parties on a “no-regrets” or low marginal cost basis:

A) **Renewable Energy**
- further liberalization of national and international energy markets. In particular, phasing out of direct and indirect subsidies to fossil fuel industries, and their replacement where appropriate by market benign forms of support for renewable energy;
- redirection of public investment in energy research and development away from fossil fuel energy technologies and the transmission and other infrastructure appropriate to them, towards renewable energy and related infrastructure;
- encouragement of synergies and partnerships — both between participating States and between industry and public bodies — to design, install and service renewable energy systems particularly in off-grid locations;
- facilitation of investment by the insurance industry and other financial institutions in renewable energy projects, particularly in developing countries;
- provision to utilities consumers of a choice between power derived from renewable and non-renewable sources, if appropriate, accompanied by redeployment for renewables research and development of any “green energy premium” which consumers may be willing to pay;
- active dissemination among parties and industrial sectors of technology and expertise relating to renewable energy.

B) **Energy Efficiency**
- provision to energy consumers of information on the energy efficiency implications of products, services, and practices, with the aim of enhancing consumer choice in energy-related purchasing decisions;
- in particular, promotion both at industry and household level of energy efficiency standards and labeling for energy consuming products including industrial installations, buildings, electrical machinery and electronic goods;
- where useful as an intermediate step towards renewable energy strategies, promotion of energy efficient and low emission forms of electricity generation from existing technologies including combined heat and generation systems and combined cycle gas turbines;
- implementation and publicizing of exemplary energy efficiency requirements in public procurement and in the management of public facilities and equipment, and encouragement for industry to adopt similar standards;
- encouragement for the emergence of energy service companies to invest in energy services, to provide advice to customers on energy efficiency best practice, and to deliver other energy services to the public, both at national level and internationally;
- dissemination among parties of energy efficiency software and analytical techniques, especially towards those experiencing rapid growth in energy demand;
- application to existing industrial plant of techniques and equipment conducive to greater energy efficiency and lower greenhouse gas emissions, as well as research designed further to support this objective.
C) Transport

- encouragement for the accelerated development and mass application by industry of climate-friendly automotive technologies, including fuel cells, gasoline-electric hybrids, solar and hydrogen power systems, flywheel systems, and the combustion of low emission fuels such as methanol, ethanol and natural gas;
- where necessary, removal of legal obstacles to cooperation on such technologies between competing companies;
- development of integrated transport policies capable of delivering multiple benefits, including reduced congestion and vehicle pollution as well as lower, or less rapid growth in, vehicle-related greenhouse gas emissions;
- provision to consumers of the option to buy vehicles on climate-benign terms, for example by means of a price premium which could be earmarked to support climate-related aims such as the sequestration of carbon
- where appropriate, promulgation of legislation and regulations to encourage the development of climate-friendly vehicles;
- fostering of top-down cooperation between governments and automotive companies on climate-related aspects of transport, and facilitation of public-private partnerships in this field;
- retrofitting of existing vehicles with technology conducive to greater fuel efficiency and lower emissions, as well as research into technologies which might further support this objective;
- adoption of government procurement policies favoring climate-friendly vehicle technologies.

D) Fiscal Mechanisms

- without undermining the fiscal sovereignty of individual parties, and for those suited to the application of direct fiscal incentives and disincentives, development of fiscal frameworks designed to encourage abatement of greenhouse gas emissions. In particular, removal of fiscal obstacles to the development of climate-benign technologies and infrastructures and, where appropriate, application of fiscal incentives in their favor.

E) Diplomatic, Trade and Development Policies

- realignment of bilateral and multilateral development finance to further more vigorously the aims of the Framework Convention on Climate Change, through the Global Environment Facility and other channels;
- in particular, encouragement through development finance of national energy strategies based on renewables, with special emphasis on the legitimate energy needs of the 2 billion people who currently have no access to electricity and who would benefit from off-grid power supplies;
- continued and action-oriented discussion of the urgent requirement to stabilize the climate system, at all appropriate international occasions, and in all appropriate international organizations and groups, including those not specifically focused on climate change but whose responsibilities and decisions have implications for the climate system. Bodies which provide opportunities for meetings between government leaders—such as the G-8, EU, OECD, Asia Pacific Economic Cooperation (APEC) forum, Commonwealth, (others)—should be encouraged to give high priority to climate related issues, and to ensure that all future decisions take full account of implications for climate.

F) Direct Action on Emissions

- continuous monitoring of national greenhouse gas sources and sinks, with the aim of reducing current uncertainties as far as possible;
- continuous review of national options, through the above strategies and other means, for reducing anthropogenic emissions of greenhouse gases, and for enhancing natural sinks to the extent possible without risking damaging side effects;
- in particular, without diverting resources away from carbon dioxide abatement, further emphasis on steps which might be taken to reduce emissions of methane.
International Roster of Speakers at Climate Institute Symposium
Express Optimism on Benign Energy Developments

Much can be done — even before the climate treaty approved at Kyoto is signed and ratified — to further its goals, concluded the Climate Institute Symposium on Green Energy Strategies. The Symposium was held partway through the official international meetings, on Saturday, December 6 at Otani University in Kyoto. Speakers included senior officials, parliamentarians, business leaders, and energy experts from nations including Australia, Chile, Denmark, Indonesia, Japan, the Philippines, South Africa, the UK and the US. About 180 people attended.

Workable, cost-effective, practical measures need not wait for government action, said Noel Brown of Jamaica, President of Friends of the United Nations. Energy efficient and healthy homes in South Africa, private on-shore wind farms and government-sponsored off-shore farms in Denmark, solar shingles produced in the US but sold around the world, were some of the many emission-saving devices described in the symposium which could be applied immediately.

We are “at the cusp of an energy revolution,” said Chris Flavin of Worldwatch in an overview, using a phrase which was repeated by a number of speakers to describe the potential of green energy technologies.

“We should make it easy to be good, by for instance changing the technology that consumes energy while our appliances are not in use. Our television remote control is on all the time so that we can have instant access,” said John Gummer, Secretary of State for the Environment under John Major. “A non-energy consuming solution should be found.” The global economy should work within a moral context; we should play on the world stage with the same ethic on which we act on the national stage.

Expedient strategies already in use or showing great potential that were described at the symposium include:

• Danish wind turbines. Small private cooperatives in Denmark sparked the tremendous growth in wind energy which now amounts to 7 percent of the energy produced in the country. Environment and Energy Minister Svend Auken outlined plans for the next 7-8 years which will include spending nearly $1 billion to build 500 big windmills which together will amount to 8 percent of total energy supply in addition to the wind turbines already in operation. (If the US were to achieve even an 8 percent level, it would need 56,000 wind turbines.) The target for Denmark by 2030 is to have windmills supplying 30 percent of total energy.

Energy efficiency is popular in Denmark, and the big utilities which were originally scornful of wind power have now joined the effort and are anxious not be left behind. The nation has discovered, says Mr. Auken, that it is not necessary to increase energy supply to achieve economic growth. Energy supply, economically competitive prices and the environment can all work together smoothly, hand in hand. In doing so, Denmark has produced energy at the lowest price in the European Union.

Energy 21, a Danish national energy policy, hopes to reduce CO2 emissions by 2030 while having renewables account for 35 percent of total energy consumption. In the same period, the policy is aimed at increasing economic wealth by 50 percent.

Denmark has the highest per capita expenditures for R&D for renewables in the world, with all of the revenues earned in operations plowed back into the industry. Auken advocates subsidizing renewables and levying taxes to increase their use — on a global scale or at the very least at the European level.

Cogeneration, which is mandatory in the country, supplies 80 percent of the heating and 50 percent of the electricity, on both a centralized and decentralized basis. The goal is to increase the contribution of renewables to total energy consumption at the rate of one percent a year.

While we are often told there is a trade-off between the environment and jobs, Auken continued, that is not true in Denmark’s experience. Lots of new jobs have been gained in insulation and other energy services and the development of renewables. Wind turbines have become the largest item for export: 60 percent of installed wind capacity in the world is based on Danish technology.

This is not to say that there are not difficulties, said Auken, who received a Climate Institute award the following day, as the driving
force behind Denmark’s Energy 21 program which seeks to limit greenhouse emissions through an aggressive expansion of wind energy and extensive reliance on combined heat and power systems. The country has found no solution to the problem of road traffic growth which continues to accelerate. It is also facing a challenge from liberalization of electricity supply in Europe; cogeneration will fall apart unless there is established a principle of complete protection for such arrangements against short term price pressures.

Rene Karottki, Secretary General of the Danish Forum for Energy and Development, expanded on the decentralization theme, stating that cogeneration started with district heating cooperatives which were also opposed by the utilities. These decentralized units were fueled by one-third waste and biogas and two-thirds natural gas. Farmers are now establishing biogas plants, setting an important example in the developing country market where decentralization is the order of the day. In the long run, he said, centralized units may be totally phased out and the industry will be on a 100 percent sustainable basis. This is particularly relevant to developing countries which could encourage development of decentralized, up to date, advanced renewable technology for the 2.5 billion people who are off grid.

- **Substantial investments in solar energy by the financial community.** Approaching the issue of green energy from a different perspective, the large-scale provision of supporting funds rather than the smaller scale decentralized cooperatives which led Denmark’s renewable energy growth, Jeremy Leggett has been campaigning strenuously for several years to gain support for solar energy.

He sees a “seismic revolution in the way the world uses energy” and quotes a British solar task force report which in its first sentence warns, “The driving rationale for the solar century, the unmitigated enhancement of the greenhouse effect, is a threat to the heart of the British economy” as well as the rest of the world.

Leggett, who is chairman of the UK government-industry solar task force, believes solar pv could be the single most important long-term means of achieving the deep cuts in greenhouse gas emissions which are the ultimate objective of the climate convention. This solar process is an outstanding candidate for meeting the needs of the two billion people with no electricity and the many more with inadequate supplies. Its growth rate this year is 24 percent, Leggett says, and as it becomes an established technology with an established market, it will take off explosively.

There are areas in the industrialized world where solar electricity is competitive with utility prices: in Sacramento, California, and in Japan where MITI has targeted a 70,000 solar roofs program.

The scale of the marketing opportunity is huge: if 30 percent of the projected world electricity were pv by 2020, the market would be worth $3 trillion which can be compared with the $2 trillion in premiums for the present-day world insurance industry.

Leggett has been pushing for a marriage between the insurance industry and renewable energy as the industry has faced huge insured economic losses which are not only because people have moved into harm’s way.

He has two missions: formation of a consumer alliance in the North, a buyers’ club to speed adoption of solar pv projects, and an investment forum which will set up a nonprofit revolving loan fund to support pv projects. Already three banks, a hotel chain and the large European insurance company, Swiss Re, have invested in this scheme.

- **Public/private cooperation in the Philippines** succeeded first in reducing lead concentrations, then sulfur and nitrous oxides, and now in diminishing wasteful consumption of energy and promoting geothermal. The goal is now to cut the increase in energy requirements one percent a year for the next 12 years, said Senator Heherson Alvarez and Antonio La Vina, Undersecretary of Environment and Natural Resources.

- **Green energy measures taken at all levels in Australia.** Tom Roper, former Environment and Planning Minister of Victoria, tallied a long list of steps Australia is taking to further the cause of reducing emissions: setting of building standards such as compulsory insulation, demonstration projects, industry initiatives to meet the greenhouse challenge, procurement at the government level to develop and spread technology, ensuring utility consumers have access to green energy, encouragement and advice to consumers, appealing to accounting and finance committees to demonstrate the benefits of successful energy management.

- **Ingenuity at US firm.** “We need to promote economic growth, address environmental issues, and advance economic choices,” said Nancy Bacon, vice president at Energy Conversion Devices of Troy, Michigan. The company is engaged in many-faceted technology responses.

1. It has strong patents and is working with commercial development partners on thin-film photovoltaics which are particularly appropriate for decentralized uses not dependent on an electric grid. Part of this technology includes solar roof shingles and a solar lighting kit (which can change lives and make money as well, Bacon said).

2. It is working on a nickel metal hydride battery which will (Continued on page 8)
Symposium

(Continued from page 7)

last the life of the vehicle, and which is capable of driving a’
Soletraxa 240 miles on a single
charge (an 130 mpg equivalent).
3. Electric scooters which offer an
enormous market opportunity
to supply low cost, speed, battery
lifetime, and cheap fuel expense.

The company is trying to bring
together economic prosperity and
an improved life style.
- South African housing. The
Province of Northern Cape is a
region of abject poverty, according
to Pakes Dikgeta, the Province’s
Minister of Housing and Local
Government. People live in squalor
with no access to clean water,
shelter, or education. They need
jobs, affordable health care, roads
and infrastructure development.
Although resources are limited, the
Province is trying to achieve an
energy efficient concept.

The area offers a perfect opportu-
unity to leapfrog over the tradi-
tional technologies and build
“wholistic communities,” said Lilja
Abron, which will improve health,
create jobs and reduce emissions.
(South Africa is the largest CO2
emitter in Africa, she said.) The
Province is building steel frame
houses, designed by the people,
using passive solar concepts. The
houses are wrapped in polystyrene
for insulation so no heat is needed.
(Most of the time poor people in
the region are cold, says Abron.)
The newly built houses are venti-
lated to reduce levels of carbon
monoxide which tends to leave the
people comatose from burning low
grade coal.

The houses are being built to
meet government cost targets, save
50 – 70 percent on energy bills and
produce net CO2 savings while
requiring no heat except for
cooking.
- Small and medium-sized
industries in Chile have united in
an association to attain quality
control and energy efficiency, using
new technologies to combat the
high cost of energy and at the same
time improve their productivity
and competitiveness, stated Mario
Marcel, Director of CEPR.
- Phasing out fossil fuel
subsidies will make the economy
more efficient and reduce environ-
mental damage, argues John
Ashton, Visiting Fellow at Green
College, Oxford. He acknowledged
that it was difficult to calculate the
amount of damage avoided.
- Reduce the barriers to
purchasing energy from inde-
pendent producers in Japan,
Kazuo Aichi, former environment
secretary, urged, to encourage more
production of renewables. The
obstruction by utilities was a
phenomenon familiar to the Danes
who recounted similar reluctance
during the early phases of their
efforts to gain acceptance of wind
energy.
- A price signal is needed to
encourage development of
photovoltaics and wind energy,
argued John Palmisano, director of
environment of Enron, which has
embarked on substantial invest-
ments in both sun and wind energy.
A tax or some other “high and
steady” signal would provide a
needed rise in demand for pv’s and
wind energy and give much more
of a boost than further R&D,
according to Palmisano. Enron is
the leading producer of renewable
energy in the US. The “5 labs”
study by the US Energy Research
Labs has predicted that power from
wind could range in the 5 to 20
gigawatt range in the US by 2020,
he stated. He argued for no emis-
sions borrowing (a recommenda-
tion by the Clinton Administration
in the pre-Kyoto plan) because it
“erodes credibility.” He agreed
with John Ashton that subsidies for
fossil fuels should be phased out.
- Joint implementation: what
is efficient and what incentives
should be used to encourage it,
asked Mikihiko Watanabe of Japan.
- Unknown breakthroughs will
be needed or the world will not
be able to solve its CO2 problem,
contended Katsu Seiki, executive
director of Japan’s GISPI. He
foresees a big use of nuclear energy
by 2050, with renewables running
“a bit behind.”

In a summation of the sym-
posium, John Topping, President of
the Climate Institute, said benign
energy development for both the
North and the South is something
for 1998, not 2010. The South will
not be helped by an extension of
the present system. We need to
harness public policy to make
things happen, build a base of
public support, as in Denmark, or
“think smart,” as in South Africa,
integrating human considerations.
Then we will have an array of
measures which countries could
choose from.
Climate Institute Awards Prizes to Enron CEO, Danish and British Environment Ministers

December 7 at a dinner in Kyoto during the Conference of the Parties the Climate Institute presented three 1997 awards: to Kenneth Lay, Chairman and Chief Executive Officer of Enron Corp., Hon. Svend Auken, Minister of Environment and Energy of Denmark, and Rt. Hon. John Gummer, former Secretary of the Environment of the United Kingdom.

This is the eleventh year the Climate Institute has made such awards for achievement either in improving scientific understanding of climate or in fostering effective responses to climate change. In previous years award winners have included British Prime Minister Margaret Thatcher, US Vice President Albert Gore, Jr., Rhode Island Senator John Chafee, British diplomat and educator, Sir Crispin Tickell, US scientist, Dr. F. Sherwood Rowland, and Indian scientist, Dr. M. S. Swaminathan.

Kenneth Lay who heads Enron Corp., the foremost US natural gas supplier, was honored for his leadership in moving Enron and the world energy industry into large scale investment in renewable energy, especially wind and solar power.

“At the same time that many US fossil fuel firms have spent lavish sums on television and print advertisements denying the need for strong international action to address climate change, one US energy giant, Enron, has emerged as the world leader in renewable energy investment,” stated Climate Institute President John Topping. “Through large scale investments in Minnesota, Iowa and Nevada, India and Indonesia, Enron has significantly lowered the cost of renewable energy, and triggered energy industry investment in both solar and wind power. Ken Lay has spearheaded this effort by Enron.”

The other two 1997 Climate Institute awards were conferred on officials who were instrumental in their countries’ carrying our innovative and cost effective reductions of greenhouse emissions.

“Under Svend Auken’s leadership Denmark has emerged as a world leader in wind energy and has also carried out extensive combined heat and power development,” said Topping. Auken has been the driving force behind Denmark’s imaginative Energy 21 program. Under his leadership Denmark installed 300 MW of wind energy in 1996 and the first half of 1997, bringing total wind power capacity in Denmark close to 1000 MW. There are now more than 4,000 wind turbines in Denmark and a large portion of the Danish population, especially members of agricultural cooperatives, has an investment interest in this emerging technology. With an aggressive near term program to install another 500 MW of land-based wind turbines and 750 MW of seaborne wind farms by 2005, Denmark envisions that wind will ultimately provide around 50 percent of its electricity by 2030 and have in operation 4000 MW of offshore windpower. This Danish effort, inspired by Auken, has been characterized as a Gift to the Earth by the World Wildlife Fund.

Like Minister Auken, Rt. Hon. John Gummer, MP, is being honored for his work setting the pace for his country’s successful efforts simultaneously to limit greenhouse emissions and maintain economic growth. Although some of the United Kingdom’s progress in limiting greenhouse emissions has been due to a shift in electric power generation from coal to less expensive natural gas, the bulk of it from the North Sea, much of it, the Institute’s Chairman, Sir Crispin Tickell, noted, has also been attributable to efforts spurred by Gummer when, as Secretary for the Environment for the UK, he built climate change considerations into transport and taxing policy. Since stepping into the Opposition with the Tory Party’s defeat in 1997 Gummer has worked to maintain cross-party support for an aggressive British effort to limit greenhouse emissions.
Kyoto Basket
(Continued from page one)
countries. The measures in the basket could, in many instances, begin immediately rather than waiting for the completion of a possibly prolonged ratification process.

Unlike the thrust of the Protocol, the Kyoto Basket focuses on enhanced investment in commercialization of green energy, especially wind, solar, biomass, geothermal, hydrogen fuel cells and energy efficiency. It builds on the proposal of the February 1995 Manila Asia Pacific Leaders Conference on Climate Change convened by Philippine President Fidel Ramos. A central component of that conference’s Manila Declaration was a call for the creation of an international public-private partnership to accelerate applications of greenhouse benign energy.

It envisions a shift by industrialized countries of their roughly seven billion dollar annual energy R&D to focus largely on renewables and energy efficiency with special attention to applications in rural areas of developing countries. Multinationals and bilaterals would refocus their energy investments to address the two billion, mostly rural dwellers, who now lack access to electricity. Building on a green energy revolution already underway through initiatives of some countries, especially Denmark, Costa Rica, the Philippines, and India, and private firms, the Basket seeks to facilitate such partnerships.

The core of this effort is a blending of three elements — more enlightened public investment, including a phasing out of subsidies that entrench fossil fuel industries, private sector innovation, and green purchasing both through public and consumer sector markets

Kyoto Meeting
(Continued from page one)
percent or more of 1990 industrial country emissions. It is extremely unlikely that either condition will be met 90 days before COP4. Thus, the Buenos Aires Conference will have no authority to amend a treaty which has yet to come into force. There is an obvious out: COP4 could approve a substitute using the text of the Kyoto Protocol on most provisions but filling in the blanks concerning emissions trading, compliance mechanisms, etc.

Protocol Provisions. The agreement sets varying targets for the industrial countries, averaging a 5.2% reduction of greenhouse gas emissions below 1990 levels by 2008 - 2012. For the US, the reduction is 7% (significantly below stabilization, originally proposed), for EU 8%, Japan 6%. A few nations are allowed a stable target; three are permitted increases: Australia 8%, Norway 1%, and Iceland 10%. (At present per capita emissions by the US are more than double those of Japan, triple France and 10 times those of Brazil.)

The US persuaded the other nations to agree to the international trading of emission credits, but implementation details were postponed till COP4. Trading would be “supplemental to domestic actions,” and limited to those agreeing to binding emission limits. Joint implementation was converted to a “Clean Development Mechanism,” a clearinghouse for investment in sustainable development projects, such as a fuel-efficient power plant, in return for credits. The mechanism will be supervised by the Convention Secretariat, pending establishment of verification procedures.

Compliance. No enforcement provisions were included, but nations which do not inventory and report their emissions will not be eligible to buy credits. Procedures to address non-compliance will be adopted by an amendment, which would require separate ratification.

Developing countries. “Voluntary opt-in” was dropped but perhaps developing nations may join the protocol by a simple amendment to the list of participants.

Loopholes. Russia and the Ukraine were assigned a target of 100% of 1990 levels rather than proposed reductions to bank emission credits since 1990.

Basket of Gases. Carbon dioxide, methane, nitrous oxide, perfluorocarbons, hydrofluorocarbons, and sulfur hexafluoride are all included.

Sinks. The possibility of credit for enhancing greenhouse gas-absorbing sinks was included but further study was mandated.

Ratification. Participants have one year to ratify, starting in March 1998. The US will not submit the treaty for ratification until it finds “meaningful participation” of key developing countries. It is not clear whether President Clinton will sign the treaty before COP4.

Clinton Administration
(Continued from page one)
incentives. Together these initiatives would stimulate adoption of more efficient technologies in buildings, industrial processes, vehicles and power generation. Residents are responsible for about one-sixth of greenhouse emissions. The package would give tax credits to purchasers of highly efficient homes, would encourage efficient building equipment and appliances and would stimulate the use of solar power including solar roofs. For the one-third of the greenhouse gas emissions produced by the transportation sector, the package promotes ultra fuel-efficient vehicles by giving tax credits of $3000 or $4000 to double or triple current mileage and a funding increase for fuel cell development, advanced direct injection diesel cycle engines and a low-NOx methanol-fueled engine.
Institute Board Members
Take Part in UN Day Symposium in Japan

A United Nations Day Climate Change Symposium October 24, 1997 at Tokyo’s United Nations University witnessed presentations by three Climate Institute members and the winner of the Institute’s 1996 Public Policy Award. The Symposium was sponsored by Amway Japan.

Chairled by Institute Board member Dr. Noel Brown, President, Friends of the United Nations, this meeting focused on issues prominent in the Kyoto negotiations. The Symposium keynoter was Philippine Senator Herson Alvarez, who drew on his country’s experience in energy efficiency applications, geothermal and other renewables, to illustrate the practical measures needed for green energy development.

Institute Vice President Ata Qureshi, who served as Team Leader of an eight-country Asian climate change study, summarized studies of climate change implications for Asia. The Institute’s President, John Topping, urged that Japan, as the host of COP3, champion a green energy investment strategy. Also participating in this symposium was Hon. Kazuo Aichi, Environment Secretary of Japan at the time of the 1992 Rio Conference. Well received by an audience which included a number of Japanese parliamentarians and civic leaders, these discussions ultimately culminated in the Kyoto Basket, drafted three days later in England using texts from the major UN University speeches.

Board Members Win Prizes in Japan

Two of the Institute’s Board members from Japan were awarded prizes by the Nihon Keizai Newspaper Inc., the leading economic newspaper in the country. The 7th Nikkei Global Environmental Technology Awards were given last October.

Dr. Nobuo Mimura won the Grand Prix of the Award as team leader of the 14-member Intergovernmental Study Team for Climate Change and Sea-Level Rise. Members came from Japan, China, South Pacific Regional Environmental Programme, Fiji and New Zealand. They studied vulnerability and response strategies to climate change and sea-level rise for the past seven years in Asia and the Pacific. Dr. Mimura is a professor at the Center for Water Environment Studies, Ibaraki University. He is a member of the Institute’s Advisory Board.

Dr. Shuzo Nishioka, a Member of the Institute’s Board of Directors, won an award for his contribution to linking the academic community and policymakers. He is the author of a paper, “Studies on the process of and activities to enhance integration of scientific knowledge and environment policy.” Director of the Global Environment Division of the National Institute for Environmental Studies, he has served as vice chairman of the Effects Section of the Intergovernmental Panel on Climate Change. He is a member of the Board of Directors of the Institute.

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Earth Savers Sing, Dance and Capture Hearts at Kyoto

The Earth Savers Dream Ensemble, a group of about 20 young singers and dancers from the Philippines, provided an emotional high point at the Kyoto Conference. Credentialed as part of the Climate Institute delegation to COP3, the group performed at the Institute’s December 6 Green Energy Symposium, before GLOBE, an international parliamentarians group, and at a press conference of the Philippines delegation supporting the Kyoto Basket.

The group’s lead singer and keyboardist are both blind, and some other performers are deaf or otherwise disabled. Recruited by Cecile Alvarez, they sang environmental songs in English and Tagalog, delighting Kyoto attendees.

From a project in Ninoy Aquino park just over 10 years ago that included a learning center for street kids, the disabled and tribal youth, the Earth Savers has grown into a large organization with a credo on protecting the trees, flowers, rivers and lakes. It has held an On-the-Spot Painting Contest, a tribal art exhibit, a DREAM (Development, Rehabilitation of the Environment through Arts and Media) Festival/Conference, an eco-science and technology exhibit, an eco-communications workshop, an eco-play and eco-songs.

Inspired by early Earth Savers activities, Senator Alvarez, Hon. President of the Senate Committee on Natural Resources and Ecology, convened the 1st National Earth Savers Conference of environmentally concerned citizens in April 1990 which drew two thousand participants — scientists, farmers, fishermen, youth and indigenous people.