

# QUARTERLY REPORT

*For the quarter ending September 30, 2001*

## **NEW YORK ENERGY \$MART<sup>SM</sup> PROGRAM EVALUATION AND STATUS REPORT**

*Quarterly Report to the New York State  
Department of Public Service*

**NYSERDA**



**New York Energy \$mart<sup>SM</sup>**  
**QUARTERLY PROCESS AND PROGRESS UPDATE**  
**For Quarter Ending September 30, 2001**

**INTRODUCTION**

This report updates the implementation status of the **New York Energy \$mart<sup>SM</sup>** program as of September 30, 2001. The results from the initial three-year System Benefits Charge program have been combined with those from the five-year expanded program.<sup>1</sup> This report provides the following updates: budget status; recent solicitations; anticipated energy and demand savings from committed funds; energy and demand savings from installed measures; anticipated oil and natural gas savings from committed funds; and anticipated environmental and economic benefits from committed funds.

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<sup>1</sup> New York State Public Service Commission. January 26, 2001. *Order Continuing and Expanding the System Benefits Charge for Public Benefits Programs.*

## BUDGET STATUS

The eight-year budget by major funding category is shown in Table 1. Also shown are the funds committed<sup>2</sup> and encumbered<sup>3</sup> as of September 30, 2001. Approximately \$272.4 million has been committed as of September 30, representing 29.8% of the 8-year budget. Approximately \$195.5 million has been encumbered, representing 21.4% of the 8-year budget.<sup>4</sup>

**Table 1: Budget Status by Program Area as of September 30, 2001 (\$ million)**

<b>Program Area</b>	<b>8-year Budget</b>	<b>Funds Committed (See Footnote 2)</b>	<b>% of 8-year Budget Committed</b>	<b>Funds Encumbered (See Footnote 3)</b>	<b>% of 8-year Budget Encumbered</b>
Business and Institutional	355.4	146.3	41.2%	95.0	26.7%
Residential	150.2	43.2	28.8%	41.6	27.7%
Low-Income	119.6	13.9	11.6%	12.6	0.8%
R&D	210.8	54.8	26.0%	32.1	15.2%
Environmental Disclosure	2.9	0.4	13.8%	0.4	13.8%
Evaluation	15.3	1.0	6.5%	1.0	6.5%
Administration	61.4	12.9	21.0%	12.9	21.0%
<b>TOTAL</b>	<b>915.6</b>	<b>272.4</b>	<b>29.8%</b>	<b>195.5</b>	<b>21.4%</b>

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<sup>2</sup> For financial incentive programs administered through NYSERDA, *e.g.*, New Construction Program, committed funds include (1) funds associated with signed or pending contracts and purchase orders and (2) funds set aside to meet applicants' incentive requests. For projects administered by NYSERDA through a competitive solicitation, *e.g.*, Distributed Generation-Combined Heat and Power Program, committed funds represent funds awarded to contractors. For programs administered by outside contractors, *e.g.*, Direct Installation Program, committed funds represent the total amount awarded to the contractor for implementation and participant incentives.

<sup>3</sup> Encumbered funds are associated with signed contracts and purchase orders.

<sup>4</sup> As of September 30, 2001, \$84.2 million, or about 9% of the 8-year budget, has been invoiced.

## SOLICITATIONS

Table 2 lists Program Opportunity Notices (PONs) that were open during the third quarter of 2001. The purposes of the PONs were to announce financial incentives or to solicit contractor support for program implementation.

**Table 2: Third Quarter 2001 Solicitations**

Solicitation Number	Solicitation Name and Purpose
Business and Institutional Program Area	
PON 593-01	New Construction Program: Provide financial incentives
PON 597-01	Smart Equipment Choices Program: Provide financial incentives
PON 602-01	<b>New York Energy \$mart<sup>sm</sup></b> Loan Fund: Solicit lender participation and provide borrower incentives.
PON 592-01	Premium-Efficiency Motors: Solicit vendor participation.
PON 605-01	Technical Assistance: Provide financial incentives
PON 624-01	Commercial/Industrial Performance Program (Standard Performance Contracting): Provide financial incentives
PON 577-00 <sup>5</sup>	Peak Load Reduction Program: Provide financial incentives
Residential Program Area	
PON 615-01	Low-Income Heating Oil Summer Fill Pilot Program: Contractor support for program implementation.
R&D Program Area	
PON 590-01	Renewable Energy Technologies: Contractor support for education and outreach.
RFP 601-01	Wastewater Treatment Plants Energy Performance Evaluation Through Submetering: Seek proposals from contractors to evaluate the process and energy performance of wastewater treatment plants using submetering technology.

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<sup>5</sup> This \$14 million solicitation included \$3.0 million for PV from R&D .

## PROGRESS SUMMARY

### Anticipated Electricity Savings

Tables 3 through 5 provide energy and demand savings for three categories of programs: (1) Business and Institutional, (2) Residential, and (3) Industry and Buildings R&D. Each table shows the anticipated energy savings from funds committed as of September 30, 2001 and the energy savings from measures installed as of September 30, 2001. For some programs, energy savings from funds committed are currently not available and are denoted as To Be Determined (TBD).

**Table 3: Energy and Demand Savings from Business and Institutional Programs**

Program	Anticipated from Funds Committed			From Measures Installed as of Sept. 30, 2001		
	Funding (\$ Million)	kWh (Million)	MW	Funding (\$ Million)	kWh (Million)	MW
C/I Performance (Standard Performance Contracting)	\$56.5	351.9	74.6	\$27.0	158.0	37.4
New Construction	\$28.1	89.6	35.1	\$2.4	3.2	1.2
Smart Equipment Choices	\$0.3	TBD	TBD	\$0.001	TBD	TBD
Small Commercial Lighting	\$3.5	TBD	TBD	\$1.0	0.02	0.003
Commercial HVAC	\$1.6	TBD	TBD	\$0.2	0	0
Cooling Recommissioning	\$2.1	26.8	8.8	\$2.1	26.8	8.8
Peak Load Reduction Program	\$15.6	n/a	221.1*	\$6.4	n/a	107.5*
Premium-Efficiency Motors	\$1.0	3.8	0.8	\$0.7	1.7	0.4
Technical Assistance Programs	\$13.0	320.0	86.0	3.5	86.5	23.0
Loan Fund (C/I and Residential)	\$2.3	TBD	TBD	\$1.8	6.7	1.5
<b>Business and Institutional Programs Total</b>	<b>\$124.0</b>	<b>792.1</b>	<b>426.4</b>	<b>\$45.1</b>	<b>282.9</b>	<b>179.8</b>

TBD: To be determined.

n/a: Not applicable

\*Approximately 95% of the demand reduction is curtailable load or on-site generation capacity.

**Table 4: Energy and Demand Savings from Residential Programs**

Program	Anticipated from Funds Committed			From Measures Installed as of Sept. 30, 2001		
	Funding (\$ Million)	kWh (Million)	MW	Funding (\$ Million)	kWh (Million)	MW
Appliance & Lighting and ENERGY STAR® Awareness	\$15.7	65.1	11.3	<b>\$15.7</b>	65.1	11.3
ENERGY STAR® Homes	\$4.3	TBD	TBD	\$1.9	0.02	0.02
Home Performance with ENERGY STAR® Star	\$3.6	TBD	TBD	\$3.4	<b>0.05</b>	<b>0.004</b>
Keep Cool*	\$8.1	5.4	8	\$8.1	5.4	8
Residential Comprehensive Energy Management	\$1.4	TBD	TBD	\$0.4	0	0
Low-Income Aggregation	\$1.2	TBD	TBD	\$0.24	TBD	TBD
Publicly Assisted Housing	\$1.3	TBD	TBD	\$0.14	TBD	TBD
Low-Income Direct Installation	\$9.9	14.2	1.5	\$3.2	5.3	0.56
<b>Residential Programs Total</b>	<b>\$45.5</b>	<b>84.7</b>	<b>20.8</b>	<b>\$33.1</b>	<b>75.9</b>	<b>19.9</b>

\* Results are presented through the end of the Summer 2001 program.

TBD: To Be Determined.

**Table 5: Energy and Demand Savings from Industry and Buildings R&D Programs**

Program	Anticipated from Funds Committed			From Measures Installed as of Sept. 30, 2001		
	Funding (\$ Million)	kWh (Million)	MW	Funding (\$ Million)	kWh (Million)	MW
Enabling Technologies for Price Responsive Load	\$0.8	n/a	67.0*	\$0.8	n/a	67.0*
Distributed Generation /CHP	\$15.5	n/a	32.0	\$0.0	0.0	0.0
<b>Industry and Buildings R&amp;D Total</b>	<b>\$16.3</b>	<b>0.0</b>	<b>99.0</b>	<b>\$0.8</b>	<b>0.0</b>	<b>67.0</b>

n/a: Not applicable

\* Represents curtailable load and on-site generation capacity.

Table 6 provides a summary of information presented in Tables 3 through 5. The total energy and demand savings are shown separately for energy efficiency measures and curtailable load. The anticipated energy savings from funds committed as of September 30, 2001 is 876.8 million kWh per year.<sup>6</sup> The anticipated demand savings is 524.1 MW of which 269.1 MW is from energy efficiency measures. The energy savings from measures installed as of September 30, 2001 is 358.8 million kWh per year. The demand savings from installed measures is 252.6 MW of which 97.5 MW is from energy efficiency measures.

**Table 6: Summary of Energy and Demand Savings**

	Anticipated from Funds Committed		From Measures Installed as of Sept. 30, 2001	
	kWh (million)	MW	kWh (million)	MW
<b>Energy Efficiency (Permanent) Measures</b>				
Business and Institutional Programs	792.1	216.3	282.9	77.6
Residential Programs	84.7	20.8	75.9	19.9
Distributed Generation / CHP	n/a	32.0	n/a	0.0
<b>Energy Efficiency Measures Subtotal</b>	<b>876.8</b>	<b>269.1</b>	<b>358.8</b>	<b>97.5</b>
<b>Curtailable Load</b>				
Peak Load Reduction Program	n/a	210.0	n/a	102.1
Enabling Technologies Program	n/a	67.0	n/a	67.0
Overlap Between Programs*	n/a	-22.0	n/a	-14.0
<b>Curtailable Load Subtotal</b>	<b>n/a</b>	<b>255.0</b>	<b>n/a</b>	<b>155.1</b>
<b>Total of Energy Efficiency Measures and Curtailable Load</b>	<b>876.8</b>	<b>524.1</b>	<b>358.8</b>	<b>252.6</b>

\* The overlap represents the demand reduction achieved by customers that participated in both the Peak Load Reduction Program and the Enabling Technologies Program.

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<sup>6</sup> Based on Year 2000 weighted average electricity price of \$0.113, the annual electricity bill savings are \$99.0 million per year.

## Renewable Energy

Table 7 presents the energy generation from the renewable energy programs. As in the previous tables, the energy and capacity is shown for two categories of outcomes: anticipated energy generation from funds committed and energy generation from equipment installed as of September 30, 2001.

**Table 7: Energy and Capacity from Renewable Energy Generation**

<b>Program</b>	<b>Anticipated from Funds Committed</b>			<b>From Measures Installed as of Sept. 30, 2001</b>		
	<b>Funding (\$ Million)</b>	<b>kWh (Million)</b>	<b>MW</b>	<b>Funding (\$ Million)</b>	<b>kWh (Million)</b>	<b>MW</b>
Wind Plant Demonstration	\$7.0	103.0	41.5	\$7.0	103.0	41.5
PV on Buildings	\$3.0	0.95	0.70	\$0.3	0.21	0.15
Residential PV	\$1.2	0.40	0.29	n/a	<0.0	0.03
High-Value Wind & PV	\$1.2	0.77	0.38	n/a	0.01	0.01
<b>Renewable Energy Generation Total</b>	<b>\$12.4</b>	<b>105.1</b>	<b>42.9</b>	<b>\$7.3</b>	<b>103.2</b>	<b>41.7</b>

Other Fuel Savings.

Several programs provide energy savings for fuels other than electricity. The anticipated and achieved natural gas and oil savings from these programs are reported in Table 8. For several new programs, there is insufficient data to project the savings from committed funds. Therefore, the savings for these programs are denoted as To Be Determined (TBD). From committed funds, the anticipated savings in natural gas is 3.3 TBtu per year and the anticipated oil savings 1.0 TBtu per year.<sup>7</sup>

**Table 8: Annual Natural Gas and Oil Savings**

New York Energy \$mart <sup>SM</sup> Program	Anticipated From Funds Committed		From Measures Installed as of Sept. 30, 2001	
	Natural Gas (mmBtu)	Oil (mmBtu)	Natural Gas (mmBtu)	Oil (mmBtu)
C/I Technical Assistance Programs	3,300,000	1,000,000	870,000	280,000
Geothermal Heat Pump Project	TBD	TBD	TBD	TBD
Loan Fund	TBD	TBD	0.03	0
ENERGY STAR <sup>®</sup> Homes	TBD	TBD	530	0
Home Performance ENERGY STAR <sup>®</sup>	TBD	TBD	0.005	0
Publicly Assisted Housing	0	9,133	TBD	TBD
<b>Total</b>	<b>3,300,000</b>	<b>1,000,000</b>	<b>870,530</b>	<b>280,000</b>

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<sup>7</sup> Based on Year 2000 weighted average natural gas price of \$7.48 per mmBtu and weighted average oil price of \$7.12 mmBtu, annual bill savings are \$32 million per year.

Environmental and Economic Benefits.

Anticipated reductions in nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and carbon dioxide (CO<sub>2</sub>) emissions are presented in Table 9 for those programs listed in previous tables. These reductions are based on annual electricity savings of 876.8 million kWh, clean generation of 105.1 million kWh, natural gas savings of 3.3 Tbtu, and annual oil savings of 1.0 Tbtu. Collectively, the annual CO<sub>2</sub> reduction is equivalent to removing approximately 140,000 automobiles from New York's roadways. The cost savings from reduced energy use (from electricity, oil, and natural gas bills) is expected to be approximately \$131 million per year, leading to the creation or retention of about 2,500 jobs in New York's service and retail trade sectors.<sup>8</sup>

**Table 9: Anticipated Annual Emission Reductions**

<b>Primary Pollutant</b>	<b>From Electricity Savings</b>	<b>From Natural Gas Savings</b>	<b>From Oil</b>	<b>From Clean Generation: Wind &amp; PV</b>	<b>All Sources</b>
NO <sub>x</sub> (in tons)	658	165	61	79	932
SO <sub>2</sub> (in tons)	1,324	0	116	159	1,599
CO <sub>2</sub> (in tons)	386,669	193,050	81,729	46,358	707,806

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<sup>8</sup> These jobs will be supported annually for as long as the implemented energy efficiency measures remain in effect.

## SUMMARY

Table 10 provides a summary of outcomes as of September 30, 2001.

**Table 10: Summary of Anticipated Energy, Environmental, and Economic Outcomes**

Outcomes		Anticipated from Funds Committed as of Sept. 30, 2001	From Measures Installed as of Sept. 30, 2001
Annual Electricity Savings		876.8 million kWh	358.8
Summer Peak Demand Reduction Potential (MW)*		506.7 MW	252.6 MW
Electricity Generation from Renewable Sources		105.1 million kWh	103.2 million kWh
Oil and Gas Savings (tBtu )		4.3 tBtu	1.2 tBtu
Annual Energy Bill Reduction - all fuels **		\$130.7 million	
Annual Emission Reductions	NO <sub>x</sub> (tons per year)	962	
	SO <sub>2</sub> (tons per year)	1,599	
	CO <sub>2</sub> (tons per year)	707,806	
Economic Benefits	Jobs Created (jobs created or sustained per year)	2,500	

\* Including energy efficiency measures and curtailable load.

\*\* Includes bill savings from electricity, oil, and natural gas.