

**Draft  
Citizens Energy Plan  
For  
Long Island**



**Executive Summary  
September, 2002**

*Draft*

**Citizens Energy Plan  
For  
Long Island**

***Executive Summary***

October 2002



Member Groups of  
 ~ *The Sustainable Energy Alliance of Long Island* ~  
**ABCO~Longwood Alliance \***  
**Amagansett Springs Aquifer Protection Inc.\***  
**American Lung Association Of Nassau~Suffolk \***  
**Brentwood/Bayshore Breast Cancer Coalition \***  
**Central Nassau Greens \***  
**Citizens Advisory Panel \***  
**Citizens For A Progressive Energy Policy \***  
**Dark Sky Society~East Hampton \***  
**EarthSave~Long Island \***  
**East Hampton Town Energy Advisory Committee \*\***  
**Environmental Advocates of New York \***  
**Ethical Society of Suffolk \***  
**Global Resource Action Center For The Environment (GRACE) \***  
**Group For The South Fork \***  
**Justice & Peace Commission~Diocese of Rockville Centre**  
**1 in 9 Breast Cancer Coalition**  
**Long Island Coalition For Democracy \***  
**Long Island SHAD \***  
**Long Island Neighborhood Network \***  
**Long Island Progressive Coalition \***  
**Natural Resources Defense Council \***  
**New York League Of Conservation Voters - LI \***  
**North Fork Environmental Council \***  
**New York Public Interest Research Group \***  
**Pace University Energy Project \***  
**PeaceSmiths \***  
**Radiation And Public Health Project**  
**Sierra Club~Atlantic Chapter**  
**Sierra Club~Long Island Group \***  
**Standing For Truth About Radiation \***  
**The Yaphank Taxpayers And Civic Association \***  
**Townline Civic Association \***  
**Utility Consumer Advocacy Project \***  
**Unitarian Universalist Fellowship of Huntington \***  
*Affiliate Member*  
**Suffolk County Soil And Water Conservation District**  
*Additional CEP Supporters*  
 (as of 9/27/02)  
**Long Island Alliance for Peaceful Alternatives**  
**Public Citizen – Critical Mass Energy & Environment Program**  
**South Fork Groundwater Task Force**  
**Sustainable Business.com**  
**Wading River Civic Association**

\* SEA groups that signed a Declaration of Support for the Draft CEP as of 9/17/02

\*\* Recommendation of EHEAC to adopt town specific recommendations of Draft CEP

**Sustainable Energy Alliance c/o Citizens Advisory Panel**  
**PO Box 789, Bridgehampton, NY 11932 631-537-8282 [info@seali.org](mailto:info@seali.org) [www.seali.org](http://www.seali.org)**



# Table of Contents

## Executive Summary

<i>~ The Sustainable Energy Alliance of Long Island ~</i> .....	3
<b>Additional CEP Supporters</b> .....	3
<b>Table of Contents</b> .....	1
<b>Acknowledgements</b> .....	3
<b>Prologue</b> .....	5
<b>Preface</b> .....	7
<b>Highlighted Recommendations</b> .....	10
LIPA and KeySpan.....	10
New York State.....	11
County Government.....	12
Town Government.....	12
<b>Introduction</b> .....	13
<b>Citizens Energy Plan Priorities</b> .....	14
<b>Summary of Chapters</b> .....	17
<b>Trends in Long Island Electric Capacity &amp; Energy Supply</b> .....	17
<b>Health, Environment and Economic Impacts</b> .....	21
<b>Legal &amp; Regulatory Issues</b> .....	24
<b>Conservation &amp; Efficiency</b> .....	25
Light Pollution.....	26
Rapid Deployment Conservation Contingency Plan.....	27
<b>Renewables &amp; Alternatives</b> .....	28
<b>Repowering of Existing Power Plants</b> .....	30
<b>Combined Heat and Power</b> .....	31
<b>Public Outreach</b> .....	31
<b>Overview of Recommendations &amp; Conclusions</b> .....	33
1. Double Energy Efficiency Program.....	34
2. Get Serious About Renewables.....	34
3. Deliver on Solar & Wind.....	34
4. Let’s Clean Up the Old Clunkers.....	34
5. Level the Playing Field.....	35
6. Carrots & Sticks.....	35
7. Reward Conservation.....	35
8. Cap Carbon and Other Pollutants.....	35
9. Emission Standards for Diesels.....	35
10. Improve on Siting.....	36
11. Job Impacts.....	36
12. Environmental Justice.....	36
13. Holding LIPA Accountable.....	36

14.	Provide Citizen Oversight .....	36
15.	Low Income Programs & Lifeline Rates.....	37
16.	Plan for the Unexpected .....	37
17.	Combine Heat and Power.....	37
18.	PV Rebate .....	37
19.	NY Energy Smart.....	37
20.	T&D Upgrade Alternatives .....	38
21.	Reincarnate LIPA’s Clean Energy Advisory Panel.....	38
22.	Reevaluate Load Expansion/Attraction Program .....	38
23.	Internalizing Externalities .....	38
24.	Reduce Wasteful Energy Consumption .....	38
25.	Honest Budgets .....	38
26.	Clear Billing .....	38
27.	Generation Acquisition .....	39
28.	No More Nukes .....	39
29.	Roll Back Increased Emissions .....	39
30.	Counties Count.....	39
31.	Towns, Too .....	39
32.	LEED by Example .....	40
33.	Economic Development Power .....	40
34.	Cool Communities .....	40
35.	Create Energy Committees.....	40
36.	Information Please .....	40
37.	Keep the Skies Dark.....	41
38.	Neighborhood Review Boards .....	41
39.	Public Participation .....	41
40.	How Are We Doing?.....	41

## ***Acknowledgements***

The compilation of this draft of the Citizens Energy Plan has been, and continues to be, a joint effort of numerous organizations and individuals. The contributions of time, ideas, knowledge, guidance and inspiration from dozens of outstanding community leaders and their organizations as well as the important input from concerned citizens and their community groups have helped to make this draft plan a highly unique, truly grassroots-generated document. The list of contributors who gave freely of their time and provided all important input and encouragement is too long to include here so we mention just some of the people that took part in this collaborative process:

Special recognition goes to Gordian Raacke and Kathleen Whitley of the Citizens Advisory Panel. Without their initiative, expertise and hard work this plan would not exist today.

An enormous amount of time and effort went into drafting the individual chapters. A big thank you goes to all authors, editors and contributors of the various chapters, including Jason Babbie and Todd Stebbins of NYPIRG, Cynthia Barnes of Three Village Civic Association/ABCO, Peter Caradonna of Peter Caradonna Architects, Scott Cullen and Tina Guglielmo of S.T.A.R., Ernest Fazio of LI Future Energy, Klaus Feindler of CAP, Elsa Ford of Brentwood-Bayshore Breast Cancer Coalition, Susan Harder of the EH Dark Sky Association, Dennis Intravia and Dr. David Sprintzen of LIPC, Jenna Kern Rugile of the Unitarian Universalists of Huntington, Eve Kaplan of the North Fork Environmental Council, Paul R. Lozowsky of UCAP, Chris O'Connor and Neal Lewis of the LI Neighborhood Network, Marie Pendzich of the Sierra Club, Peter Quinn of the LI Coalition for Democracy, Mark Serotoff of the Townline Civic Association, and Marianne Zacharia of ALA Nassau/Suffolk.

In addition, we are grateful to the guidance and review provided by Ashok Gupta, Nathanael Greene, and Alex Pereira of NRDC, Anne Reynolds of EANY, and Fred Zalcman of Pace University.

In numerous meetings, we discussed the many issues and reviewed initial drafts for the Citizens Energy Plan. Among the tireless participants in those lengthy evening meetings and corresponding electronically were H.D. Berger, Ron Clipperton, Cindy Crociata, Tom Delgiudice, Fred Drewes, Eric Dumont, Nanette Essel, Laurie Farber, Michael Giacomaro, Jodi Grindrod, Stacy, Steven Kvit, Peter Maniscalco, Susan McKeon, John McNamara, Wayne Prospect, Michael Sheridan, Joe Sicignano, Shirley Siegal, Steve Sloane, Roger Snyder, Bill Steibel, and Peter Sverd.

We are indebted to the Suffolk County Legislature and especially Legislator Jon Cooper, Chairman of the County's Economic Development and Energy Committee, as well as his Chief of Staff Barbara LoMoriello and former staff member Gerard McCreight, for their support and assistance in letting us use County facilities as meeting rooms. In addition, we thank the Commack Branch of the Smithtown Library, the Kings Park Library, and the Huntington Library for lending us their meeting rooms for many evenings.

Of course, this venture would have been impossible without the support of all 30+ member groups of the Sustainable Energy Alliance and the 50 or so grassroots organizations from all over the Island that signed on to the Declaration of Need for a Citizens Energy Plan.

We also thank Michael Grodzicki at Lighthouse Graphics for the pro bono design and execution of the cover page, and Vincent Bartell of All Office Services for the printing and binding of these draft documents.










And last, but not least, we express our deep appreciation to the Long Island Community Foundation and the Long Island Unitarian Universalist Fund for providing grants to the Citizens Advisory Panel for energy education and other outreach programs that will help us to solicit broad public input on this draft version of the Citizens Energy Plan.



## Prologue

As we set out to formulate our regional energy plan we must remember to wear our global ‘thinking caps’ from time to time.

Denis Hayes<sup>1</sup>, the founder of Earthday, reminded us on Earthday 2000 that our current patterns of global energy consumption and generation are not sustainable. When we look at the big picture it becomes clear that we cannot expect to continue on this path.

-  The United States with less than 5% of the world’s population consumes one quarter of the world’s energy resources.
-  As a result, we are responsible for approx. ¼ of the world’s energy related emissions of CO<sub>2</sub> and other pollutants.
-  CO<sub>2</sub> is the chief greenhouse gas responsible for global warming and climate change.
-  US EPA predicts the possibility of 2’ to 4’ sea level rise for the eastern seaboard within this century.<sup>2</sup>
-  Emissions from power plants cause over 30,000 deaths each year in the US alone.<sup>3</sup>
-  We use twice as much energy per dollar of Gross National Product (GNP) as Japan and other industrialized nations.
-  In 1998, Americans drove 60% more total miles in automobiles than the Germans, French, British, Japanese, Canadians, Mexicans, and Swedes – combined.
-  Given the gas-guzzling appetite of the American new vehicle fleet – a fleet that is 51% SUVs, vans, and light trucks – the problem gets even worse. That is why Americans, with less than 5% of the world’s population, consume 43% of the world’s gasoline.
-  Worldwide fossil fuel consumption has increased four times as rapidly as world population in the 20<sup>th</sup> century.

Here on Long Island we use energy and electricity in much the same way as the rest of the country:

---

<sup>1</sup> Denis Hayes is chair of [Earth Day Network](http://www.earthday.net).(www.earthday.net) He was the national coordinator for the first Earth Day in 1970 and now earns his keep as president of the Bullitt Foundation ([www.bullitt.org](http://www.bullitt.org)) in Seattle, Wash. He is also author of the book [The Official Earth Day Guide to Planet Repair](http://www.islandpress.org/books/Detail.tpl?cart=311418345659021&SKU=1-55963-809-5) ([www.islandpress.org/books/Detail.tpl?cart=311418345659021&SKU=1-55963-809-5](http://www.islandpress.org/books/Detail.tpl?cart=311418345659021&SKU=1-55963-809-5))

<sup>2</sup> See for example <http://www.epa.gov/globalwarming/> and <http://www.epa.gov/globalwarming/publications/impacts/sealevel/index.html>

<sup>3</sup> See The Particulate-Related Health Benefits of Reducing Power Plant Emissions, Abt Associates, Inc. October 2000. [www.cleartheair.org](http://www.cleartheair.org). The report is available at <http://cta.policy.net/proactive/newsroom/release.vtml?id=19080>

We rely on non-renewable, and mostly imported, fuels such as gasoline, oil and natural gas.

We convert these fossil fuels into usable energy by burning them in very inefficient cars, trucks, power plants and heating systems, causing tremendous harm to our environment and ourselves.

Once converted, we waste much of the useful energy by using antiquated and highly inefficient end-use technologies and wasteful habits.<sup>4</sup> We waste at least 17%, and up to 75% of our electricity through inefficient lighting, appliances, and buildings.

To make things worse, our wasteful energy practices also harm our regional economy. By importing almost all of our energy sources from outside the region or country, we are exporting a lot of our hard-earned money to those regions. Every time we fill up the gas tank or turn on the lights, much needed dollars are taken out of the local economy.

Unfortunately, our bad energy practices keep getting worse every year:

- Our energy consumption keeps growing.
- Our reliance on imported fossil fuels is higher than ever.
- Our emissions of air pollutants & greenhouse gases keep going up.

Virtually all of our electricity on Long Island comes from fossil & nuclear sources.

LIPA, so far, refuses to get out of the nuclear power business - and instead of making major investments in energy efficiency and renewable energy sources, LIPA and private power developers are planning to spend hundreds of millions of dollars to build more fossil plants and cross-sound cables/pipelines.

If we don't like this picture and if we want to wean ourselves off the dangerous and non-sustainable addiction to fossil fuels, we have to start at home – and home is right here on Long Island.

The Citizens Energy Plan for Long Island is meant to help us in bringing about this much needed change.

---

<sup>4</sup> E.g., a typical incandescent light bulb converts most (80%) of the electricity it uses into heat rather than light.

Draft

# Citizens Energy Plan

For

## Long Island

### Preface

Since 2001, Long Island has witnessed a flurry of new power plant applications throughout Nassau and Suffolk Counties. Approximately 2,000 MW of new capacity has been proposed, including 10 small turbines, 10 emergency generators, 3 large-scale natural gas-fired facilities and a cross-sound cable to Connecticut. Of these new projects, the cross-sound cable and 10 turbines were expected to be up and running by summer of 2002 but the full availability of the cable was uncertain during the summer of 2002. As of August of 2002, LIPA had brought over 600 MW of additional capacity on-line. Major facilities proposed by KeySpan, American National Power, and PPL are in the permitting stages for a combined 1,130 MW of power<sup>5</sup>. Additional fossil fuel projects loom on the horizon as Long Island's high-energy costs attract merchant power companies who wish to build here in a rapidly evolving deregulated energy market.

For decades, our densely populated and geographically unique region has dealt with energy related problems, including soaring demand and consumption, erratic price swings and enormous energy waste in the government, business and residential sectors.

*For decades, Long Island  
has dealt with energy  
related problems*

Our region, combined with the New York City metropolitan area, ranks 3<sup>rd</sup> worst in the nation for smog and non-attainment of federal health-based ozone standards. Power plants located in Port Jefferson and Northport, for example, are among the worst polluting facilities in our region adding to the escalating rates of asthma, respiratory and other health-related conditions.

According to a recent analysis of data from Long Island's power plants, emissions from baseload plants have increased enormously. Between 1995 and 2000, carbon dioxide emissions from those plants have increased 42%, nitrogen oxides emissions are up 64%, and sulfur dioxide emissions have almost doubled (91%) over the course of only six years.<sup>6</sup>

---

<sup>5</sup> The 580 MW ANP plant received NYS Siting Board approval in August, 2002

<sup>6</sup> CAP Memorandum by Gordian Raacke to the Suffolk County Legislature dated July 26, 2002 "Review of Fuel, Emission and Power Production Data of Long Island Power Plants 1995 to 2000". The report is available on CAP's website at [www.energymatters.org/LIpowerplants1995to2000Report.pdf](http://www.energymatters.org/LIpowerplants1995to2000Report.pdf)

In 1998, Long Island rid itself of the investor-owned and much despised Long Island Lighting Company that burdened us with the defunct Shoreham nuclear plant. Long Island now boasts its own public power entity, the Long Island Power Authority.

But despite this switch to a utility company that should serve the public interest, customer approval ratings are low. In a recent J.D. Power and Associates 2002 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>, LIPA ranked amongst the worst utilities in the country. LIPA was rated 14<sup>th</sup> out of 15 utilities in the Eastern region and 71<sup>st</sup> worst utility out of the 74 utilities reviewed nationally.<sup>7</sup>

There is constant uncertainty as to whether Long Island will have enough electric capacity to make it through the next heat wave. LIPA has been far too reactive by only responding to load growth after such growth materializes and not doing enough proactively to stem peak growth through true efficiency programs. The Authority's demand forecast continues to be amended and LIPA has yet to come forward with a comprehensive energy master plan for Long Island.

*There is constant uncertainty whether we will have enough electric capacity to make it through the next heat wave*

On May 29, 2002, LIPA Chairman Richard Kessel stated that he expects energy demand to grow at least 2% (approximately 100 MW) per year for the next five years.<sup>8</sup> Only two months later, in July of 2002, LIPA's peak demand level had risen by 153 MW from last year.

In the absence of a comprehensive, Island-wide energy plan to address this and other critical issues related to energy use and demand, concerned citizens, environmental organizations, civic associations, and public health advocates found themselves asking many of the same questions:

- 1. What are Long Island's true power needs?*
- 2. What are the best options to meet these needs?*
- 3. What are the harmful health, economic and environmental effects of continued reliance on fossil-fueled power?*
- 4. What are the comparative costs and benefits of conservation, alternative energy sources, repowering of old generating plants, and the construction of new plants?*
- 5. What changes in public policies and legal and regulatory frameworks are needed to protect citizens and encourage public involvement in energy issues?*
- 6. How can we best reach out to and educate the public, so that Long Island's residents can have a meaningful impact on energy decision making?*

<sup>7</sup> The report is available at [www.jdpa.com/presspass/pr/pressrelease.asp?ID=2002057](http://www.jdpa.com/presspass/pr/pressrelease.asp?ID=2002057)

<sup>8</sup> LIPA Press Release dated May 29th, 2002: LIPA Announces Electricity Demand Forecast for Summer 2002

During the summer of 2001, the Citizens Advisory Panel<sup>9</sup> contacted a number of local and state-wide organizations and individuals with the proposal to begin to create a Citizens Energy Plan (CEP), intended as a blueprint for sustainable energy policies across Long Island.

This diverse coalition of groups found that given the increasing demand for electricity on Long Island and the numerous proposals under consideration, a comprehensive electric energy plan for Long Island should be compiled as soon as possible. The groups drafted a Declaration of Need for a Citizens Energy Plan<sup>10</sup> for Long Island which was signed by over seventy organizations on Long Island. The Declaration of Need stated, in part:

“[S]ince these important long-term planning decisions will affect the economic and environmental well being of Long Islanders for decades to come, we know that we would be ill advised to leave such decisions to others.”

The document called for a thorough review of all available and existing energy options, considering economic, environmental and public health impacts and the establishment of priorities for those options, emphasizing energy efficiency and renewables. In addition, it stressed the need for public outreach and education on the impacts of energy choices and the importance of raising awareness of available energy efficient consumer products, tax incentives and rebate programs.

From the signers of the Declaration, a coalition of over 30 local and statewide groups emerged as the most active and involved in the CEP process. This core group became known as the Sustainable Energy Alliance of Long Island (SEA)<sup>11</sup>. SEA member groups collectively represent over 100,000 Long Islanders.

Sustainable Energy Alliance members recognize that energy is a necessary ingredient in the lives of Long Islanders and people around the world and that we must find a way to ensure the supply of affordable electricity in a reliable and environmentally benign way.

*Important long-term energy planning decisions should not be left up to others – they should be made by the public*

This draft of the Citizens Energy Plan outlines public interest priorities and recommendations designed to allow Long Island to meet its future energy needs in a sustainable, affordable, reliable, and environmentally and socially acceptable manner.

<sup>9</sup> CAP is the Long Island Energy Watchdog [www.energymatters.org](http://www.energymatters.org)

<sup>10</sup> See [www.energymatters.org/ceplanstatement.html](http://www.energymatters.org/ceplanstatement.html)

<sup>11</sup> More information about SEA can be found on its website at [www.seali.org](http://www.seali.org)

## Highlighted Recommendations

We believe that a Citizens Energy Plan should strive for energy choices that ensure long-term sustainability and avoid damage to public health and the environment. Among many other goals, a sensible plan should promote a thriving local economy, provide for affordable and fair electric bills for all customer classes, and reduce exposure to fuel price volatility. Maybe most importantly, a valid plan should represent the public interest and be compiled with meaningful and broad public participation.

We began this planning process by formulating public policy priorities that should be used when selecting options for future additions to our electric grid.

These priorities are as follows:

- **Firm commitment to aggressive conservation, energy efficiency and demand reduction;**
- **Solid mandate to use a definite percentage of solar, wind and other renewable technologies by certain dates;**
- **Repowering of existing power plants before adding of new plants.**

With these goals and priorities in mind, we developed numerous recommendations in the various chapters of the draft plan. Below, we highlight some of the most important recommendations:

### LIPA and KeySpan

The Long Island Power Authority should:

- ☑ double its current Clean Energy Initiative (CEI) program budget from \$160 million to \$320 million for the next 5 years;
- ☑ commit to a Renewable Portfolio Standard (RPS) which would guarantee 10% of our electricity to come from renewable energy sources by the year 2010;
- ☑ deliver on its promise to install at least 10,000 solar roofs by 2010 by putting forward a concrete plan with annual targets;
- ☑ continue its efforts to site a 100 MW offshore wind project by 2005 or sooner;
- ☑ work with KeySpan to repower our old and dirty power plants prior to siting of new generation on Long Island;
- ☑ evaluate and adjust its rate structures to provide proper incentives for energy efficiency and shifting to off-peak times and disincentives for wasteful energy consumption and peak usage;
- ☑ offer a rate rebate to households that use 15% to 20% less electricity than they used in the previous year similar to California PG&E's "20/20 rebate";

- ☑ voluntarily adopt a carbon dioxide cap as well as firm goals and mechanisms that will reduce total emission levels of SO<sub>2</sub> and NO<sub>x</sub> to below 1995 levels within five years;
- ☑ explore opportunities to site Combined Heat & Power (CHP) systems on the Island and implement policies that will facilitate the siting of such systems, including direct financial assistance;
- ☑ give consideration to clean distributed generation when planning for upgrades to the Island's electric Transmission & Distribution (T&D) system;
- ☑ reevaluate its Load Expansion/Attraction efforts which increase LIPA's revenue but result in increased demand and consumption;
- ☑ consider the indirect costs that result from the generation of electricity with fossil fuels, such as environmental degradation, health related costs, and other societal costs not directly included in electric rates;
- ☑ work to eliminate unnecessary electric consumption, such as daytime usage of outdoor and street lighting, running air-conditioners while windows or exterior doors are open, etc.;
- ☑ structure its rates and budgets to reflect the true cost of service as well as actual fuel costs and provide for more honest customer billing by showing information such as the actual cost of electricity during peak periods, power plant emissions, etc.;
- ☑ comply with its statute and sell its 18% share in the Nine Mile Point 2 upstate nuclear reactor as all other New York State utilities with ownership in the plant have already done;
- ☑ open up its planning process to all interested parties and engage in active outreach to all of Long Island's citizens so that all stakeholders will be able to contribute to the creation of LIPA's energy plan;
- ☑ prepare a bi-annual resource plan and provide regular monitoring and reporting of performance in fulfilling the above-stated goals.

## New York State

New York State should:

- ☑ establish a carbon emissions cap at 40% below 1990 levels to reduce greenhouse gases;
- ☑ reform NYS Power Plant Siting Law (Article X) to ensure meaningful public participation, adequate environmental and health review, and mitigation of impacts of generating electricity;
- ☑ replace LIPA's appointed Board of Trustees with an elected Board;
- ☑ provide additional checks and balances for LIPA, including a Citizen Advisory and Oversight Committee to make LIPA more accountable to Long Islanders;

- ☑ establish Neighborhood Review Boards for communities most affected by power plants to ensure access to information and enable communities to monitor plant emissions and other issues;
- ☑ adopt legislation to regulate outdoor lighting.

## County Government

Nassau and Suffolk County Government should:

- ☑ commit to procuring only energy efficient buildings, lighting and appliances;
- ☑ require that at least 20% of its electricity consumption come from renewable energy sources by 2010;
- ☑ establish energy committees charged with developing and implementing recommendations on local energy issues;
- ☑ provide informational resources on energy issues and available programs through county offices and other entities funded by it.

## Town Government

Town Government should:

- ☑ improve and enforce local building codes with respect to energy efficiency requirements;
- ☑ require that at least 20% of its electricity consumption come from renewable energy sources by 2010;
- ☑ designate an energy Resource Conservation Manager;
- ☑ establish energy committees charged with developing and implementing recommendations on local energy issues;
- ☑ provide informational resources on energy issues and available programs through Town offices.

\* \* \*

This draft version of the Citizens Energy Plan contains forty summarized recommendations and additional ones in the chapters. The complete text of the Summary of Recommendations can be found at the end of the Executive Summary. Additional information is available in the respective chapters.

## Introduction

As citizens of Long Island we stand at the cross-roads of our energy future. The members of the Sustainable Energy Alliance and contributors to this draft of the Citizens Energy Plan believe that this is time for pause, reflection, and independent, intelligent energy planning. Decisions we make today about energy policy will affect our health, environment, economy, safety, and the cost of electricity for decades to come.

*Energy policy decisions we make today will affect our health, environment, economy, safety, and the cost of electricity for decades to come*

The member groups of the Long Island Sustainable Energy Alliance which have cooperatively authored this draft Citizens Energy Plan have the honor and the privilege of representing over 100,000 Long Island constituents. As citizens and representatives, we believe firmly in the need for an energy policy that protects our health, environment, prosperity and safety. Together we set out to review Long Island's energy needs, resource options, and desirable priorities from a public interest perspective, rather than that of the power companies which usually author such studies and make energy planning decisions for us.

We researched the following areas and drafted chapters related to energy generation, transmission, and use:

- Trends in Long Island Electric Capacity & Energy Supply
- Health, Environment and Economic Impacts
- Legal & Regulatory Issues
- Conservation & Efficiency
- Renewables & Alternatives
- Light Pollution
- Repowering of Existing Power Plants
- Public Education & Outreach

*The real crisis is that we are producing electricity in an environmentally harmful and non-sustainable manner*

The California energy 'crisis', which as it turns out may have been more a product of price manipulation by utilities than actual energy shortages, nevertheless left an impression that we face a national shortage of power supplies. Dire predictions since made by the Long Island Power Authority have led many to believe that imminent electric supply shortages are the most important power issue

on Long Island, when we are in fact facing a much more serious energy crisis. The real crisis is that we are currently using and producing electricity in an inefficient, environmentally harmful and non-sustainable manner.

*It is time to set clear  
planning priorities  
for Long Island's  
energy future*

While we are concerned with the threat of rolling brown-outs or blackouts that could result from Long Island's insatiable appetite for electricity and lack of planning on behalf of our Power Authority, the reality is that for the majority of the year, we face no credible threat of power supply shortage in our region.

Aggressive conservation and energy efficiency measures, rate incentives for commercial and residential customers willing to reduce wasteful energy use, increased deployment of renewable energy sources such as solar and wind energy, and the refurbishing ('repowering') of our antiquated, highly inefficient, dirty power plants in Nassau and Suffolk Counties could greatly reduce the chances of supply shortages during peak demand periods in the summer, while also steering us towards a more environmentally benign and sustainable energy path.

While there is an unprecedented rush in applications for construction of new power plants on Long Island, and a rather short-term focus by LIPA to secure an adequate summer supply of electricity by siting 'quick and dirty' simple-cycle turbines, and now even truck-mounted diesel generators all over the Island, the need to plan for a sustainable energy future is grossly neglected.

This draft of the Citizens Energy Plan does not attempt to quantify future generation capacity and infrastructure improvement needs. Instead, the Citizens Energy Plan sets public policy priorities that should be used when selecting options for future additions to our electric grid.

We believe that it is time to set such clear priorities in planning for Long Island's energy future. The chief priorities which will provide guidance on our way toward a sustainable energy future are reflected in the main initiatives of the Citizens Energy Plan and can be summarized as follows:

### ***CITIZENS ENERGY PLAN PRIORITIES***

- **Firm commitments to aggressive conservation, energy efficiency and demand reduction;**
- **A Renewable Portfolio Standard (RPS) mandating a definite percentage of solar, wind and other renewable technologies by certain dates;**
- **Repowering of existing old power plants with natural gas fired, efficient state-of-the-art technologies before adding of new (preferably combined-cycle or combined heat & power) plants.**

We urge policy and decision makers at the Long Island Power Authority and all levels of government and industry to consider these priorities in order to promote energy policies that are sustainable and in the public interest.

As member groups of the Sustainable Energy Alliance of Long Island, we recognize that a reliable supply of electricity is an essential part of our economy and a necessary ingredient in the lives of Long Islanders. We also know, that in order meet our future demand for electricity in a sustainable manner, we must find a way to generate electricity in a reliable, affordable and environmentally safe way.

This is why we set out to draft the Citizens Energy Plan. The Plan provides a much needed public interest perspective on energy planning, setting priorities and providing recommendations designed to allow Long Island to meet its future energy needs in a sensible manner.

It is our hope that this initial draft of the Citizens Energy Plan for Long Island will present a starting point for a public dialog over much needed alternatives for addressing Long Island's energy needs, and help foster broad public discussion of these issues.

Summaries of each draft chapter of the Citizens Energy Plan follow, providing additional background and detail.

### *Citizens Energy Plan Priorities*

- ⚙ *Firm commitments to energy efficiency and conservation;*
- ⚙ *A Renewable Portfolio Standard (RPS) requiring a certain portion of renewable energy;*
- ⚙ *Repowering of old power plants before adding new ones.*



## Summary of Chapters

### **TRENDS IN LONG ISLAND ELECTRIC CAPACITY & ENERGY SUPPLY**

To plan for the future of Long Island's energy supply, it is necessary to understand Long Island's current electrical generating capacity. This chapter reviews current and projected levels of demand and consumption and classifies energy resources in the following categories: "existing" (pre-2000), "new" (2000-2002), and "proposed" (not yet constructed).

As of August 2002, LIPA was expected to have a total capacity of 5,640 MW at its disposal<sup>12</sup>. The majority of this generation is fossil fuel (oil and natural gas) dependent (> 93%) with nuclear fuel (< 4%) and biomass (< 3%) being minor contributors to the mix. LIPA's current solar and wind generating capacity is miniscule (less than 0.04%).

For the summer of 2002, LIPA projected a base peak demand of 4,775 MW (if temperatures stay in the low to mid-90s). Extreme weather events could push peak demand to 5,200 MW.

*The majority of LIPA's power comes from burning fossil fuels*

On May 29, 2002, LIPA announced that its current available resources, including the Y-50 and Y-49 imports, total 5,180 MW. With 407 MW to be added through the ten LM-6000 turbines ("Powering Long Island 2002") and the new 330 MW cross-sound cable that LIPA was hoping to have operational the available supply of electricity could have reached 5,917 MW. On an expedited basis, LIPA also placed 200 MW of diesel-fueled stand-by generation at sites in Shoreham and Holtsville. The additional generation consists of ten 22 MW generators (TM-2500) mounted on flatbed trailers that are linked to LIPA's transmission system via temporary connections. The stand-by generation became available by July, and is supposed to be utilized only in extreme heat conditions.

However, LIPA's anticipated resources did not fully materialize. TransEnergie, the owner and operator of the newly constructed 330 MW cross-sound cable decided to comply with orders by Connecticut authorities not to operate the cable during the 2002 summer. Subsequently, LIPA got the U.S. Department of Energy to grant the Authority's request to allow for the use of the cross-sound cable in the event of an emergency in the region.

The repair of the Y-50 cable which prompted fears of repeated failure resulted in a reduction in import capabilities to LIPA of 150 MW. The cable had 600 MW of capacity, 400 MW of which were available to LIPA and 200 MW to Con Edison. The LIPA capacity is now reduced to 250 MW.

---

<sup>12</sup> This figure does not include the 330 MW cross-sound cable which was not on-line as of mid-August 2002. DoE later granted LIPA's request to allow for the use of the cable in the event of an emergency. The figure also represents the lowered Y-50 cable capacity (250 MW instead of 400 MW).

Although early in the summer of 2002, LIPA's total capacity was 5,437 MW, the expected capacity is 5,970 MW, assuming the addition of the ten TM-2500 turbines with a combined capacity of about 203 MW<sup>13</sup> and the availability of the 330 MW cross-sound cable. LIPA's expected peak load could go up to 5,200 MW during extremely hot and humid periods.<sup>14</sup>

LIPA is required to maintain an 18% reserve margin. Assuming a peak load of only 4,775 MW, this would require 5,635 MW which LIPA should have available. However, assuming a peak load of 5,200 MW, the required capacity including the reserve margin would be 6,136 MW which LIPA would not have. Under this scenario, LIPA would have approximately 770 MW to spare, a reserve margin of about 14.8%.

*Absent aggressive measures by LIPA to reduce overall demand, we may find a shortage of generation capacity during the summer months*

On August 13, 2002, before DoE granted LIPA's request to operate the new cross-sound cable in emergencies, and as LIPA prepared for another heat wave, it had only 5,576 MW of capacity available to meet the day's anticipated peak demand of some 4,850 MW. Temperatures for that day were expected to be in the low to mid nineties, accompanied by high humidity. This case illustrates the need for an adequate reserve margin

In addition to meeting peak demand with available supply-side resources, LIPA uses its peak load reduction programs when supplies threaten to fall short of demand. Under such circumstances, LIPA can initiate its LIPAEEdge<sup>15</sup> program and request that Peak Load Reduction program members curtail electric consumption to help reduce Island-wide electric demand. Both programs combined currently reduce demand by approximately 155 MW.

On August 8, 2002, LIPA announced that it not only set a new summer peak hour demand record on July 29<sup>th</sup>, when 5,059 MW of electricity were delivered to customers, but that a new record was set for the entire month when 2,357,253 Megawatt hours (MWh) were delivered to the Long Island Control Area (LICA).

According to LIPA's press release, the new July record is 411,777 MWh or 21% higher, than last July's total of 1,945,476 MWh. During the month of July, the demand for electricity exceeded the 4,000 MW mark for a total of 133 hours during the month, or 17% of the total hours in the month. LIPA's peak demand level has risen by 153 MW from last year. The previous peak increase had been approximately 100 MW. LIPA

<sup>13</sup> Each unit has a net capacity of 20.5 MW. However, LIPA chose to limit the output of four units at the Holtsville location to 79.9 MW to avoid Art. X review. Thus total combined capacity is  $6 \times 20.5 \text{ MW} + 79.9 \text{ MW} = 202.9 \text{ MW}$ .

<sup>14</sup> It should also be noted that due to equipment failures, maintenance and other operating factors 100% of LIPA's total capacity may not always be available

<sup>15</sup> Customers participating in the LIPAEEdge Program have their home central air conditioning units controlled by LIPA via the Internet for 15 minutes every hour between the hours of 2 p.m. and 6 p.m. As of August, 2002, over 18,000 LIPAEEdge thermostats and controllers have been installed Island wide.

has pointed out that air-conditioning can account for as much as one-third of the electricity consumed during the summer.

On August 20, 2002, LIPA announced yet another record. During the weekend of August 17th, LIPA delivered a peak of 4,447 MW on Saturday and a peak of 4,462 MW of electricity on Sunday to the Long Island Control Area (LICA) setting a new *weekend peak record*.<sup>16</sup>

Long Island's South Fork set a weekend electric demand record of 190 MW on Saturday, August 17th and 180 MW on Sunday, August 18th.<sup>17</sup>

It is clear that in the absence of more aggressive measures by LIPA to offset or reduce overall demand, the potential exists for a shortage of Long Island based generation capacity during the peak summer months. Without improvements in energy efficiency and conservation, peak usage can be expected to continue to rise.

As described above, LIPA responded to this possibility with the addition of about 400 MW of new generation from 10 small turbines in both Nassau and Suffolk Counties in time for the summer of 2002. Recent power losses from the Y-50 cable, however, and delays in construction of the new TransEnergie cross-sound cable have all but negated the benefits from these turbines. Consequently, LIPA announced an additional 10 small GE power plants (TM2500) to be mounted on flatbed trucks in Suffolk County for use only in 'emergency' situations this summer.

Unfortunately these solutions are merely quick and dirty responses to a more pervasive, ongoing problem within the Long Island Power Authority – the absence of a comprehensive, master energy plan that measures short and long term energy need, available future resources, cumulative impact issues and prioritizes cleaner, alternative energy options. In addition, potential transmission and distribution problems combined with overall power grid management troubles may hinder productivity and lead to congestion, overload, grid instability, high power prices and rolling blackouts.

*LIPA favors additions to the supply side while neglecting to reduce energy demand and consumption through demand-side management.*

LIPA's short-term fixes may be able to avoid blackouts during peak demand periods but come at high expense and cause unnecessary pollution while failing to solve the underlying problems for the long-term.

Sadly, LIPA appears to favor additions to the supply side while neglecting to tap into the still largely untapped potential to reduce energy demand and consumption through so-called demand-side management. This potential for MW and MWh

---

<sup>16</sup> Figures include electricity delivered to LIPA's customers as well as, to customers who purchase electricity from Energy Supply Companies (ECSOs) through LIPA's LI Choice program, and to municipal electric utilities and Power For Jobs customers on Long Island who receive electricity from the New York Power Authority.

<sup>17</sup> These levels were only surpassed by a record 183 MW on July 3<sup>rd</sup>, 2002 and 194 MW on July 4<sup>th</sup>, 2002. The previous all time peak on the South Fork was 167 MW, during the August 8th, 2001 heatwave.

reductions is significant and LIPA's current programs do not come close to the possible reductions. For example, a study, conducted by CAP and the Pace Energy Project identified the potential demand reduction from cost-effective energy efficiency programs as 465 MW by 2010.<sup>18</sup> LIPA's own study conducted by the Tellus Institute before the takeover from LILCO, showed a similar potential demand reduction, yet, despite the urgent need to reduce demand, LIPA has not embarked upon a course that would quickly realize these reductions.

According to an August press release, LIPA Chairman Richard Kessel stated that "as a result of July's record power use, the potential for installing additional generation to Long Island's on-Island resources in time for the 2003 summer season is already being explored."

It is painfully obvious that LIPA should have begun to implement a highly aggressive demand-side management program immediately when it took over from LILCO in 1998. It is equally clear that the Authority wasted precious time by not taking immediate steps to work with KeySpan to repower some existing generating plants. If a repowering plan had begun in 1998 or 1999, some units would now be converted to much more efficient combined-cycle technology and a considerable amount of additional capacity would be available as a result.

It now appears that in addition to the 407 MW of new LM-6000 installed in 2002, a number of other planned additions will come on line in the foreseeable future. The 330 MW cross-sound cable is expected to operate fully in 2003. A proposal for a 580 MW combined-cycle plant to be built by ANP in Yaphank received the approval of the NYS Siting Board in August of 2002. Another proposal by KeySpan for a 250 MW combined-cycle plant in Melville may be approved as well. A proposal by PPL to build a 300 MW simple-cycle plant in Kings Park is also undergoing Article X review but may have a lesser chance to receive the required Siting Board approval. There are

additional proposals for submarine transmission cables as well as natural gas pipelines.

*LIPA must plan for a more diversified and balanced portfolio of fossil and renewable energy supplies*

LIPA has also begun the process of issuing a Request for Proposals for a 100 MW off-shore wind project which it hopes to see operating within three years.<sup>19</sup>

While it is impossible to predict which of these supply-side additions will obtain the required regulatory approvals as well as the necessary financing to get constructed, it appears likely that some of these projects will be operating in the foreseeable future. The availability of these new resources may ease the current supply crunch for some time. However, LIPA should use this time wisely and begin immediately to plan for a more sustainable and longer-term energy future for the Island. LIPA must better balance its investments in supply-side resources with demand-side management. LIPA

<sup>18</sup> Power Choices: 21st Century Energy Alternatives for Long Island, October 1999. [www.energymatters.org/WEBpowerChoices.pdf](http://www.energymatters.org/WEBpowerChoices.pdf)

<sup>19</sup> See [www.lioffshorewindenergy.org](http://www.lioffshorewindenergy.org) for more information

must also plan for a more diversified and balanced portfolio of fossil and renewable energy supplies.

It should be noted that we did not attempt to assess the exact quantitative need for future generation capacity and infrastructure improvements in this draft. Instead, the Citizens Energy Plan sets public policy priorities that should be used when selecting options for future additions to our electric grid. These priorities start with energy efficiency and peak shifting measures, followed by a phasing in of renewable energy technologies. When it comes to conventional fossil fuel generation technologies, repowering of our existing power plants is recommended before any substantial new generation capacity is added at new sites.

## ***HEALTH, ENVIRONMENT AND ECONOMIC IMPACTS***

This chapter discusses the fact that energy generation of all types has significant health, environmental and economic implications. From a public interest perspective, optimal generation technologies have minimal impacts on both surrounding communities and the global environment. Sustainable energy solutions incorporate public health and environmental safeguards against the negative impacts from harmful pollutants, dangerous emissions and other negative environmental and socio-economic factors and, to the greatest extent possible, create actual environmental, societal and economic benefits.

Any choice of future sources of energy generation should weigh the long and short term benefits and cost, and must account for the 'hidden costs' inherent in many technologies, especially fossil and nuclear fueled power generation.

Environmental impacts consist of air, water, noise and visual pollution, with air emissions being one of the most critical challenges we face. Gaseous emissions from power plants travel great distances, imparting serious short and long-term consequences on public health and the local and global environment.

*Power plant emissions cut short the lives of over 30,000 people each year*

In many cases the health risks associated with power plant emissions affect children and the elderly to a greater extent than the general population. Potential public health impacts include inordinately high occurrences of cardiopulmonary disease, asthma and cancer throughout the region which might be related to the cumulative effect of years of exposure to these emissions, even though the levels of pollutants emitted often fall within state and federal governmental legal limits.

Soot emissions from power plants, also referred to as particulate matter, have been shown to have a particularly damaging, and sometimes fatal effect on people's lives. A recent study<sup>20</sup> has shown that fine particle pollution (smaller than 2.5 microns) from U.S. power plants cuts short the lives of over 30,000 people each year. According

---

<sup>20</sup> The Particulate-Related Health Benefits of Reducing Power Plant Emissions, Abt Associates, Inc. October 2000. [www.cleartheair.org](http://www.cleartheair.org). The report is available at <http://cta.policy.net/proactive/newsroom/release.vtml?id=19080>

to the study, hundreds of thousands of Americans suffer from asthma attacks, cardiac problems and upper and lower respiratory problems associated with fine particles emitted from power plants.

*LI Power plant emissions  
have increased dramatically*

Greenhouse gas emissions from power plants and other sources are responsible for global warming and climate change, with predictions of severe negative impacts including sea level rise, an increase in the frequency and severity of storms,

hurricanes and droughts, the spread of tropical diseases, the loss of important wetlands, and infiltration of saltwater into our wells.

The detrimental health effects of air pollution from power plants have an increasingly significant influence on our economy. Lost productivity in the workplace, school, and at home are directly linked to respiratory illness, increased medical costs from emergency room visits and hospital admissions. Furthermore, the import of fossil fuels from other states and countries to burn in our power plants results in an export of local dollars and loss of regional wealth.

The health, environmental and economic implications remind us of the pressing importance of maximizing our use of renewable energy resources, energy efficiency improvements and demand reduction measures which have positive economic impacts and create more jobs per investment dollar than investments in fossil fueled power plants, in addition to being clean and environmentally benign.

A recent study<sup>21</sup> conducted by Gordian Raacke of CAP showed that there is a trend towards increased power plant operations and emissions on Long Island. It further finds that production and emissions from power plants located in Suffolk County have increased dramatically while power plant operation and emissions in Nassau County has been flat or even declining. It appears that this trend is the result of increasing demand of electricity coupled with the fact that the plants have been running to a greater extend on oil rather than cleaner-burning natural gas.

There are of course other significant sources of air pollution such as vehicles and up-wind power plants. However, since these sources of pollution are beyond the influence of LIPA and outside the scope of this plan, we focus here on impacts from power plants located on Long Island.

Furthermore, environmental impacts from power plant emissions are most pronounced closest to the plants. Therefore, it makes sense for a Long Island Citizens Energy Plan to focus on what is closest to home and within the reach of local and state decision makers.

Long Island's power plants have very direct public health impacts that need to be considered when developing an energy plan. In a recent analysis using a model developed for New York State, the particulate emissions from the Northport and Port Jefferson facilities were found to have caused 12 premature deaths, 16 new cases of

---

<sup>21</sup> The report is available at [www.energymatters.org/LIpowerplants1995to2000Report.pdf](http://www.energymatters.org/LIpowerplants1995to2000Report.pdf)

chronic bronchitis, 113 cases of childhood acute bronchitis, 1,315 asthma attacks, and 93 emergency room visits and 5 hospital admissions for respiratory problems in 1999.<sup>22</sup>

The CAP study looked at output and emissions of power plant on Long Island from 1995 to 2000, based on data obtained from the U.S. DoE and EPA. It showed that electricity generation and emissions from Long Island's power plants have increased considerably between 1995 and 2000.

For example, in 1995, Long Island's power plants<sup>23</sup> generated 9,352,710 MW hours (MWh) of electricity while in 2000 production was 11,433,405 MWh, up by 22%. It also showed that while the bulk of the output comes from the steam units (baseload plants), there has been a trend toward greater usage of the more polluting peaker units. In 1995, steam units produced 99% of the annual output; in 2000 the steam units accounted for only 95%.

But the most notable finding was that emission levels have increased much more than energy production and consumption.

While electricity output from the baseload plants increased only 18% between 1995 and 2000, an average of 3.4% per year, emissions from those plants increased much more dramatically.<sup>24</sup>

Between 1995 and 2000, emissions from the plants increased as follows:

- **Carbon dioxide emissions increased 42%**  
(from 7,056,000 tons to 10,008,000 tons)
- **Nitrogen oxides emissions increased 64%**  
(from 6,564 tons to 10,783 tons)
- **Sulfur dioxide emissions increased 91%**  
(from 17,517 tons to 33,460 tons)

Another recent report<sup>25</sup> issued by the American Lung Association gave Suffolk County a failing grade of 'F', ranking it the third worst New York County for ozone non-attainment. According to the report, almost 50% of Suffolk residents are at risk of suffering from some form of respiratory disease

*Long Island's Northport and Pt. Jefferson are among the 21 dirtiest power plants in New York State*

<sup>22</sup> In the mid-1990s, the New York State Public Service Commission ordered that a model be developed to quantify the impacts of generating electricity. A. Myrick Freeman III, Ph.D., was part of a team that developed the New York State Environmental Externalities Cost Model (EXMOD). He is also the one that ran the recent analysis. See Appendix for the Executive Summary.

<sup>23</sup> The plants are listed in US Department of Energy, Energy Information Administration, Form EIA-759 databases, 1995-2000 (effective 1/1/2001, Form EIA-906), [www.eia.doe.gov/cneaf/electricity/page/eia906u.html](http://www.eia.doe.gov/cneaf/electricity/page/eia906u.html). Plants are listed as: BROOKHAVEN, E F BARRETT, E HAMPTON, FAR ROCKWAY, GLENWOOD, HOLTSVILLE, MONTAUK, NORTHPORT, P JEFFERSON, SHOREHAM, SOUTHAMPTON, SOUTHDOLD, W BABYLON, WADING RVR.

<sup>24</sup> Data from US EPA Emission Database [www.epa.gov/airmarkets/emissions](http://www.epa.gov/airmarkets/emissions), plants included are: Barrett, Far Rockaway, Glenwood, Northport, Pt. Jefferson. Data for the other plants was not reviewed for this report.

<sup>25</sup> See [www.stateoftheair.org](http://www.stateoftheair.org) for the full report.

such as pediatric or adult asthma, chronic bronchitis and emphysema.

A loophole in the Clean Air Act that allows power companies such as LIPA and KeySpan to keep old, dirty power plants like Port Jefferson and Northport operating with outdated pollution controls is contributing to these unacceptable health hazards.

A report on this power plant pollution loophole, ranked Long Island's Northport and Port Jefferson plants among the top 21 dirtiest power plants in New York State.<sup>26</sup>

If KeySpan were to clean up its highly polluting, antiquated facilities by 'repowering' its plants, emissions could be reduced over 90% while increasing output and saving ratepayers money. While this alone will not solve Long Island's air quality problems, cleaning up old power plants on Long Island is one of the most direct actions we can take to reduce the public health toll we are paying as a result of our fossil-powered electricity generation.

In order to be sustainable, our energy planning choices must consider the welfare of the general public as well as local and global environmental impacts. In planning for the Island's energy future we must ensure that meeting Long Island's energy needs does not unduly compromise public health, the region's economy and our fragile local and global environment.

## **LEGAL & REGULATORY ISSUES**

*The shift from an investor-owned utility to public power presents a unique opportunity to shape our energy future in a way that is representative of the will of the people*

As a public power entity created by New York State, the Long Island Power Authority has an exceptional legal status that gives it the authority to be innovative and responsive to the public in a democratic and transparent manner. In short, LIPA has been given the sole responsibility of meeting Long Island's electricity needs through policies that reflect the public interest. As such, the shift from an investor-

owned utility regime toward public power presents a unique opportunity for Long Island to shape its energy future in a sustainable manner that is truly representative of the will of the people and in the public interest.

In addition to LIPA, certain federal, state, county and local laws impact energy planning and the siting of new power plants and alternative energy sources. The Federal Energy Regulatory Commission (FERC) regulates key interstate aspects of electric power, natural gas, oil pipeline and hydroelectric industries, while New York state laws govern transmission and distribution, the siting of electric generating facilities, and research and development of alternative energy sources. County governments play an increasingly significant role in the formation of sustainable energy policies through tax levies, increased conservation and energy efficiency measures, improved

---

<sup>26</sup> New York's Dirty Secret, The Power Plant Pollution Loophole, compiled by Environmental Advocates, NYPIRG Fund, and the Pace Energy Project, 1998. [www.eany.org/public\\_html/pdf/dirtyNY3.pdf](http://www.eany.org/public_html/pdf/dirtyNY3.pdf)

building codes and enforcement of environmental regulations. Local municipalities have not yet begun a holistic, integrated approach to energy planning, but have the potential to implement local policies that improve efficiency and integrate a sound mix of traditional and renewable energy sources.

The relatively new era of deregulation in the energy marketplace has loosened regulatory controls in an effort to create a more competitive marketplace, without a corresponding increase in representation of citizens and public interest organizations. The present legal framework for energy production, siting and transmission was not created within the context of deregulation, and it is clear that the siting process for power plants and major energy generating facilities in New York must be revised to protect public health and the environment.

This chapter of the Citizens Energy Plan examines the roles and impacts of these levels of government in the planning of Long Island's energy policy, various laws and regulations affecting existing and proposed generation, and deficiencies and loopholes in the present legal and regulatory scheme. The chapter also provides recommendations to those who formulate energy policy for the Long Island region and to varying government entities in an effort to create a sustainable, healthier energy future for Long Island.

## **CONSERVATION & EFFICIENCY**

Energy conservation and efficiency are important goals for any region, but especially so for a region burdened with high electricity rates, great population density and growing environmental concerns. This chapter makes it clear that in a time of uncertain international relations and limited domestic supplies of fossil fuels, on Long Island and across the nation, we would do well to improve our energy efficiency and decrease our energy consumption.

*Energy conservation and efficiency are especially important for a region burdened with high electricity rates*

On Long Island, an aggressive long-term program of investments in cost-effective energy efficiency measures could reduce energy demand by 9.5% to 12.5% of our forecasted energy requirements by 2010.<sup>27</sup> These energy efficiency measures teamed with simple energy conservation efforts, such as setting air conditioner controls to slightly higher temperature settings, setting pool-pump timers to run at night and turning off lights and appliances when not in use, could reduce the demand for additional fossil fuel burning power plants significantly.

Conservation programs and improved energy efficiency immediately reduce our dependence on fuels imported to Long Island by decreasing our enormous daily demand of oil and natural gas for the production of electricity. Investments in efficiency measures that reduce our fossil fuel consumption would save the us millions of dollars –

---

<sup>27</sup> Power Choices: 21st Century Energy Alternatives for Long Island, October 1999.  
[www.energymatters.org/WEBpowerChoices.pdf](http://www.energymatters.org/WEBpowerChoices.pdf)

money that would be better spent on advancing renewable energy technologies and improving other segments of our economy.

Long Island has experienced an extraordinary boom in residential and commercial construction in recent years. Unfortunately, most buildings built today are far from being energy efficient. Our failure to ensure that all new buildings incorporate the most energy efficient building techniques presents an enormous lost opportunity for energy savings since these buildings will most likely continue to waste energy for the next 30 or more years.

The adoption and implementation of Green Building standards as set forth by the Leadership in Environmental and Energy Design (LEED) Pilot Program<sup>28</sup> should become the benchmark for all new and retrofit residential and commercial building projects on Long Island. Green buildings are designed to meet sustainability objectives including energy efficiency and renewable energy technologies, conservation of materials and resources, water efficiency and improved indoor air quality. Such buildings typically are no more, or only slightly more expensive to build than traditional structures and are cost-effective solutions with far-reaching public health and environmental benefits.

The availability and levels of energy efficient appliances and other electricity consuming products continues to rise as technology improves. The EnergyStar<sup>TM</sup><sup>29</sup> label has become the standard-bearer of efficiency with rebates offered by both LIPA and NYSERDA. Yet, many of these products remain out of reach for residents in lower income or disenfranchised communities who suffer the most from inefficient, old and energy-guzzling housing and appliances.

This chapter contains a number of recommendations, including a cooperative effort between state, county and local authorities to offer low interest loans and tax incentives to allow all residents regardless of income to take advantage of available energy saving opportunities.

## Light Pollution

This section of the Conservation & Efficiency Chapter addresses a wasteful and harmful practice of unnecessarily lighting up the night sky. It is estimated that as much as \$4.5 billion annually is wasted in the United States alone on night lighting that shines up into the sky or off its intended target, serving no useful purpose. On Long Island and throughout New York, misdirected outdoor night light is reflected off dense air pollution and moisture particles, creating a yellowish nighttime 'skyglow' effect.<sup>30</sup>

This misuse of energy has diminished the wonders of our star filled sky, robbing the public of their privacy, and an enjoyment of the night sky's natural mystery and beauty. Additionally, the glare from misdirected roadside and shoreline lighting can disable drivers and navigators, creating dangerous venues for accidents.

---

<sup>28</sup> See [www.usgbc.org](http://www.usgbc.org)

<sup>29</sup> See [www.energystar.gov](http://www.energystar.gov)

<sup>30</sup> For more information, visit SELENE at [www.selene-ny.org](http://www.selene-ny.org) and [www.darksky.org/resources/library.html](http://www.darksky.org/resources/library.html)

To correct this problem, there needs to be continued political and public pressure on state government, lighting industries, commercial buildings, local municipalities and industry to reduce light pollution while increasing efficiency and reducing energy waste.

*We waste \$4.5 billion each year by needlessly lighting up the night sky across the US*

Legislation should be adopted to restrict new and replacement installations to those that minimize light pollution. Such a law should also require state agencies and public corporations to use full cut-off luminaires (directed completely downward) for new and replacement and outdoor fixtures. In addition, cities, towns and villages should be provided with a Model Outdoor Lighting Ordinance<sup>31</sup> for the purpose of saving energy, reducing unnecessary glare and reducing unnecessary sky glow.

By taking action in our own communities across Long Island we create opportunities for significant energy savings, aggressive energy conservation, an enhanced natural environment, and reduced dependence on polluting foreign and domestic fossil fuels. The physical health and well being of Long Island's residents and economy will benefit from measures to eliminate this wasteful energy practice.

Among the recommendations of this chapter is that the outdated, LIPA leased, commercial "Nightlight: Dusk to Dawn" area floodlight fixtures, which are so ubiquitous on public utility poles across all of Long Island, be replaced with full-cut-off type lamps, and set to turn off when not essential for pedestrian safety.

## Rapid Deployment Conservation Contingency Plan

The tragic events of September 11, and news reports that terrorists are targeting nuclear plants and other parts of our energy grid, highlight just how important it is that we are prepared for an energy emergency.

A viable energy plan must address unexpected events that could jeopardize the reliable provision of electricity on Long Island. Such planning should take into account the possibility of a terrorist attack on the electric infrastructure.

LIPA should develop a contingency conservation plan that could be deployed in the event of unexpected power supply disruptions – whether equipment failure, unexpected load growth, or deliberate terrorist act. This contingency conservation plan, consisting of a well-designed energy efficiency and peak response plan, would be activated when needed on a 'rapid deployment' basis in an effort to prevent brownouts, blackouts and price spikes.

*Energy conservation and efficiency are especially important for a region burdened with high electricity rates*

<sup>31</sup> See for example [www.haileycityhall.org/p\\_z/ordinance/light\\_ord\\_812.pdf](http://www.haileycityhall.org/p_z/ordinance/light_ord_812.pdf)

LIPA must work with New York State to be prepared for the voluntary or involuntary closure of nuclear plants or terrorist attacks against transmission lines, gas pipelines or fossil-fueled plants.

California's successful reduction of peak demand by over 12% from June 2000 to June 2001 demonstrates that it is possible to move quickly to conserve energy. With adequate preparation time and the opportunity to take advantage of NYSERDA's expertise, Long Island and New York State should be able to do far better than California. The best and most cost-effective preparation would be to maximize cost-effective investment in energy efficiency as soon as possible. Investing in energy efficiency now will promote demand reduction if and when New York needs to act quickly to ensure reliable and affordable energy supplies.

## **RENEWABLES & ALTERNATIVES**

As technology progresses by leaps and bounds, the availability of renewable and alternative energy sources is soaring in the global marketplace. Not only do we have the capability to capture the rays of the sun and the power of the wind, but we can now extract heat and energy from ground sources, harvest the power of flowing water and tap into the force of the surging tidal flow.

Renewable energy sources are the future of America's energy supply. Their impacts on the environment are benign, making them a preferable choice to conventional fossil and nuclear fuels. Renewable energy sources do not contribute to global warming and climate change and will continue to serve our needs long after oil and gas supplies have been depleted.

Investments in renewable energy technologies bring jobs to local communities, which benefits our regional and national economy as these new industries grow and flourish.

*An area of 25 square miles outfitted with solar electric panels could generate as much electricity as we currently use*

Finally, and perhaps most importantly in today's environment, renewable energy sources strengthen the safety and security of all Americans by reducing our vulnerability and decreasing our dependence on foreign fuel supplies.

It is advisable to include a sizable portion of renewable energy in our energy supply portfolio. Much like a wise investor insists on a diversified and well managed portfolio, our energy portfolio should consist of various resources, including renewable energy sources.

Fortunately, there is significant, untapped potential for solar electric generation, also called photovoltaic (PV) technology, and off shore wind generation on Long Island.

A recent study<sup>32</sup> conducted by a federal lab showed New York State as the #1 break-even state for solar electricity. The study ranked the states by break-even PV system price and found that PV systems are cost-effective today in certain areas of the country including New York State, where the break-even PV price range is more than \$10 per watt of system capacity.

Theoretically, an area of 25 square miles (i.e. an area 5 miles long by 5 miles wide) could be outfitted with almost 7,000 MW of PV panels and could generate as much electricity as all of Long Island currently consumes.<sup>33</sup> This would represent about 2% of the area in LIPA's service territory<sup>34</sup>. Given the availability of abundant unused roof surfaces on commercial and residential buildings, the PV panels would in reality not be installed in one location but distributed all over the Island.

A wind energy study<sup>35</sup> commissioned by LIPA/NYSERDA estimated 5,200 MW of total offshore wind potential along the South Shore of Long Island – roughly 300 MW more than LIPA's current on-Island capacity.

*Long Island's offshore wind potential along its South Shore is greater than LIPA's on-Island fossil capacity*

While renewable and alternative energy sources for commercial and residential users are becoming more available and popular with the general public, their relatively high upfront cost still presents an inhibiting factor for the majority of people interested in installing alternative energy systems. New York State and LIPA offer attractive tax credits, cash rebates, and other incentives ('net-metering') for the installation of residential or commercial PV systems up to 10 KW in size on Long Island. LIPA, in partnering with the LI Solar Roofs Initiative<sup>36</sup> under the national Million Solar Roofs Initiative<sup>37</sup>, has committed to install at least 10,000 solar roofs by 2010. While these commitments are an excellent first step towards making solar power mainstream, more must be done to make this technology a significant component of our region's energy mix. For example, while LIPA has committed to at least 10,000 solar installations by 2010, the Authority has presently no implementation plan to ensure that this goal will be met. This chapter recommends, among many other items, that LIPA develop such a plan and meet certain annual installation goals.

Working together, coalitions of civic, environmental, and business groups, as well as government officials at the local, regional, and state level can bring Long Island to the forefront of the renewable and alternative energy movement. Given our high electric

<sup>32</sup> See National Renewable Energy Laboratory (NREL), Customer-Sited Photovoltaics: Focusing on Markets that Really Shine (naming New York as one of the best markets in the country for grid-tied PV systems), available at [www.nrel.gov/ncpv/documents/cust-sited.html](http://www.nrel.gov/ncpv/documents/cust-sited.html)

<sup>33</sup> Calculated at 10 watts per square foot and typical Long Island insolation (1,650 kwh annually per 1 kW PV).  $25 \times 5280^2 \times 10 \text{ watts} = 6,970 \text{ MW}$  producing  $6,970 \times 1,650 \text{ kwh/p.a.} = 11,499,840 \text{ MWh}$ . 2000 annual generation from LI plants was 11,433,405 MWh.

<sup>34</sup> LIPA's service area consists of Suffolk County (911 square miles), Nassau County (287 sq. mi), and the Rockaway Peninsula (32 sq. mi.).

<sup>35</sup> See [www.lioffshorewindenergy.org](http://www.lioffshorewindenergy.org)

<sup>36</sup> See [www.energymatters.org/lishines](http://www.energymatters.org/lishines)

<sup>37</sup> See [www.millionsolarroofs.org](http://www.millionsolarroofs.org)

rates, heightened sensitivity to environmental issues and the recent takeover of LILCO by a public power authority, Long Island has a unique opportunity to become a model for diversified, sustainable energy development, prosperity and security.

## **REPOWERING OF EXISTING POWER PLANTS**

Repowering is the process whereby old, highly inefficient and ‘dirty’ power plants are temporarily shut down and replaced with cleaner, state-of-the-art efficient combined-cycle generation technologies. With demand for energy growing, it is imperative that we tap into the increased efficiency and reduced emissions potential from repowering antiquated existing power plants here on Long Island.

Preliminary findings of a memorandum by CAP<sup>38</sup> as well as a study conducted by KeySpan Energy for LIPA<sup>39</sup> reveal that output and efficiency could be nearly doubled while emissions of SO<sub>x</sub>, NO<sub>x</sub> and CO are reduced by over 90%.

In addition, a recent study<sup>40</sup> compiled by Dr. Matthew Cordaro of the Center for Management Analysis at LI University’s CW Post Campus shows that repowering of Long Island’s existing baseload plants is less costly than building new plants. The study also finds that repowering of these plants could add as much as 4,700 MW to our on-island capacity.

Repowering makes sense for a variety of reasons. Land use is no longer an issue because an existing site is being reused, eliminating the need for siting new plants on vacant parcels. Transmission and distribution lines are already in place and fuel supply established. The benefits to public health and the environment are considerable as dirty, polluting power is displaced by significantly cleaner power. Increased generation capacity as well as additional tax benefits to communities with existing facilities, and fewer new plants are additional bonuses of repowering.

*Repowering our old power plants would result in cleaner air, added capacity, and lower fuel costs*

Public support for the repowering of the 30, 40 and 50 year old plants in our region is well established. Any comprehensive energy plan, which seeks to improve efficiency and reduce emissions, must incorporate repowering as its immediate goal and preferred course of action.

---

<sup>38</sup> Memorandum on Repowering prepared for the Suffolk County Legislature by Gordian Raacke (available upon request from CAP).

See also Review of Fuel, Emission and Power Production Data of Long Island Power Plants 1995 to 2000, Memo from Gordian Raacke, CAP, to Suffolk County Legislature, July 26, 2002 draft. The report is available at [www.energymatters.org/LIpowerplants1995to2000Report.pdf](http://www.energymatters.org/LIpowerplants1995to2000Report.pdf)

<sup>39</sup> Information obtained during a meeting on June 4, 2002 between Kathleen Whitley and others from SEA and LIPA COO Seth Hulkower.

<sup>40</sup> The study is available on CAP’s website at [www.energymatters.org/LIpowerplants1995to2000Report.pdf](http://www.energymatters.org/LIpowerplants1995to2000Report.pdf)

## **COMBINED HEAT AND POWER**

Combined heat and power (CHP) is the simultaneous production of electrical or mechanical power and thermal energy from a single process. Because thermal output from the generation of electricity is captured and utilized on-site, CHP systems can achieve efficiencies from 60% to as high as 90%. In contrast, generation of electric power at sites remote from the loads served often results in efficiencies of 33% or less due to losses in generation and transmission and distribution of the power to ultimate end users. A well designed CHP system is the essence of energy efficiency and can provide significant environmental benefits.

According to NYSERDA<sup>41</sup>, New York has a potential for new installations of CHP systems of 8,477 MW, a considerable portion of which can be expected to be available on Long Island.

According to an article on CHP market barriers in New York State<sup>42</sup>, significant progress can be made by a thorough examination of the current regulatory structures which unduly inhibit the deployment of CHP deployment. The recommendations include standardizing and lowering costs of interconnection with the electricity distribution system, revising tariffs for distributed generators, streamlining the air permitting process for demonstrably clean CHP, and eliminating unreasonable obstacles in local codes, siting and permitting issues.

LIPA should work with NYSERDA to assess the opportunities that exist to site CHP systems on the Island and implement policies that will facilitate the siting of such systems.

## **PUBLIC OUTREACH**

With new proposed power plants, cross-sound transmission cables and gas pipelines, and over a dozen new combustion turbines now sited in neighborhoods all over Long Island, many residents are concerned about the adverse health and environmental consequences of meeting our electricity demand through the burning of fossil fuels.

Long Island is at a crossroads as we make decisions that will determine how we meet our energy needs without compromising the air we breathe, the water we drink and the land we depend on for sustenance. We can chose to continue to rely on last century's technologies and polluting fossil fuels

*All stakeholders, not just industry representatives or elected officials, should be able to contribute directly to the creation of an energy plan*

---

<sup>41</sup> Power Point Presentation 'Distributed Generation - Combined Heat and Power (CHP) Program' by Gunnar E. Walmet, Director, Industry & Buildings R&D, NYSERDA.

<sup>42</sup> Forthcoming in: Journal of Pollution Prevention, CREATING MARKETS FOR COMBINED HEAT AND POWER AND CLEAN DISTRIBUTED GENERATION IN NEW YORK STATE, by Thomas G. Bourgeois, Senior Economist, Pace University Energy Project.

or we can elect to switch to 21<sup>st</sup> century technologies and clean renewable energy sources.

This chapter finds that it is important that concerned citizens receive answers to their questions and have meaningful opportunities to participate in these critical decision processes. All stakeholders, not just industry representatives or elected officials, should be able to contribute directly to the creation of an energy plan that truly considers the long-term impact on our quality of life, environment and local economy. Additionally, Neighborhood Review Boards should be established in communities most affected by power plants to ensure ongoing access to information regarding output, emissions and other impacts of existing power plants.

The Sustainable Energy Alliance stands ready to work with LIPA as well as state, county and local government entities to assist in the necessary outreach, education and solicitation to Long Island residents that will guarantee the success of these goals.

The spotlight on our energy production practices and their global impacts presents an excellent opportunity for Long Island to become a national model of sustainable energy production, efficiency and consumption.

A recent poll on Newsday's website<sup>43</sup> found that 87% of respondents support the idea of building a 100 MW off-shore wind farm off Jones Beach on Long Island.<sup>44</sup> In poll after poll, public opinion favors clean and renewable energy over polluting fossil and dangerous nuclear options. Sincere efforts by LIPA to foster the deployment of renewable energy technologies on Long Island would go a long way to improve the Authority's poor public image.<sup>45</sup>

A long-term vision which balances cleaner, traditional power production with innovative, alternative technologies and energy efficiency improvements is not only feasible for Long Island, but clearly the most desirable solution from an economic, environmental and health perspective.

*A long-term vision which balances cleaner, traditional power production with innovative, alternative technologies and energy efficiency improvements is not only feasible for Long Island, but clearly the most desirable solution from an economic, environmental and health perspective*

---

<sup>43</sup> See [www.newsday.com/news/local/longisland/ny-li-windmills.poll](http://www.newsday.com/news/local/longisland/ny-li-windmills.poll)

<sup>44</sup> See [www.lioffshorewindenergy.org](http://www.lioffshorewindenergy.org)

<sup>45</sup> In a recent J.D. Power and Associates 2002 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>, LIPA ranked amongst the worst utilities. LIPA was rated 14th out of 15 utilities in the Eastern region and 71<sup>st</sup> worst utility out of the 74 utilities reviewed nationally. The report is available at [www.jdpa.com/presspass/pr/pressrelease.asp?ID=2002057](http://www.jdpa.com/presspass/pr/pressrelease.asp?ID=2002057)

## Overview of Recommendations & Conclusions

The member groups of the Sustainable Energy Alliance of Long Island, a coalition of civic, environmental, health advocacy, and faith-based groups whose mission is to educate, represent and protect the public interest in energy matters, support the adoption of an energy plan for Long Island that is based on the following criteria:

A sensible energy plan for Long Island should, at a minimum,

- aim for long-term sustainability, and avoid damage to public health and the environment,
- consist of a diversified energy portfolio matching forecast energy demand, while providing reasonable reserve margins,
- promote a thriving local economy, local job retention and stability,
- provide for affordable and fair electric bills for all customer classes,
- eliminate disproportionate impacts on low income communities,
- minimize wasteful energy consumption practices,
- maximize energy efficiency at power generation and end-user level,
- plan for optimal peak demand management,
- provide for balanced investments in renewable energy sources,
- ensure repowering of antiquated power plants,
- reduce exposure to fuel price volatility,
- lessen the likelihood of security threats,
- make use of all available tools (codes, enforcement, standards, legislation, incentives, etc.)
- be compiled with meaningful and broad public participation, and
- contain firm goals, milestones and dates and allow for monitoring of implementation.

We believe that this initial draft of the Citizens Energy Plan lays the foundation for the adoption of such a comprehensive energy plan for Long Island and hope that this first blueprint will serve as a starting point for a public debate over how we can meet Long Island's energy needs in a sustainable and environmentally safe manner.

*This plan can be the starting point for a public debate over how we can meet Long Island's energy needs in a sustainable and environmentally benign manner*

In addition to formulating priorities and general criteria, the various chapters of the Citizens Energy Plan contain a number of specific recommendations. These recommendations include the following:

## 1. Double Energy Efficiency Program

Energy efficiency and conservation efforts should be expanded by doubling the current LIPA Clean Energy Initiative (CEI) program budget from \$160 million to \$320 million for the next 5 years. As part of its energy plan, LIPA should establish five year annual energy and capacity savings goals and strive to meet them with CEI programs. The CEI should be monitored for its effectiveness in reaching these goals and program mix and funding levels should be adjusted accordingly.

## 2. Get Serious About Renewables

A commitment to a Renewable Portfolio Standard (RPS)<sup>46</sup> which mandates at least 10% of renewable (non-hydro) energy sources by the year 2010 must be made and implemented by LIPA. Such a commitment would be expedited through a Commensurate Investment Strategy pledge of 10% of LIPA's fossil-related capital investments and O&M costs towards renewable energy sources each year. LIPA should develop a plan showing how it will comply with state-mandated renewable energy purchases<sup>47</sup>. LIPA should also explore issuance of a Request for Proposals (RFP) for clean distributed generation.

## 3. Deliver on Solar & Wind

LIPA must strengthen and increase its investment in the Million Solar Roofs Initiative<sup>48</sup> to achieve its commitment of at least 10,000 solar roofs by 2010. LIPA should facilitate interconnection rules so home power producers and commercial customers can sell back unused power derived from renewable energy sources at an attractive rate ("net-metering"). Civic and environmental organizations must continue to work with LIPA, all stakeholder groups, and local, state, and federal government to expedite the approval and completion of an initial 100 MW offshore wind project<sup>49</sup> by 2005 or sooner.

## 4. Let's Clean Up the Old Clunkers

Repowering of old, dirty power plants should be pursued prior to siting of new generation on Long Island. Such a commitment by LIPA and KeySpan would yield

---

<sup>46</sup> See [www.ucsusa.org/energy/fs\\_rps.html](http://www.ucsusa.org/energy/fs_rps.html) for a fact sheet on a federal RPS

<sup>47</sup> See NYS Energy Plan and Governor Pataki's Executive Order 111 [www.nysed.org/exorder111guidelines.pdf](http://www.nysed.org/exorder111guidelines.pdf) and [www.nysed.org/exorder111orig.html](http://www.nysed.org/exorder111orig.html)

<sup>48</sup> See [www.millionsolarroofs.org](http://www.millionsolarroofs.org)

<sup>49</sup> See [www.lioffshorewindenergy.org](http://www.lioffshorewindenergy.org)

increased generation efficiency and output, drastic reductions of SO<sub>x</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> emissions and savings to ratepayers.<sup>50</sup>

## 5. Level the Playing Field

LIPA, other utilities and government must take the lead in offering incentives through rebates and tax credits to residents and businesses, which install energy efficient equipment and solar panels, fuel cells, wind turbines and other alternative technologies. Such incentives can help to level the playing field with historically heavily subsidized power sources such as coal, oil, gas and nuclear.

## 6. Carrots & Sticks

Rate structures should be evaluated and adjusted to incorporate the proper incentives for energy efficiency and shifting usage to off-peak times and disincentives for wasteful energy consumption and peak usage. LIPA should implement an annual revenue adjustment mechanism (ARAM) designed to align the financial interests of LIPA with the interests of customers and society at large.

## 7. Reward Conservation

LIPA should offer a rate rebate similar to California PG&E's "20/20 rebate". The rebates go to households that use 15% to 20% less electricity than they used in the previous year. LIPA should also reinstate LILCO's free Home Energy Audit, and provide programs that take a whole building approach, fostering conservation of all energy sources (including gas and oil).

## 8. Cap Carbon and Other Pollutants

New York State law should establish a power sector carbon emissions cap at 40% below 1990 levels to reduce greenhouse gases in New York State. In addition, legislation should be enacted mandating reductions in sulfur dioxide (SO<sub>2</sub>) by 75%, nitrogen oxides (NO<sub>x</sub>) by 75%, and mercury emissions (Hg) by 90% below 1990 levels. Until such legislation is in effect, LIPA should adopt these standards voluntarily and require its electricity suppliers to submit implementation plans to meet such standards.

## 9. Emission Standards for Diesels

DEC should establish and phase in strict new emission standards for small electric generators that fully protect health and the environment and LIPA should adopt such standards voluntarily. New standards should encourage clean technologies such as solar and wind, allow developing technologies such as fuel cells and microturbines to

---

<sup>50</sup> A recent report on repowering Dr. Matthew Cordaro is available on CAP's website at [www.energymatters.org/LIpowerplants1995to2000Report.pdf](http://www.energymatters.org/LIpowerplants1995to2000Report.pdf)

gradually get cleaner, and should prohibit diesel generators, except for infrequent emergencies when they are operated in conjunction with emission control measures.

## 10. Improve on Siting

New York State's Power Plant Siting Law (Article X) must be reformed to ensure meaningful public participation, adequate environmental and health review, and mitigation of impacts of generating electricity in New York State. The law should be strengthened to include, among other requirements, a declaration of need, an analysis of the comprehensive energy picture and a lowering of the threshold to 40 MW to close the present 80 MW loophole.

## 11. Job Impacts

When choosing between various resources to meet electricity needs, impacts on job creation/retention as well as other local economic impacts should be considered. Investments in energy efficiency and renewable energy technologies can often generate more than twice the number of job years compared to investments in fossil fueled plants.

## 12. Environmental Justice

In siting decisions environmental justice issues should be considered and disproportionate negative impacts on low income communities must be avoided.

## 13. Holding LIPA Accountable

To provide more accountability, LIPA's appointed Board of Trustees should be replaced by an elected Board. Additional checks and balances should be provided to make LIPA more accountable to Long Islanders. An independent forum to resolve customer complaint issues should be established (i.e. NY PSC).

## 14. Provide Citizen Oversight

The LIPA Act should be amended to establish a Citizen Advisory and Oversight Committee. This Committee should have adequate funding for professional staff and consultants. Among other things, the Committee should be charged with developing a comprehensive least-cost energy plan which shall consider practical and economical use of conservation, renewable resources, and cogeneration for providing service to LIPA customers.

## 15. Low Income Programs & Lifeline Rates

LIPA and local governments should work to provide additional programs designed to improve energy efficiency in low income housing units. LIPA, KeySpan and other agencies should work directly with landlords, offering incentives and rebates which encourage upgrades of heating and cooling systems, replacement of old appliances and improved weatherization and efficiency of their buildings. LIPA should consider a special “Lifeline” rate category for customers which have difficulties paying their electric bills.

## 16. Plan for the Unexpected

LIPA should develop an energy efficiency and peak response contingency plan that can be implemented immediately in the event of unanticipated supply disruptions.

## 17. Combine Heat and Power

LIPA should work with NYSERDA to assess the opportunities that exist to site Combined Heat & Power (CHP) systems on the Island and implement policies that will facilitate the siting of such systems, including direct financial assistance. LIPA and local governments should also lobby federal and state government to provide investment or production tax credits for clean distributed energy sources such as CHP.

## 18. PV Rebate

LIPA should maintain its highly successful Solar Pioneer Program with a rebate level of \$5,000 per kW until installations reach an annual rate of 1,000 systems. In addition, if annual installations are below the 1,000 mark, LIPA should consider additional incentive mechanisms to ensure reaching the minimal goal of 10,000 by 2010 committed under the LI Solar Roofs Initiative<sup>51</sup>. Net-metering, currently limited to the residential sector, should be offered to commercial customers and should apply to all renewable energy sources.

## 19. NY Energy Smart

LIPA should seek better integration of its Clean Energy Initiative programs with successful New York Energy Smart<sup>52</sup> programs. While some of LIPA’s programs are modeled after existing Energy Smart programs, LIPA can improve cooperation with statewide NYS Public Service Commission and NYSERDA programs.

---

<sup>51</sup> See [www.millionsolarroofs.org](http://www.millionsolarroofs.org), [www.energymatters.org/lishines](http://www.energymatters.org/lishines) and [www.lipower.org/solar/index.html](http://www.lipower.org/solar/index.html)

<sup>52</sup> See [www.getenergysmart.org](http://www.getenergysmart.org)

## 20. T&D Upgrade Alternatives

When planning for upgrades to the Island's electric Transmission & Distribution (T&D) system, LIPA should give consideration to clean distributed generation in lieu of investments in T&D.

## 21. Reincarnate LIPA's Clean Energy Advisory Panel

LIPA should reactivate its Clean Energy Advisory Panel to solicit public input on renewable energy projects and aid in overseeing LIPA's clean energy programs. LIPA should appoint members of the public who have demonstrated interest and expertise in these issues.

## 22. Reevaluate Load Expansion/Attraction Program

LIPA should reevaluate its Load Expansion/Attraction efforts which increase LIPA's revenue but result in increased demand and consumption.

## 23. Internalizing Externalities

When making energy planning decisions, LIPA should consider the indirect ('external') cost that result from the generation of electricity with fossil fuels, including costs resulting from environmental degradation, health related costs, and other societal costs not directly included in electric rates.

## 24. Reduce Wasteful Energy Consumption

LIPA and others should work to eliminate unnecessary electric consumption, such as daytime usage of outdoor and street lighting, running air-conditioners while windows or exterior doors are open, etc.

## 25. Honest Budgets

LIPA's rates and budgets should be structured to reflect the true cost of debt, capital improvements, operation & maintenance, as well as actual fuel costs. Accounting practices designed to defer current costs to later years in an effort to create the impression of lower electric rates must be avoided.

## 26. Clear Billing

LIPA should provide for more honest customer billing by showing additional information in monthly bills such as the actual cost of electricity during peak periods, power plant emissions, etc. Temporary fuel and purchased power cost adjustment charges should be used strictly on a short term basis. Increased costs that can be

expected to exist for more than 6 to 9 months should be incorporated in LIPA's budget and base rates.

## 27. Generation Acquisition

Should LIPA decide to acquire generation assets, the Authority should purchase only state-of-the-art technology. LIPA should not purchase the existing KeySpan power plants under the Generation Purchase Rights Agreement without a guaranty of timely repowering of those plants and a fair and firm purchase price.

## 28. No More Nukes

LIPA should comply with its statute and sell its 18% share in the Nine Mile Point 2 upstate nuclear reactor as all other New York State utilities with an ownership in the plant have already done.

## 29. Roll Back Increased Emissions

In light of the drastic increases in emissions from the Island's power plants in recent years, LIPA must adopt firm goals and devise mechanisms that will reduce total emission levels of SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> at least to below 1995 levels within the next five years.

## 30. Counties Count

Nassau and Suffolk County Government can become part of the solution through numerous initiatives, including a waiver of County Sales Tax on energy efficient EnergyStar™ and renewable energy products. The Counties should commit on a fast-track schedule to procuring only energy efficient buildings, lighting and appliances and require that at least 20% of its electricity consumption come from renewable energy sources by 2010 similar to Governor Pataki's Executive Order #111<sup>53</sup>.

## 31. Towns, Too

Town Government should consider similar initiatives as the Counties and should seek to improve and enforce local building codes with respect to energy efficiency requirements. Improved codes could dramatically reduce energy demand on Long Island and help LIPA avoid stresses on the electric system. Town and County governments should retain or designate an energy Resource Conservation Manager charged with development, implementation and monitoring of energy-efficient operation and procurement at public facilities.

---

<sup>53</sup> See [www.nyserda.org/exorder111guidelines.pdf](http://www.nyserda.org/exorder111guidelines.pdf) and [www.nyserda.org/exorder111orig.html](http://www.nyserda.org/exorder111orig.html)

## 32. LEED by Example

“Leadership in Energy and Environmental Design” (LEED)<sup>54</sup> and other green building standards should be adopted in construction of all public facilities, including schools.

## 33. Economic Development Power

Businesses that receive reduced electric rates under certain economic development power programs should be required to install energy efficient equipment and appliances that achieve a minimum 1/3 reduction in energy consumption and a 50% energy use reduction for the term of the contract.

## 34. Cool Communities

LIPA, state and local governments should partner with grassroots environmental, conservation and builders’ organizations to advance a series of measures called Urban Heat Island Reduction Initiatives under the Cool Communities program<sup>55</sup>. These measures, which involve reflective roofing and pavement and conservation of trees, have been adopted by other localities as cost-effective methods of reducing electricity demand during hot summer months. They do so by lowering temperatures inside and around buildings.

## 35. Create Energy Committees

Various levels of government should consider establishing committees charged with developing and implementing recommendations on local energy issues. Specifically, the Nassau County Legislature should establish a legislative committee on energy and appoint a Citizens Energy Advisory Committee similar to the one established recently in Suffolk County. At the town level, citizens energy advisory committees should be established and towns should designate a Town Board energy liaison.

## 36. Information Please

All levels of local government should provide informational resources on energy issues and available programs through Town and County offices. In addition, all institutions receiving Town or County funding (i.e. schools, libraries, etc.) should be required to offer such information on their premises, in mailings, websites, etc.

---

<sup>54</sup> See [www.usgbc.org](http://www.usgbc.org)

<sup>55</sup> See for example [www.coolcommunities.org](http://www.coolcommunities.org)

### 37. Keep the Skies Dark

LIPA, state, county and local government should work to improve street and outdoor lighting policies. Poorly designed and misdirected outdoor and night light fixtures waste energy and are responsible for unnecessary light pollution leading to 'skyglow' as well as endangering drivers by causing glare. The outdated, LIPA leased, commercial 'Nightlight: Dusk to Dawn' area floodlight fixtures should be replaced with the full-cut-off type lamps, and set to turn off when not essential for pedestrian safety. LIPA should also quantify and report the costs of public nighttime lighting.

### 38. Neighborhood Review Boards

Neighborhood Review Boards should be established in communities most affected by power plants to ensure access to information and enable the community to monitor plant emissions, output and other issues.

### 39. Public Participation

All stakeholders, not just industry representatives or elected officials, should be able to contribute directly to the creation of an energy plan. LIPA should open up its planning process to all interested parties and engage in active outreach to all of Long Island's citizens.

### 40. How Are We Doing?

LIPA should prepare a bi-annual resource plan; and provide regular monitoring and reporting of performance in fulfilling the above-stated goals.

\* \* \*

The Citizens Energy Plan seeks to provide answers to pressing questions on energy issues facing every Long Islander with a pragmatic approach to Long Island's future energy needs. As we move forward in a rapidly changing and unstable world, we must continue to acknowledge and embrace the changing environment of energy production and demand.

The choices we make here on Long Island and throughout our region have a ripple effect which cannot be ignored. It is up to us to make these choices responsibly by choosing sustainable energy practices that protect and preserve our health and environment for generations to come.

*It is up to Long Island's citizens to make responsible choices that protect and preserve our health and environment for generations to come*

**Draft  
Citizens Energy Plan  
for  
Long Island**

Compiled by

Sustainable Energy Alliance of Long Island c/o Citizens Advisory Panel  
PO Box 789, Bridgehampton, NY 11932 (631) 537-8282

[www.seali.org](http://www.seali.org) [info@seali.org](mailto:info@seali.org)

**Draft  
Citizens Energy Plan  
for  
Long Island**

Compiled by

Sustainable Energy Alliance of Long Island c/o Citizens Advisory Panel  
PO Box 789, Bridgehampton, NY 11932 (631) 537-8282

[www.seali.org](http://www.seali.org) [info@seali.org](mailto:info@seali.org)