

## CLEAN ENERGY DEVELOPMENT IS ALREADY GOOD BUSINESS FOR ILLINOIS

*Repowering the Midwest* presents a 20-year plan for moving Illinois to a cleaner energy future. Many Illinois businesses and thousands of workers are already part of the growing clean energy business sector, including:

ILLINOIS BUSINESSES		
Company	Location	Business Product
Advance Transformer Co.	Rosemont	Energy Efficient Lighting Ballasts
Maytag	Herrin	Energy Efficient Clothes Dryers
NEG Micron	Rolling Meadows	Wind Turbine Sales and Service
Osram Sylvania	Lake Zurich	Energy Efficient Lighting Ballasts
Spire Solar	Chicago	Solar Photovoltaic Panels

In addition, thousands of Illinois businesses have already invested in modern energy efficiency technologies ranging from new industrial motors and HVAC systems to efficient commercial lighting. Countless homeowners and renters have installed energy efficient refrigerators, air conditioners and compact fluorescent lighting.

### NEG MICON ROLLING MEADOWS AND CHAMPAIGN, ILLINOIS

*Manufactures and refurbishes wind turbines*

NEG Micon is one of the world's leading wind turbine manufacturers. For more than 20 years, NEG Micon has been active in advancing wind power as a viable industrial alternative to conventional power production. Its U.S. headquarters are located in the Chicago suburbs; its Champaign facility tests and rebuilds turbines. NEG Micon turbines have been installed in wind projects throughout the U.S., including the new 80 MW Top of Iowa project.

### ADVANCE TRANSFORMER CO. ROSEMONT, ILLINOIS

*Manufactures fluorescent and HID ballasts*

Advance Transformer Co., a division of Philips Electronics North America, is an industry leader in the design, development, manufacture and sale of fluorescent and high intensity discharge (HID) ballasts for commercial, industrial and institutional lighting. Founded in 1945 and headquartered in Rosemont, Illinois, Advance has numerous manufacturing and distribution facilities throughout the Midwest and North America, employing 400 people in Illinois. Advance works diligently to support and promote energy-efficient ideals and was named the EPA's Energy Star® Buildings Program "Ally of the Year" in 2000.

## REPOWERING THE MIDWEST – THE CLEAN ENERGY DEVELOPMENT PLAN FOR THE HEARTLAND

### CAPTURING 21ST CENTURY OPPORTUNITIES FOR CLEAN ENERGY

*Repowering the Midwest*, issued by the Environmental Law and Policy Center in 2001, presents a strategic clean energy development plan that implements smart policies and practices to capture readily achievable environmental, public health and economic development benefits. This sustainable development strategy is good for both the economy and our environment. The Clean Energy Development Plan proposes policies to implement underutilized energy efficiency technologies and to aggressively develop renewable energy resources. By diversifying the regional power supply which relies too heavily on old, highly polluting coal plants and nuclear plants, Midwest and Great Plains states can reduce pollution, improve electricity reliability, create new manufacturing and installation jobs, and provide "clean energy. **In Illinois alone, implementing the Clean Energy Development Plan will produce 57,000 net new jobs and \$6.2 billion in increased economic output by 2020.**

### THE CLEAN ENERGY DEVELOPMENT PLAN

Illinois should seize the opportunity to develop its clean energy resources: modern energy efficiency technologies and wind, biomass and solar power. The Clean Energy Development Plan achieves large environmental, public health and economic development benefits. Moreover, investing in energy efficiency and renewable energy will diversify the region's electricity portfolio, thereby improving reliability.

FIGURE 1: ECONOMIC IMPACTS OF THE CLEAN ENERGY PLAN FOR ILLINOIS

Clean Energy	Employment Impacts (# of net new jobs created)		Economic Output Impacts (2001\$)	
	2010	2020	2010	2020
Energy Efficiency	25,953	43,429	\$2.6 Billion	\$4.7 Billion
Renewable Energy	8,580	13,470	\$950 Million	\$1.5 Billion
<b>Total-Net</b>	<b>34,533</b>	<b>56,899</b>	<b>\$3.6 Billion</b>	<b>\$6.2 Billion</b>

The Clean Energy Development Plan:

1. Aggressively implements the newest, as well as "tried and true," energy efficiency technologies.
2. Develops and implements renewable energy technologies—wind, biomass and solar power—so that they provide 8 percent of the region's electricity generation by 2010, and 22 percent by 2020.
3. Develops and implements efficient natural gas uses in appropriate locations, especially Combined Heat and Power (CHP), district energy systems and fuel cells, so that they provide an additional 10 percent of the region's electricity generation by 2010, and an additional 25 percent by 2020.
4. Retires selected older, less efficient and highly polluting coal plants.
5. Applies sustainable development strategies to aggressively link environmental improvement and economic development policies.

## "JOB JOLT": THE ECONOMIC IMPACTS OF REPOWERING THE MIDWEST

The Regional Economics Applications Laboratory (REAL) of the University of Illinois, a research group involved in urban and regional economic forecasting, evaluated the economic impacts of implementing the Clean Energy Development Plan. Using sophisticated econometric modeling and the data and assumptions contained in *Repowering the Midwest*, REAL quantified the net new jobs and increased economic output that would be created in each state within the region. For Illinois, the study projects:

- ➔ New Jobs: 35,000 net new jobs by 2010 and 57,000 by 2020, in almost every sector of the state's economy.
- ➔ Economic Growth: \$3.6 billion of increased economic output by 2010 and \$6.2 billion by 2020, mostly from manufacturing, construction and service related sectors.
- ➔ Energy Cost Savings: \$1 billion in annual net electricity cost savings by 2020 from investments in energy efficiency. These savings will be re-spent by businesses and residential consumers to bolster Illinois' economy.

### Environmental Law and Policy Center

The Environmental Law and Policy Center is the Midwest's leading environmental legal advocacy and eco-business innovation organization. We believe that environmental progress and economic development can be achieved together, and we put that principle into practice through clean energy development and other initiatives to protect natural resources and improve environmental quality. For more information, please contact the Environmental Law and Policy Center at 312-673-6500 or [www.repowermidwest.org](http://www.repowermidwest.org).

### Regional Economics Applications Laboratory

The Regional Economics Applications Laboratory (REAL) was formed in 1989 to provide analytical capability to a range of policy and decision makers in the Midwest through the construction and application of economic models of urban, metropolitan and state economies. Applications have ranged from impacts of cultural events to the role and impact of international trade on interstate trade among the Midwestern state economies.



- Generation from renewable energy resources and efficient natural gas increases. By 2010, these sources will represent 18% of Illinois' electricity generation, and by 2020, they will be 43% as shown in Figure 3.
- Generation from older, less efficient and highly polluting coal and nuclear plants decreases from 95% of Illinois' power mix today to 53% in 2020.

### ECONOMIC BENEFITS OF INVESTING IN MODERN ENERGY EFFICIENCY TECHNOLOGIES

Illinois has a strong manufacturing base, and local companies now produce many energy efficiency products that are sold throughout the region and nation. If these industries grow, new jobs will be created not only in manufacturing, but also installing and maintaining these efficiency products ranging from industrial motors to advanced commercial lighting. In addition, businesses and residential consumers investing in energy efficiency measures will re-channel some of their energy cost savings into capital investment and increased payroll. Household energy cost savings from using efficient lighting, air conditioners, refrigerators and other appliances will also be re-spent on the State Streets and Main Streets of Illinois' cities and towns.

Implementing modern new cost-effective energy efficiency technologies – commercial and residential lighting, heating, ventilation and cooling (HVAC), industrial motors, and refrigerators and other appliances – will flatten out Illinois' electricity demand over the next two decades as shown in Figure 2. That will save 50,761 gigawatt-hours of electricity by 2020 – equal to

about 16 power plants—and reduce electricity demand by 16% in 2010 and 28% in 2020 compared to “business as usual.” Figure 4 identifies the projected economic impacts of implementing *Repowering the Midwest's Energy Efficiency Plan* in Illinois.

Investments in cost-effective energy efficiency will produce \$1 billion in net electricity cost savings for both business and residential consumers. As the billions of dollars of benefits from energy efficiency are spread across the Illinois economy, the decline of jobs in the utility sector due to flattened demand for electricity is greatly offset by the large numbers of new jobs created in many other business sectors, particularly manufacturing, trade and services.



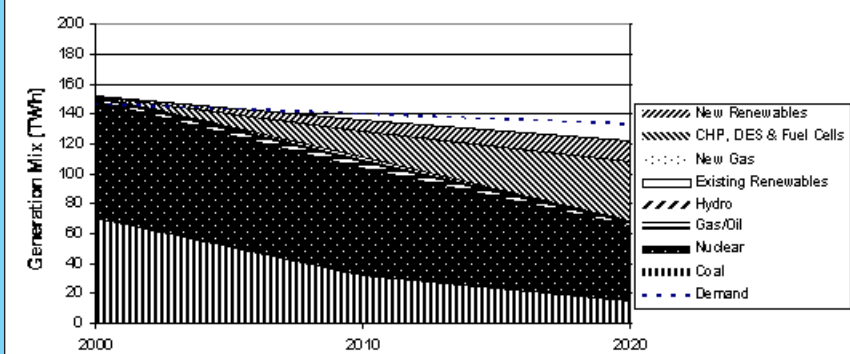
### ECONOMIC BENEFITS OF DEVELOPING CLEAN RENEWABLE ENERGY AND EFFICIENT GENERATION

Under the Clean Energy Development Plan, renewable energy – especially wind power and biomass energy – and clean efficient uses of natural gas focused on combined heat and power applications (CHP) will be 18% of Illinois' generation mix by 2010 and 43% by 2020.

This clean energy development will generate thousands of new jobs and significant economic growth benefits in both urban and rural areas. The winners will be businesses engaged in: manufacturing, installing and servicing renewable and clean energy equipment; farmers who lease their land for wind turbines or grow and harvest energy crops; businesses engaged in related services; and communities with renewable and clean energy projects that gain from this increased economic activity. Figure 5

identifies the projected economic impacts of implementing *Repowering the Midwest's Clean Energy Generation Plan* in Illinois.

FIGURE 2: CLEAN ENERGY DEVELOPMENT PLAN FOR ILLINOIS



### THE CLEAN ENERGY DEVELOPMENT PLAN IN ILLINOIS

As Figure 2 shows, implementing the Clean Energy Development Plan in Illinois means:

- Energy efficiency measures flatten out demand, and therefore, the need for new generation. By 2010, electricity demand will be 16% lower than a “business as usual” baseline, and by 2020, demand will be 28% lower, avoiding the construction of 16 new power plants to meet this demand.

FIGURE 3: ILLINOIS' CLEAN ENERGY DEVELOPMENT PLAN— MEGAWATTS OF NEW CLEAN GENERATION

Generation Type	2010	2020
Wind Power	423 megawatts	1,519 megawatts
Biomass Energy	984 megawatts	1,642 megawatts
Efficient Natural Gas, CHP	2,162 megawatts	4,997 megawatts
Photovoltaics	80 megawatts	200 megawatts
<b>Total</b>	<b>3,649 megawatts</b>	<b>8,358 megawatts</b>

Source: Regional Economics Applications Laboratory.

FIGURE 4: ILLINOIS ECONOMIC IMPACTS OF INVESTING IN ENERGY EFFICIENCY

Employment Sector	Employment Impacts (# of net new jobs created)		Economic Output Impacts (Additional economic activity in 2001\$)	
	2010	2020	2010	2020
Agriculture/Mining	873	1,921	\$24 Million	\$66 Million
Construction/Manufacturing	5,911	9,465	\$1.8 Billion	\$3.2 Billion
Utilities/Transport/Communications	-2,543	-4,448	-\$947 Million	-\$1.6 Billion
Wholesale/Retail Trade	10,214	16,677	\$708 Million	\$1.2 Billion
Services/Government	11,498	19,814	\$1.0 Billion	\$1.8 Billion
<b>Total-Net</b>	<b>25,953</b>	<b>43,429</b>	<b>\$2.6 Billion</b>	<b>\$4.7 Billion</b>

Source: Regional Economics Applications Laboratory.



FIGURE 5: ILLINOIS ECONOMIC IMPACTS OF INVESTING IN CLEAN ENERGY GENERATION

Employment Sector	Employment Impacts (# of net new jobs created)		Economic Output Impacts (Additional economic activity in 2001\$)	
	2010	2020	2010	2020
Agriculture/Mining	750	1,170	\$21 Million	\$36 Million
Construction/Manufacturing	2,480	3,620	\$464 Million	\$700 Million
Utilities/Transp/Communications	440	840	\$106 Million	\$216 Million
Wholesale/Retail Trade	710	1,060	\$60 Million	\$96 Million
Service/Government	4,250	6,780	\$299 Million	\$480 Million
<b>Total-Net</b>	<b>8,580</b>	<b>13,470</b>	<b>\$950 Million</b>	<b>\$1.5 Billion</b>

Source: Regional Economics Applications Laboratory.