

This document contains images from NYSERDA Report 08-09 and the subsequent addendum to that report. These images are described in detail in NYSERDA Report 08-09, which can be found at [http://www.brightpower.com/SDHW\\_report](http://www.brightpower.com/SDHW_report).

In this document, there are 3 types of maps:

- Simple Payback
- Solar Fraction (percent of DHW Energy provided by the SDHW system)
- Year 1 Savings (\$)

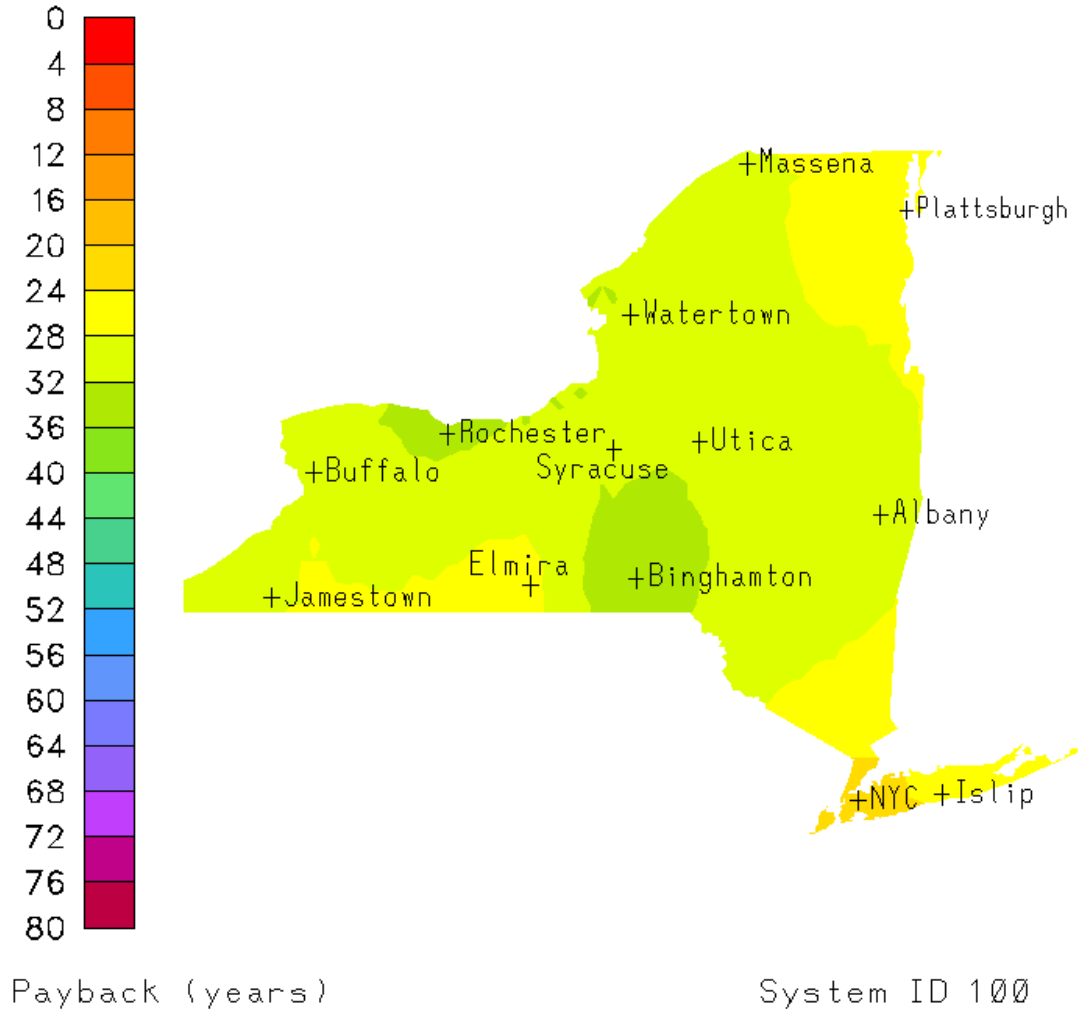
There are 32 different systems that were modeled in this report and so there are a total of 96 different maps, three maps for each unique system. The systems vary according to:

- Solar collector technology type
- Solar tank arrangement
- Backup fuel used for DHW heating

The unique system ID shown in the bottom right hand corner of the map is described in detail in the full report.

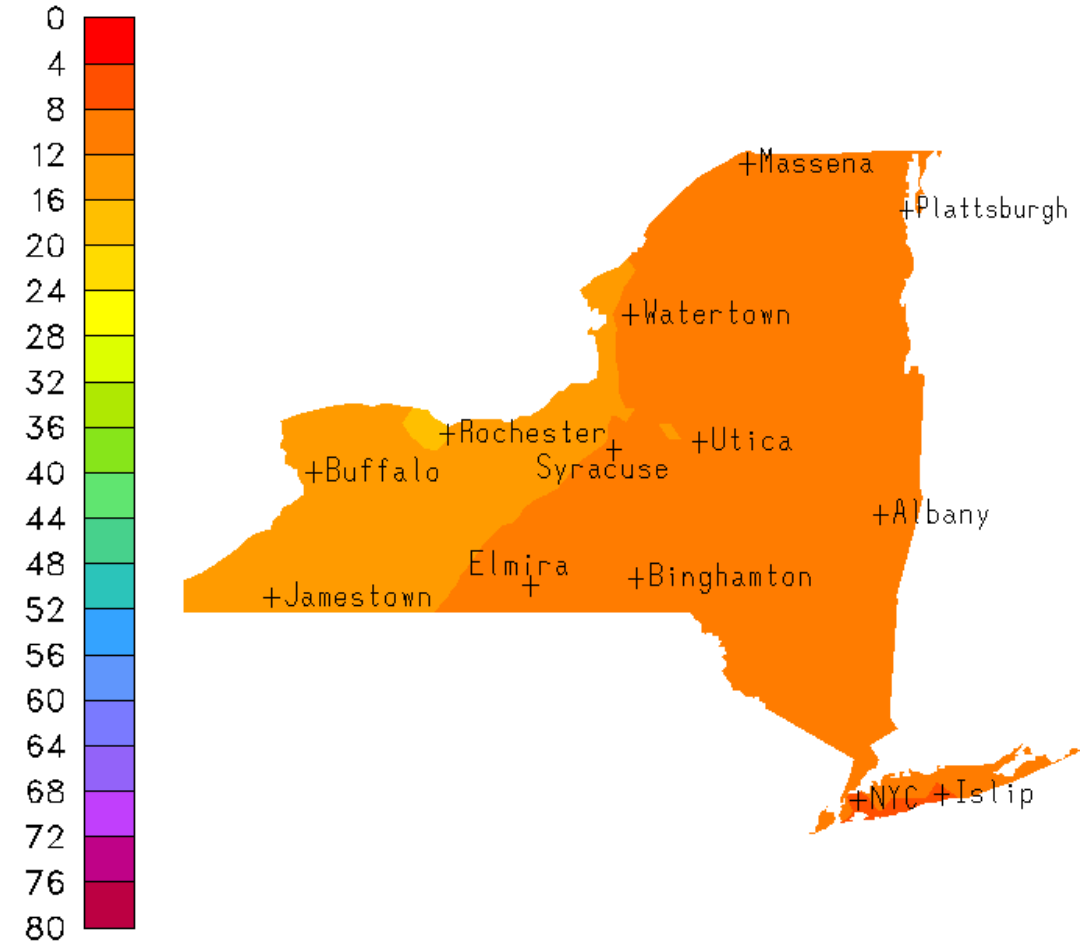
Simple Payback  
Flat Plate Model "A" - 3 Collectors  
Solar preheat tank/Conventional Tank  
Natural Gas

New York State



Simple Payback  
Flat Plate Model "A" - 3 Collectors  
Solar preheat tank/Conventional Tank  
Electric

New York State

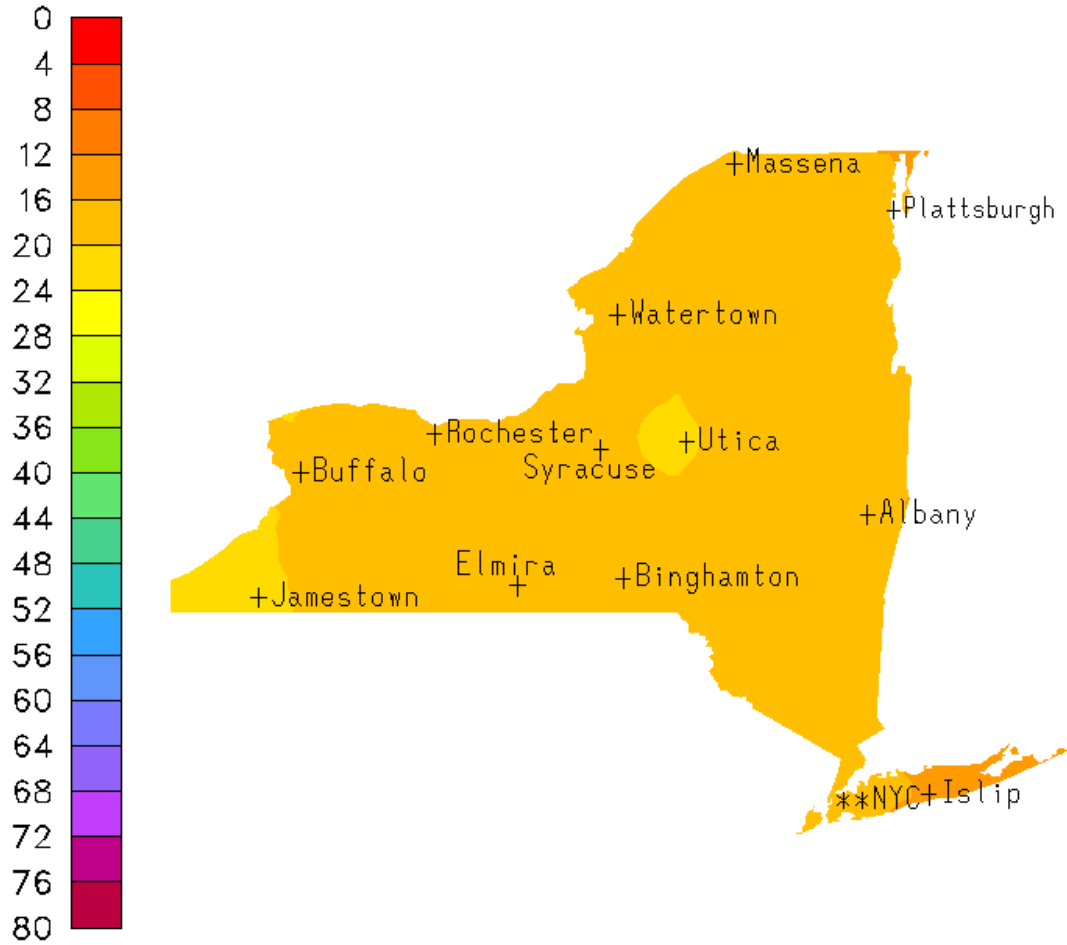


Payback (years)

System ID 101

Simple Payback  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



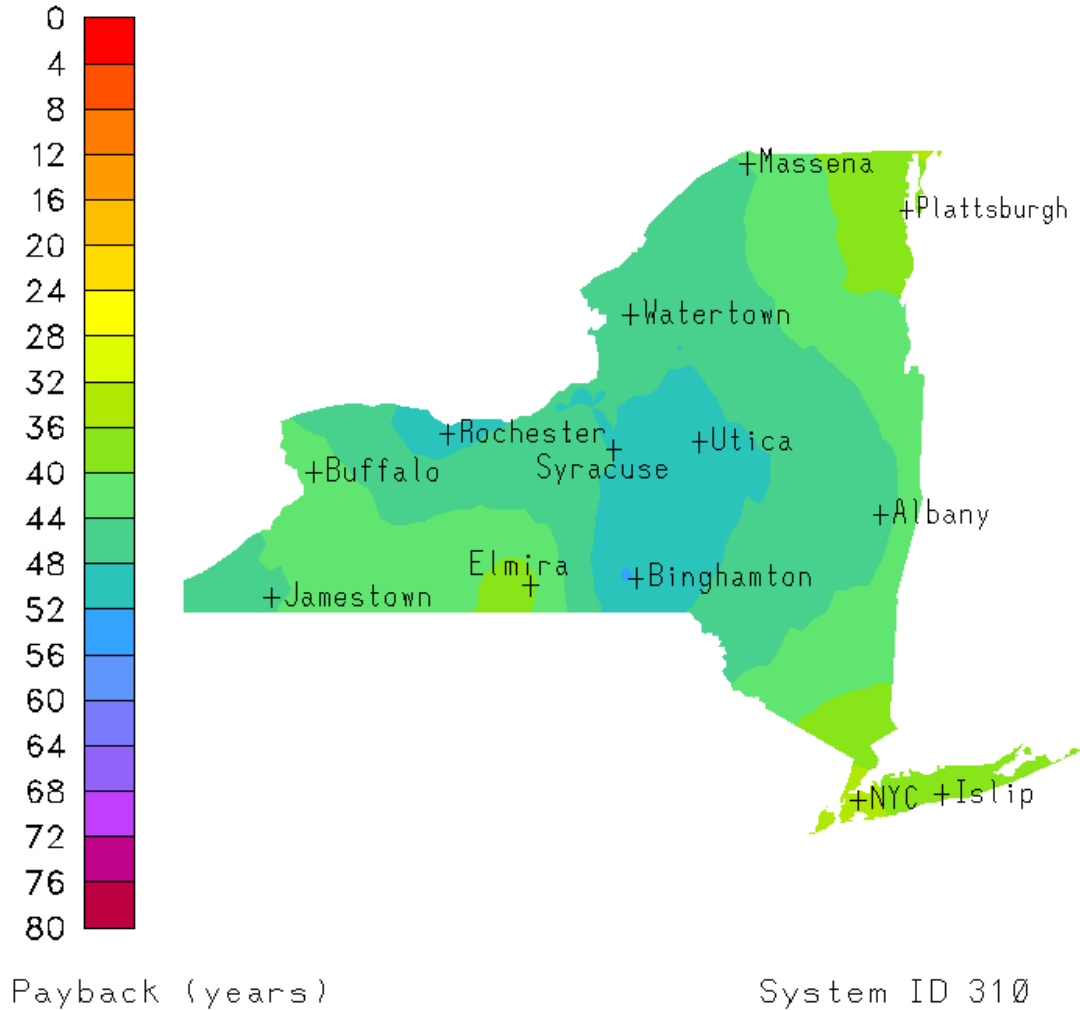
Payback (years)

System ID 302

\*\*Propane not available for heating in the NYC AREA

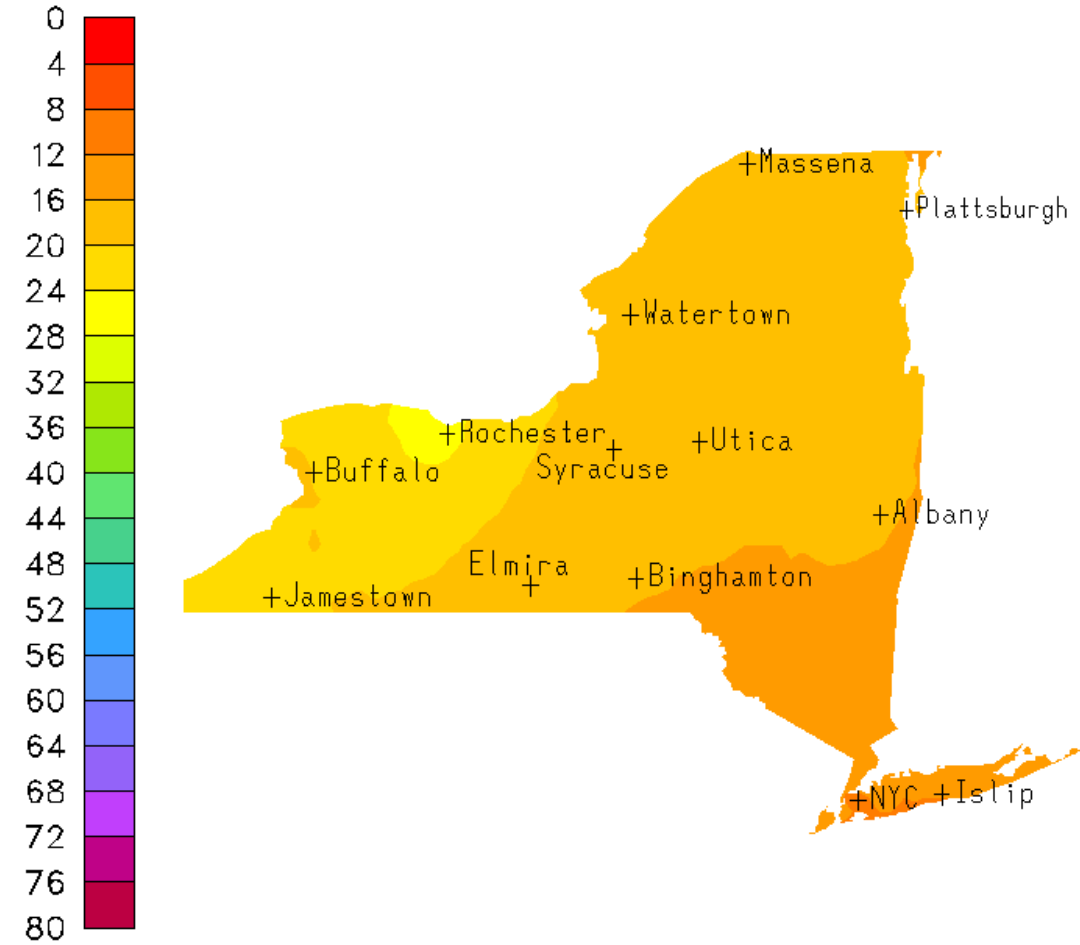
Simple Payback  
Evacuated Tube Model "B" - 24 Tubes  
Solar preheat tank/Instantaneous (tankless)  
Natural Gas

New York State



Simple Payback  
Evacuated Tube Model "B" - 24 Tubes  
Conventional Tank/Ext Heat Exchanger  
Electric

New York State

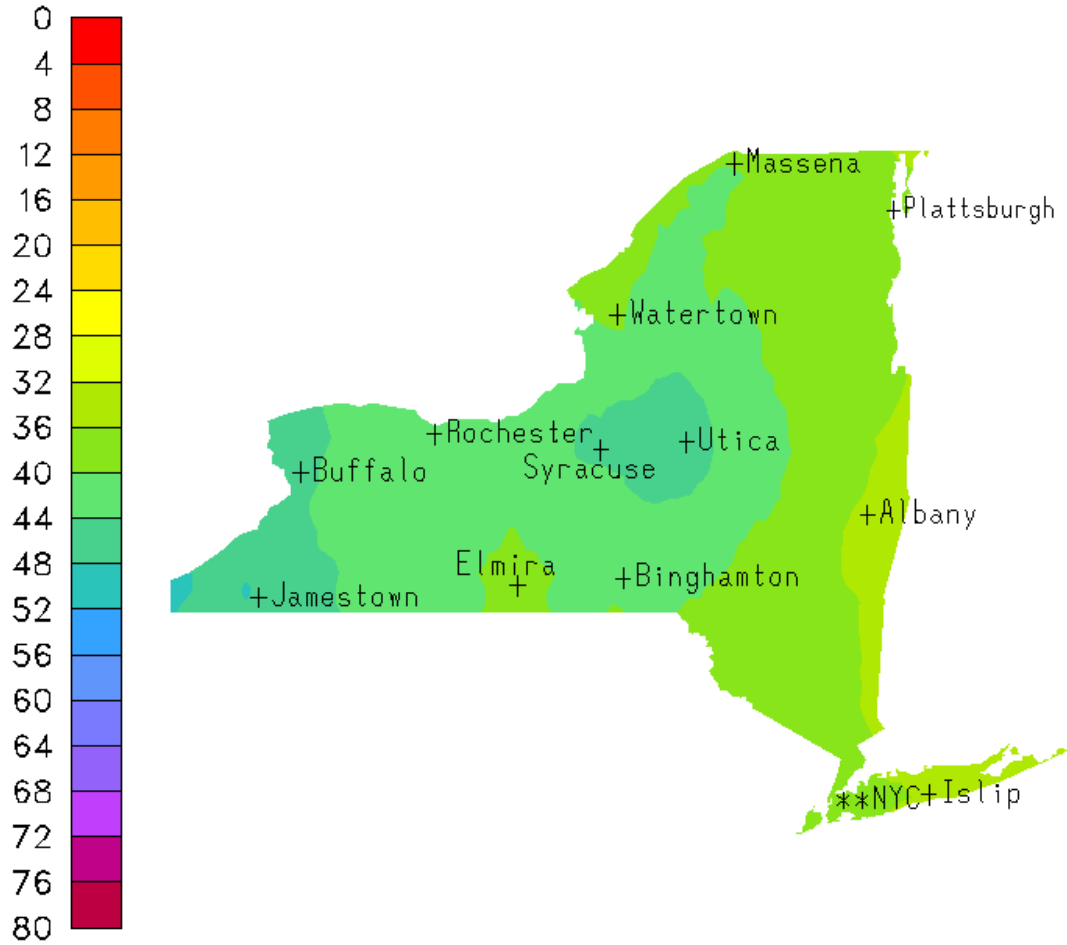


Payback (years)

System ID 331

Simple Payback  
 Evacuated Tube Model "B" - 24 Tubes  
 Conventional Tank/Ext Heat Exchanger  
 Propane

New York State



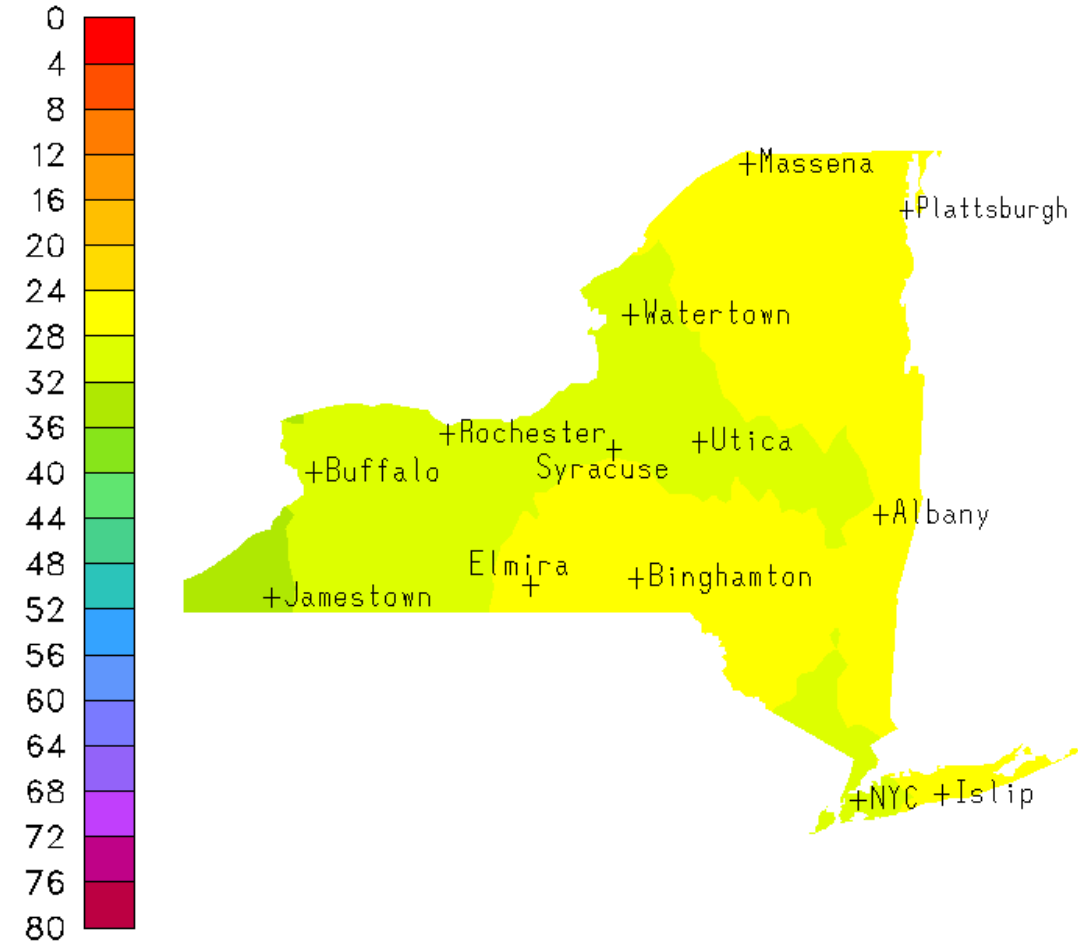
Payback (years)

System ID 332

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Evacuated Tube Model "B" - 24 Tubes  
Double Heat Exchanger Tank  
Oil

New York State



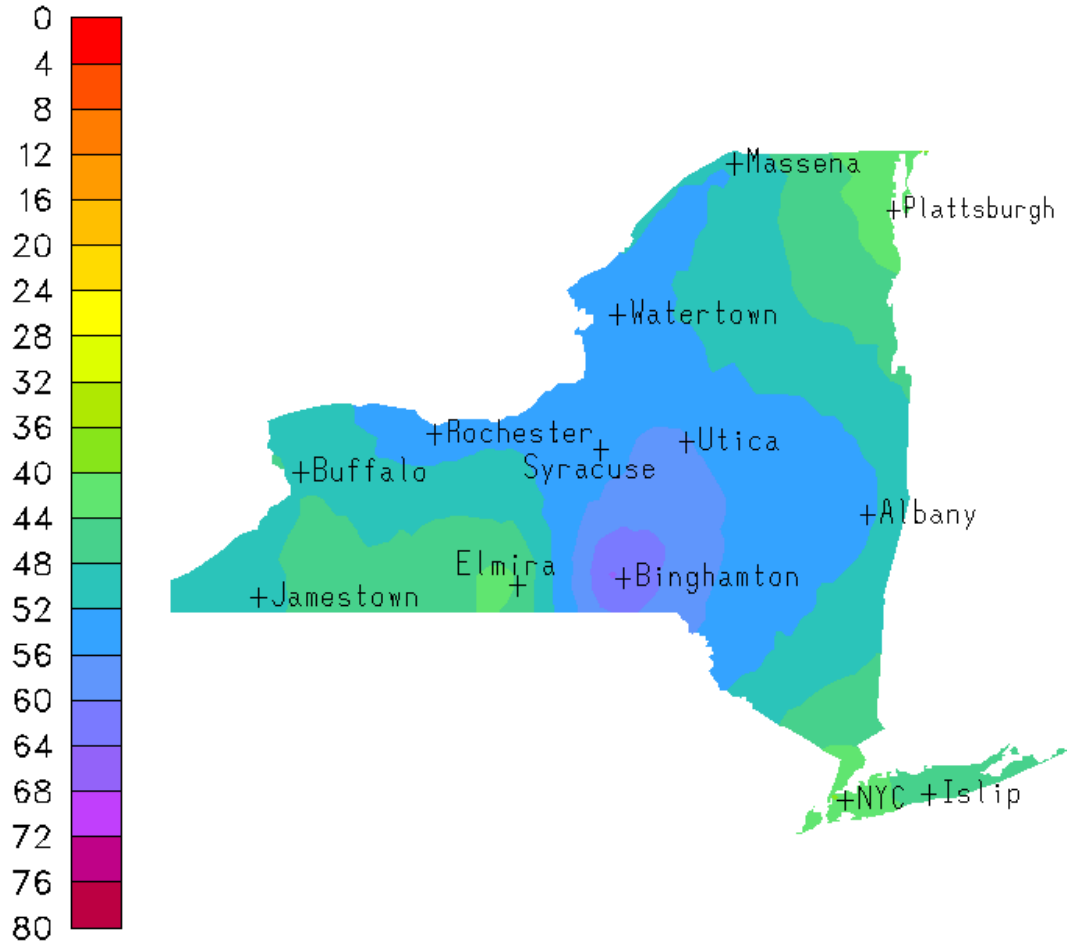
Payback (years)

System ID 343

Simple Payback  
Flat Plate Model "B" - 2 Collectors

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Natural Gas



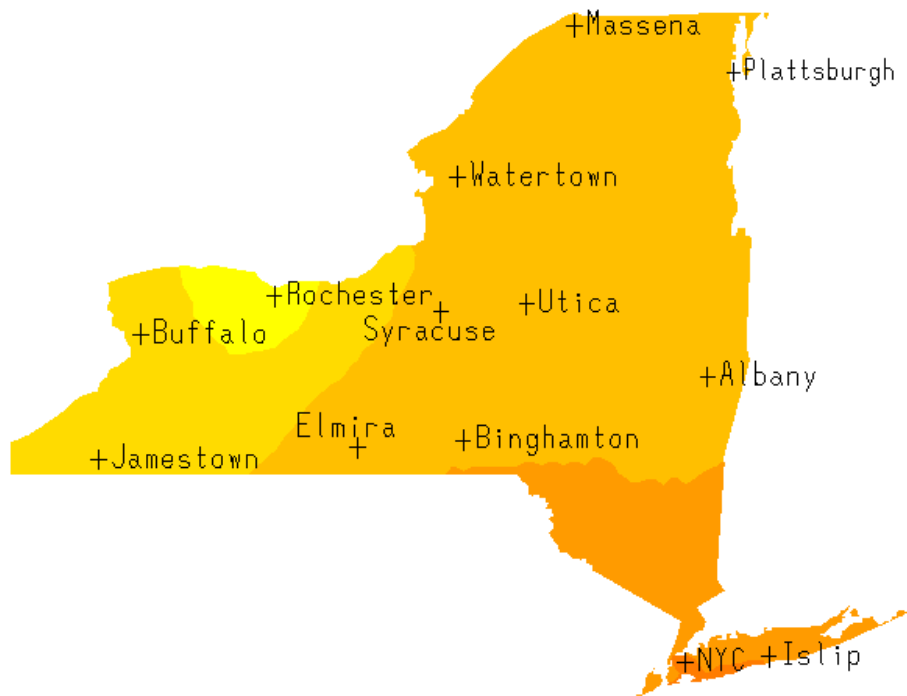
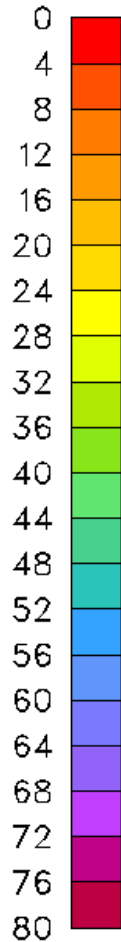
Payback (years)

System ID 520

Simple Payback  
Flat Plate Model "B" - 2 Collectors

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric

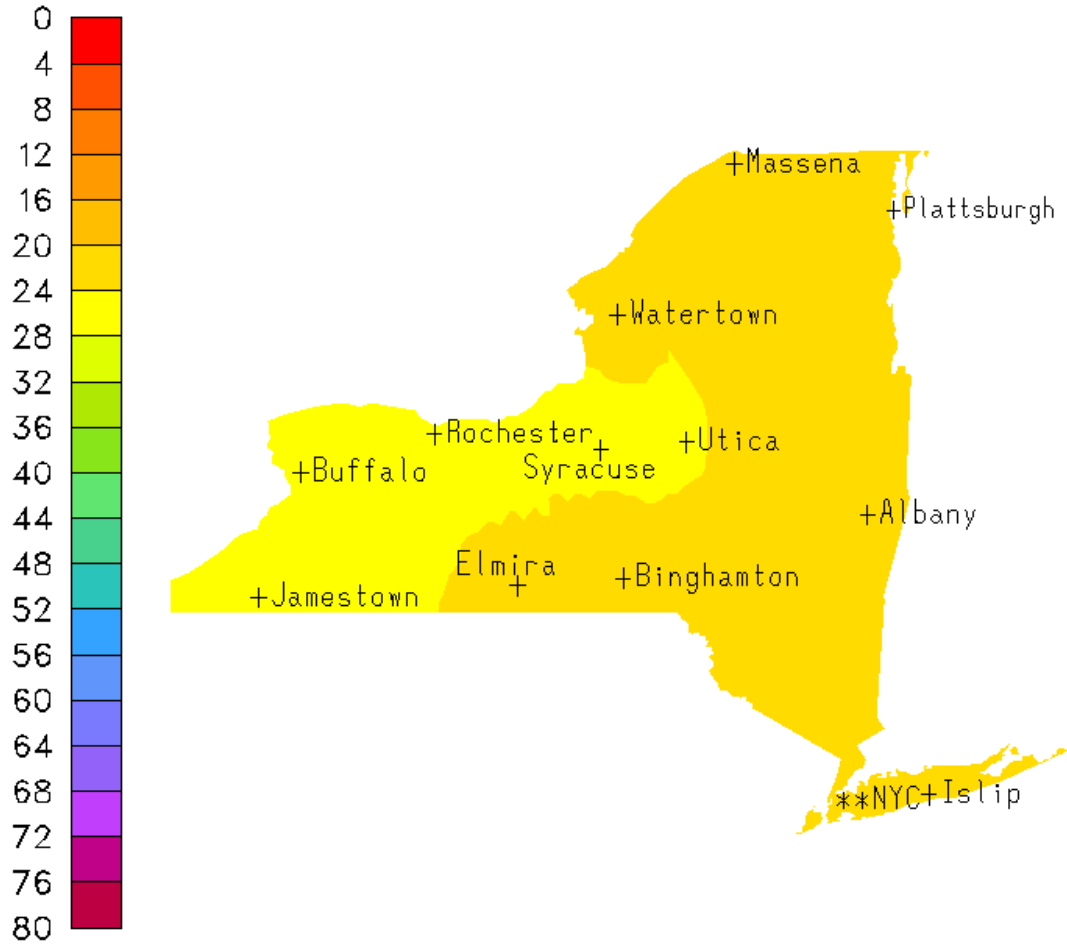


Payback (years)

System ID 521

Simple Payback  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Propane

New York State



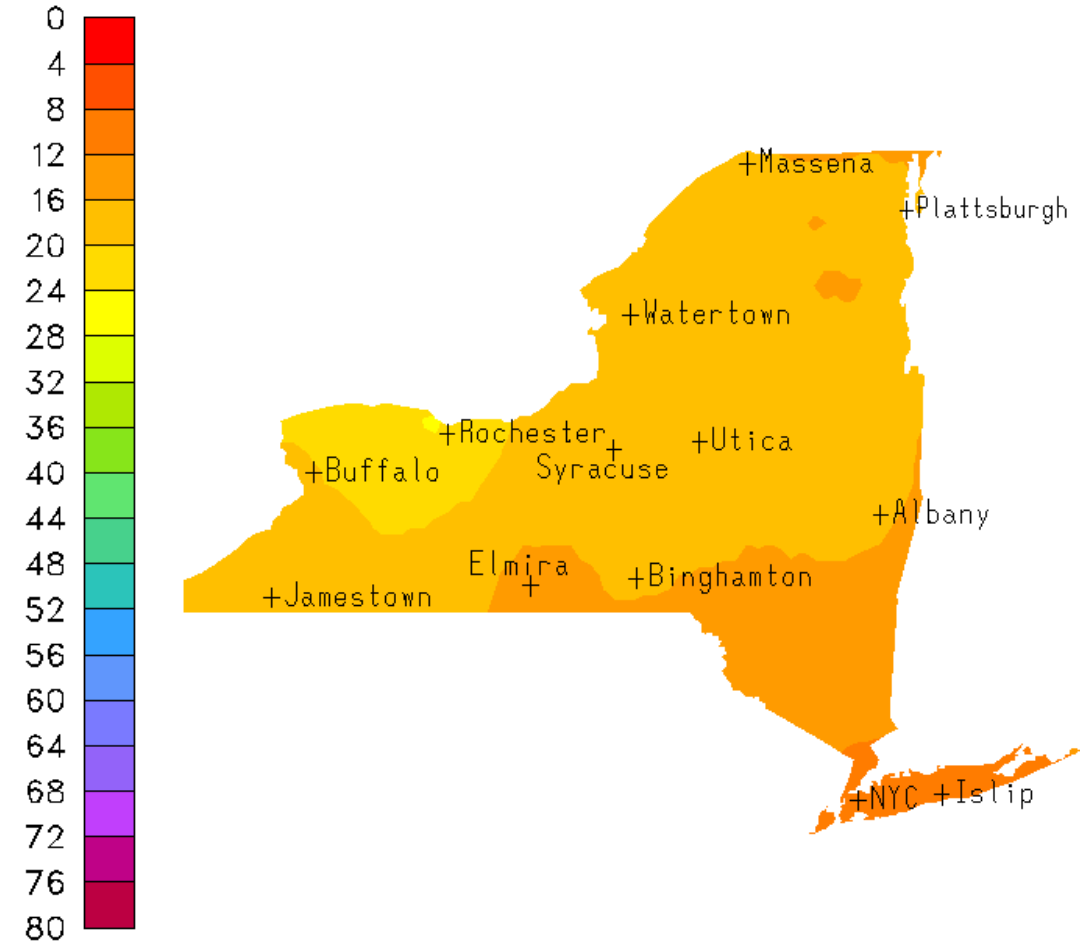
Payback (years)

System ID 522

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Flat Plate Model "B" - 2 Collectors  
Conventional Tank/Ext Heat Exchanger  
Electric

New York State

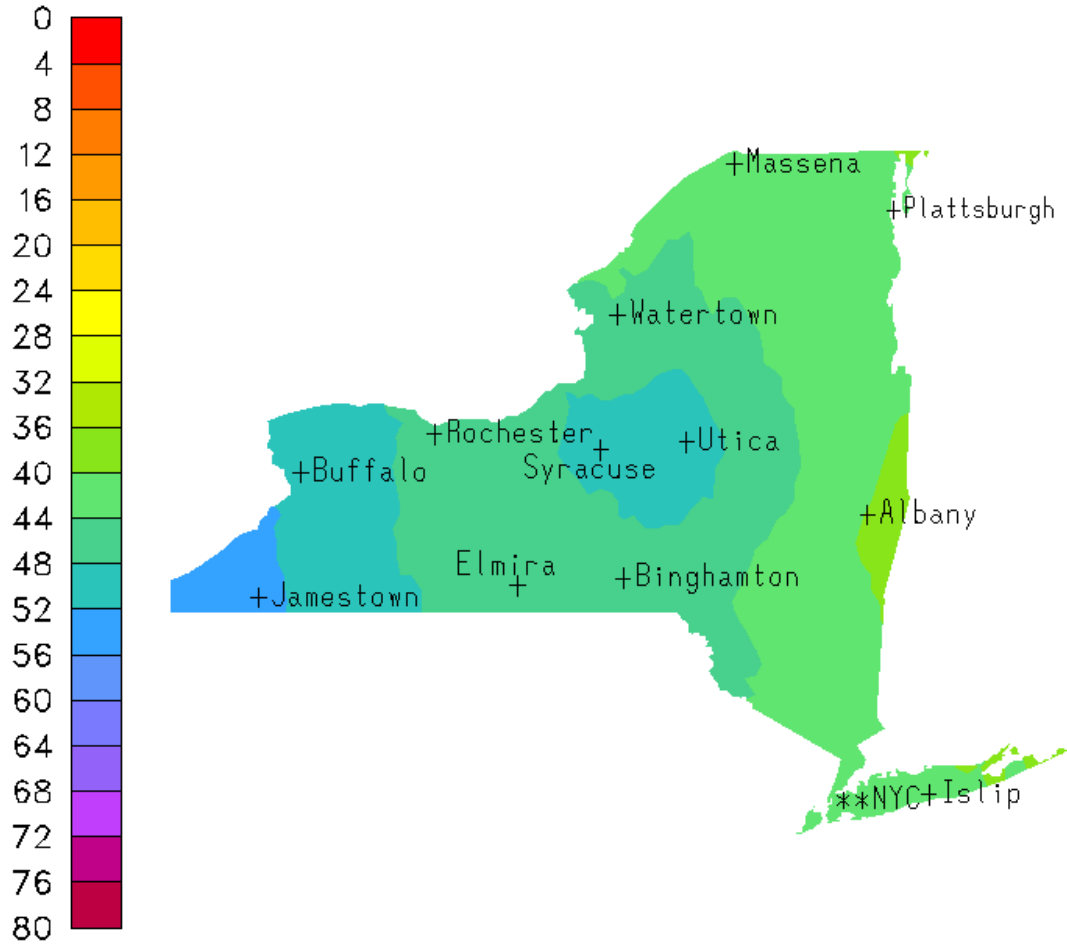


Payback (years)

System ID 531

Simple Payback  
 Flat Plate Model "B" - 2 Collectors  
 Conventional Tank/Ext Heat Exchanger  
 Propane

New York State



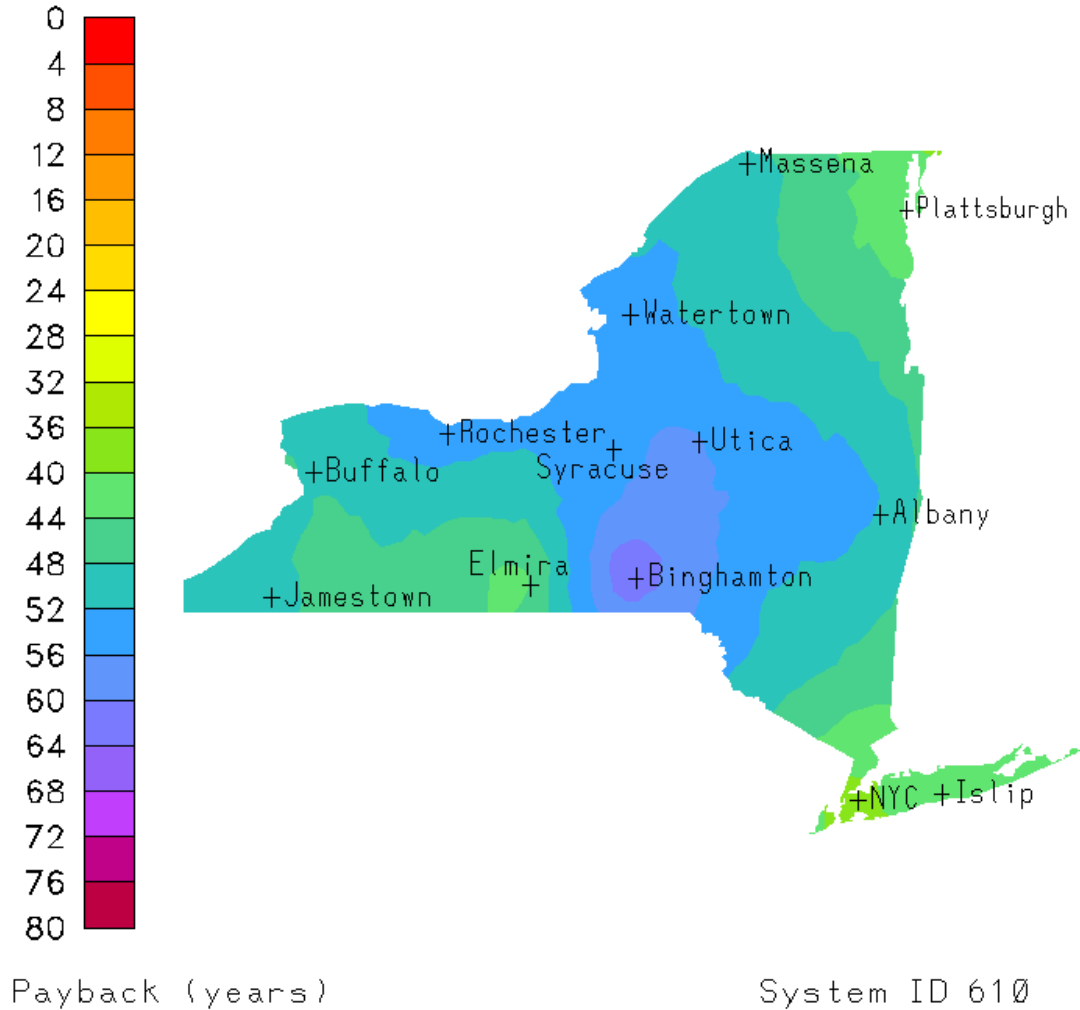
Payback (years)

System ID 532

\*\*Propane not available for heating in the NYC AREA

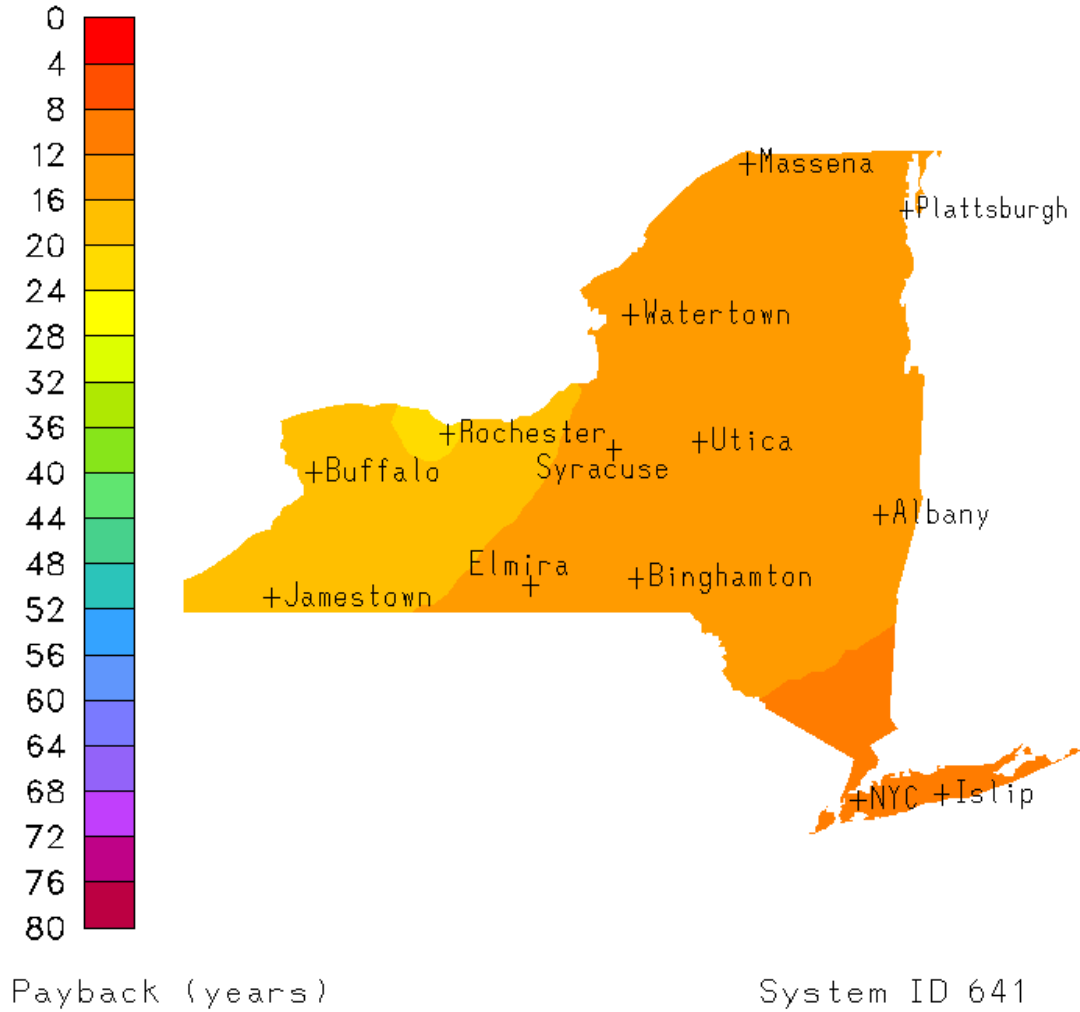
Simple Payback  
 Evacuated Tube Model "C" - 30 Tubes  
 Solar preheat tank/Instantaneous (tankless)  
 Natural Gas

New York State



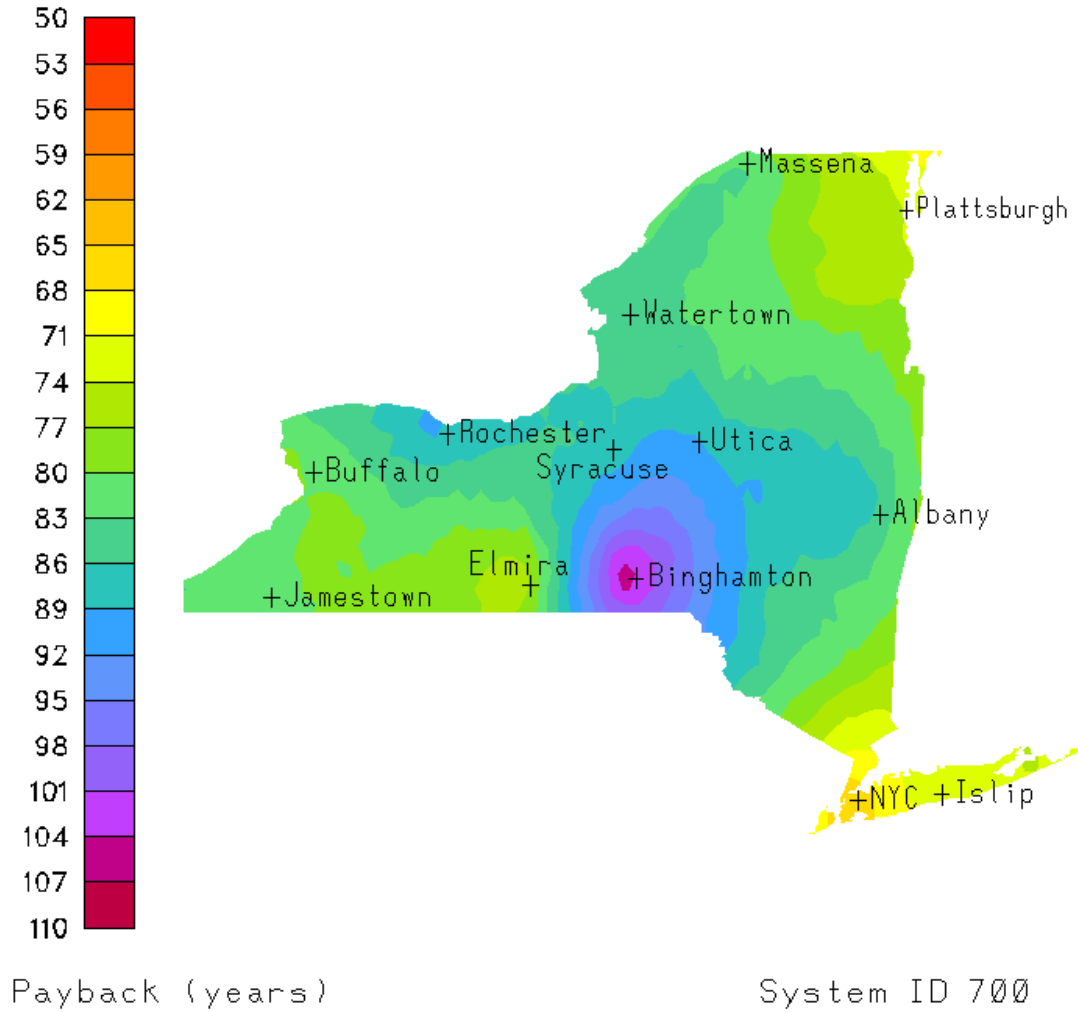
Simple Payback  
Evacuated Tube Model "C" - 30 Tubes  
Double Heat Exchanger Tank  
Electric

New York State



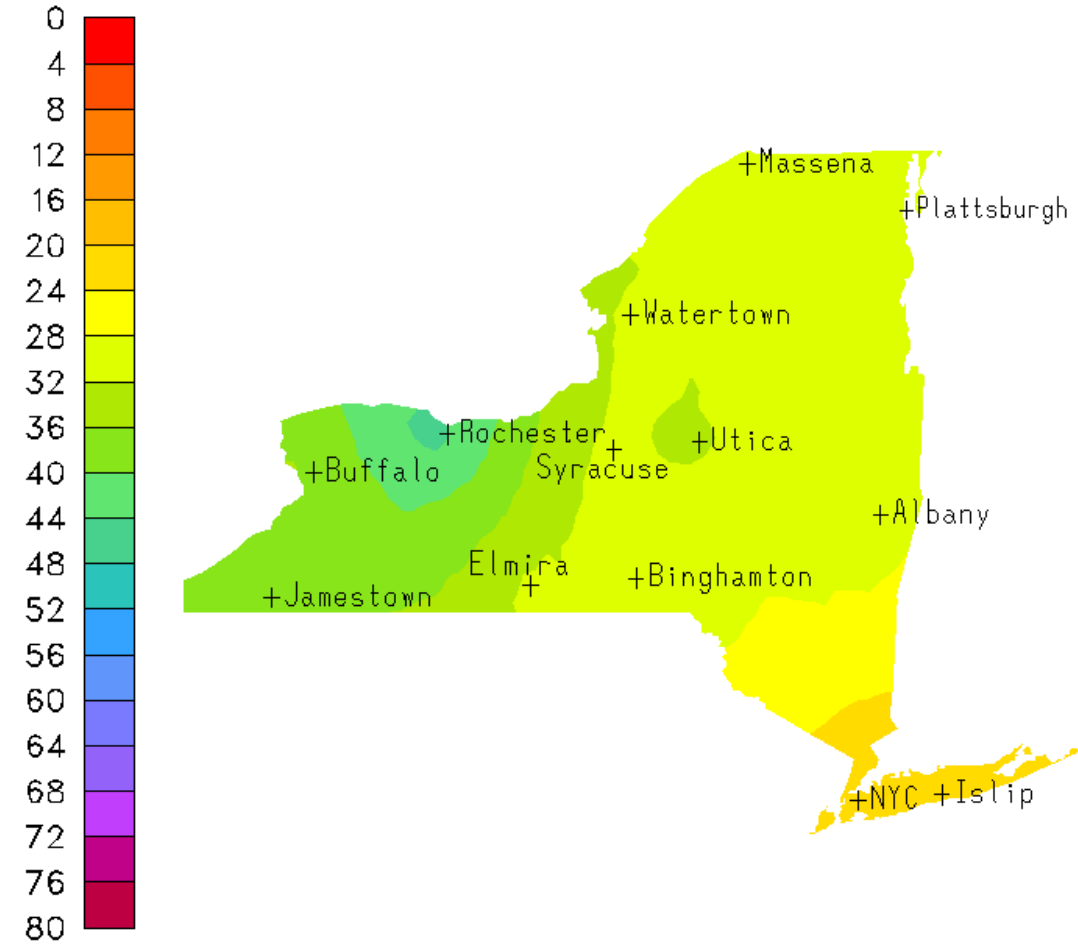
Simple Payback  
Building Integrated - 600 Square Feet  
Solar preheat tank/Conventional Tank  
Natural Gas

New York State



Simple Payback  
Building Integrated - 600 Square Feet  
Solar preheat tank/Conventional Tank  
Electric

New York State

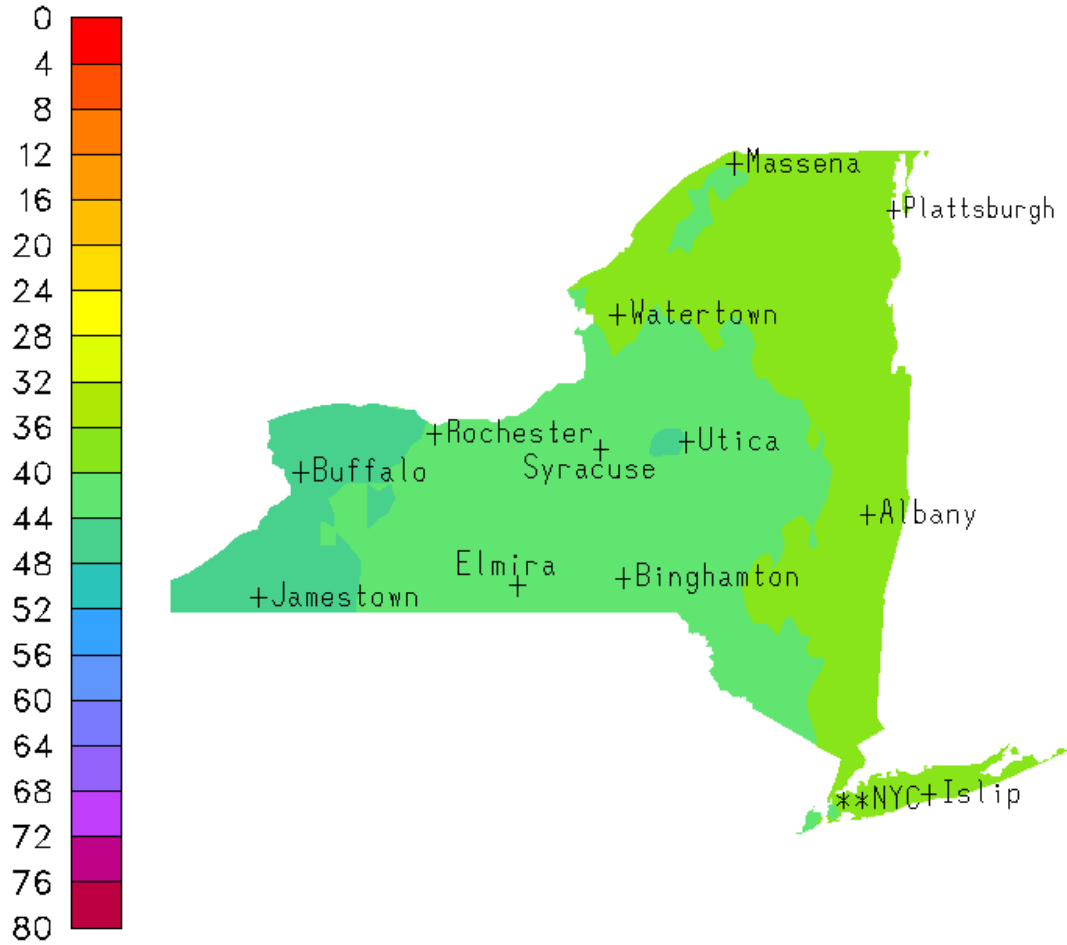


Payback (years)

System ID 701

Simple Payback  
 Building Integrated - 600 Square Feet  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



Payback (years)

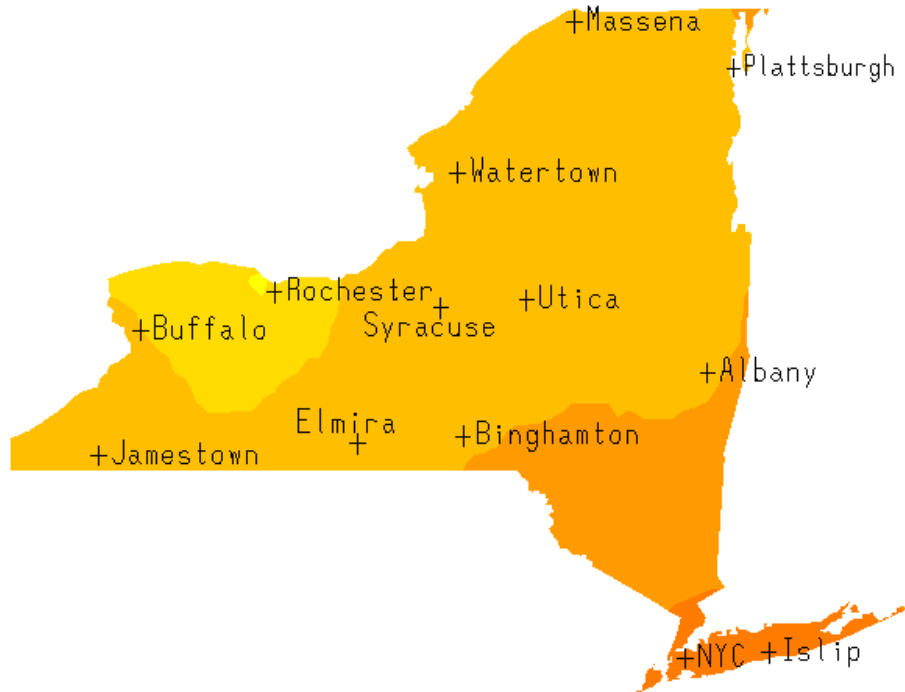
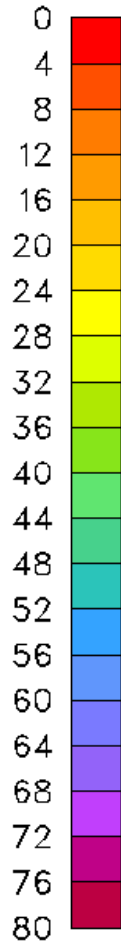
System ID 702

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Flat Plate Model "C" - 1 Collector

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric



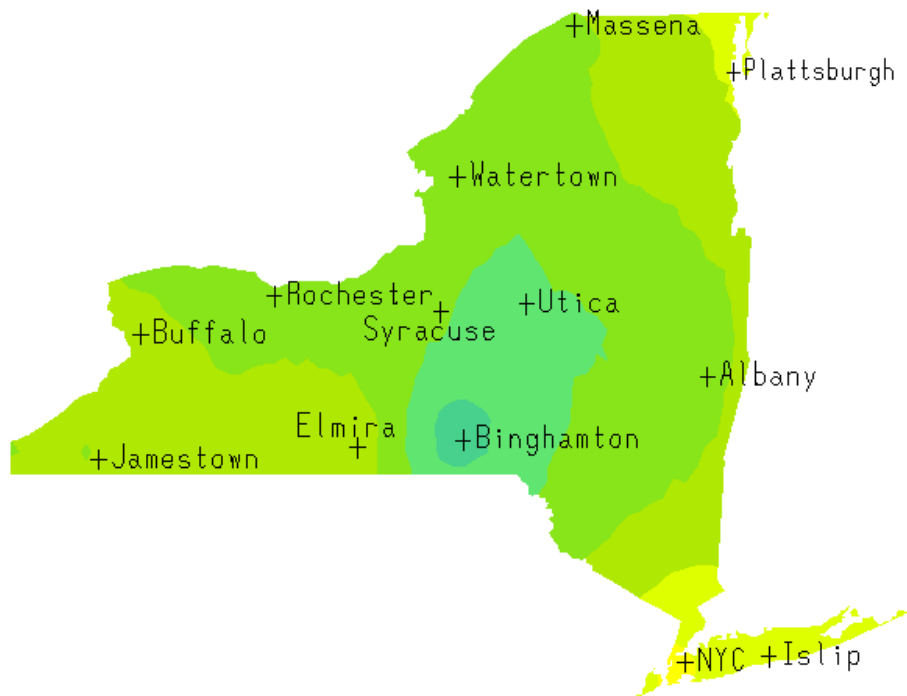
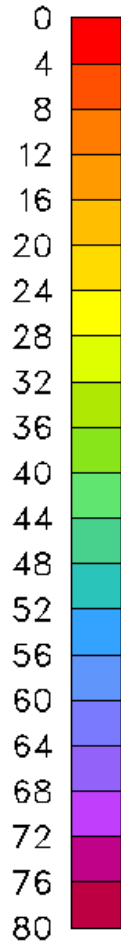
Payback (years)

System ID 821

Simple Payback  
Flat Plate Model "C" - 2 Collectors

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Natural Gas



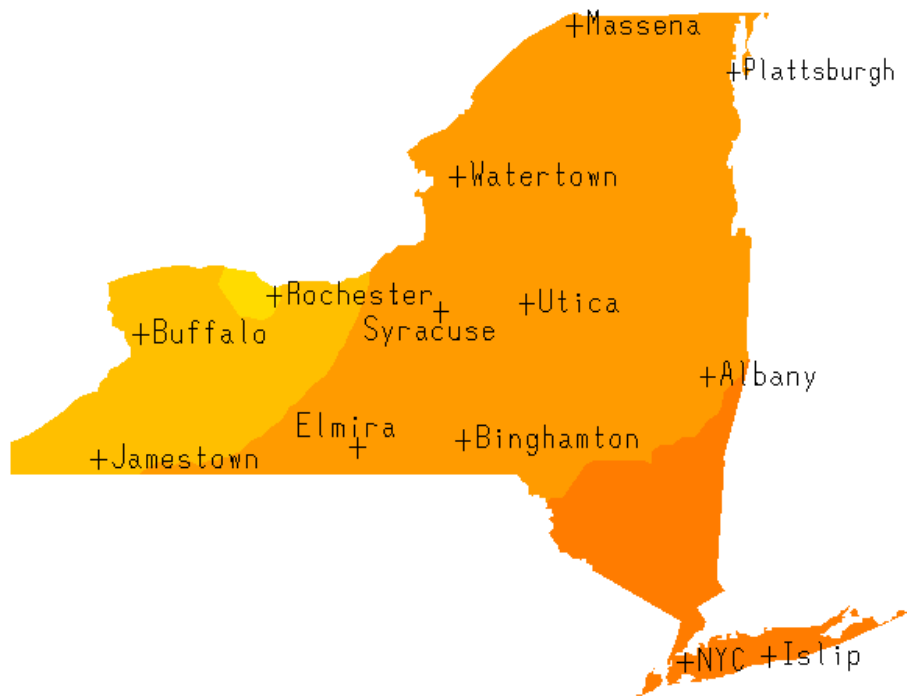
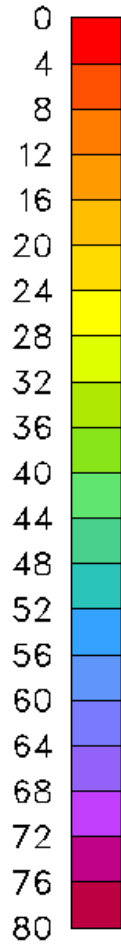
Payback (years)

System ID 920

Simple Payback  
Flat Plate Model "C" - 2 Collectors

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric

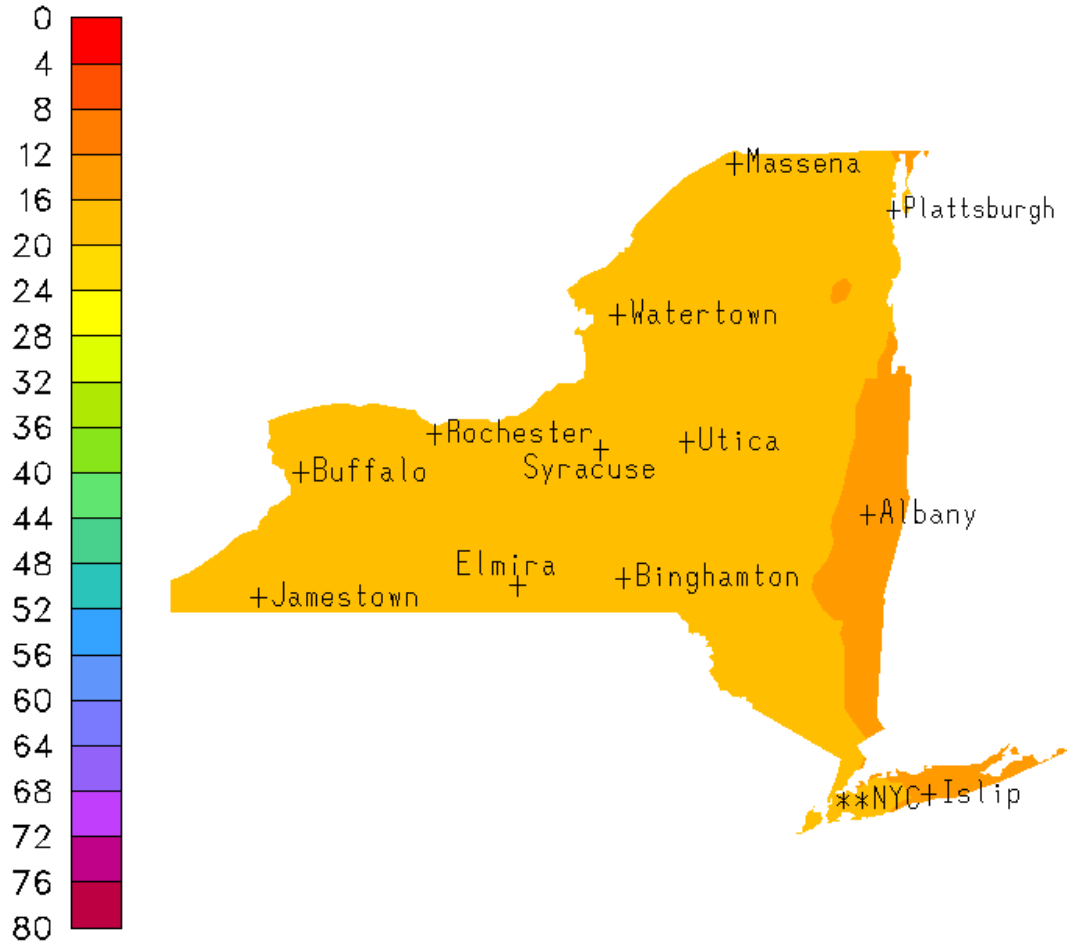


Payback (years)

System ID 921

Simple Payback  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Propane

New York State



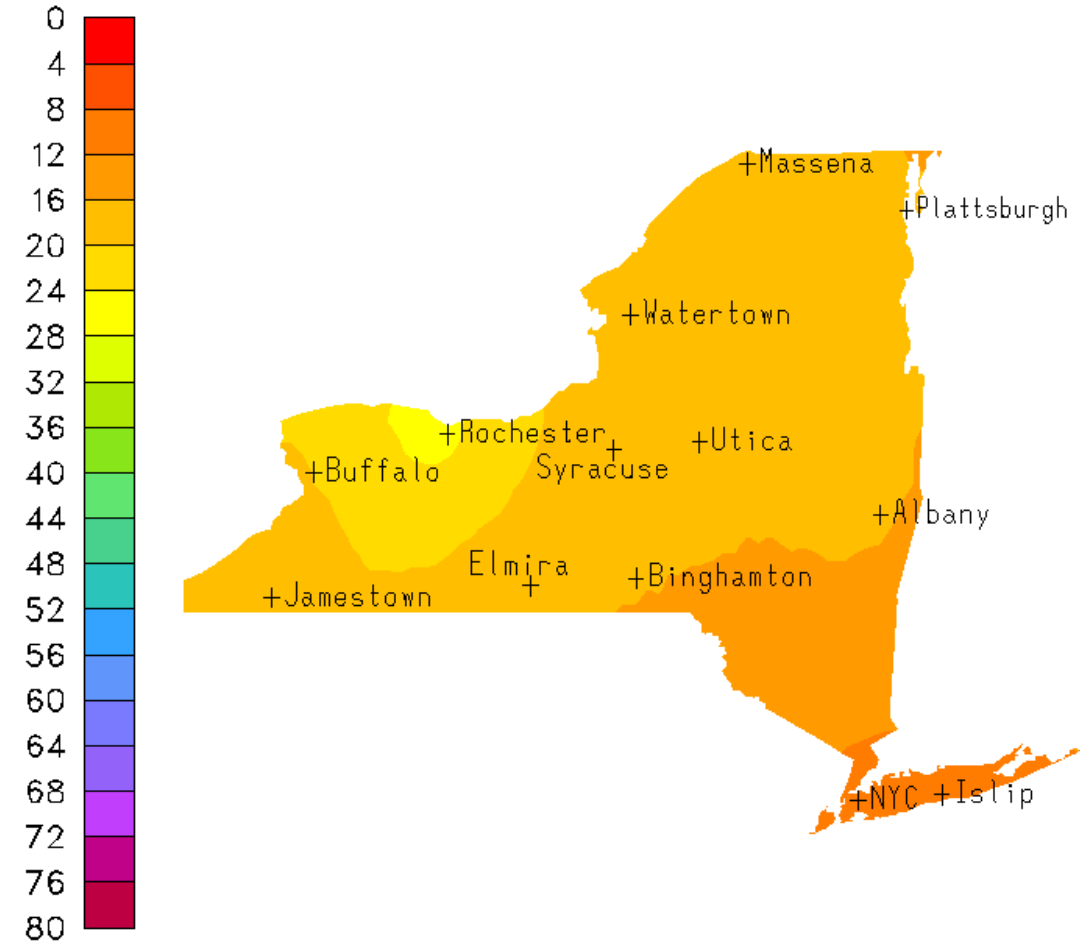
Payback (years)

System ID 922

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Flat Plate Model "C" - 2 Collectors  
Conventional Tank/Ext Heat Exchanger  
Electric

New York State



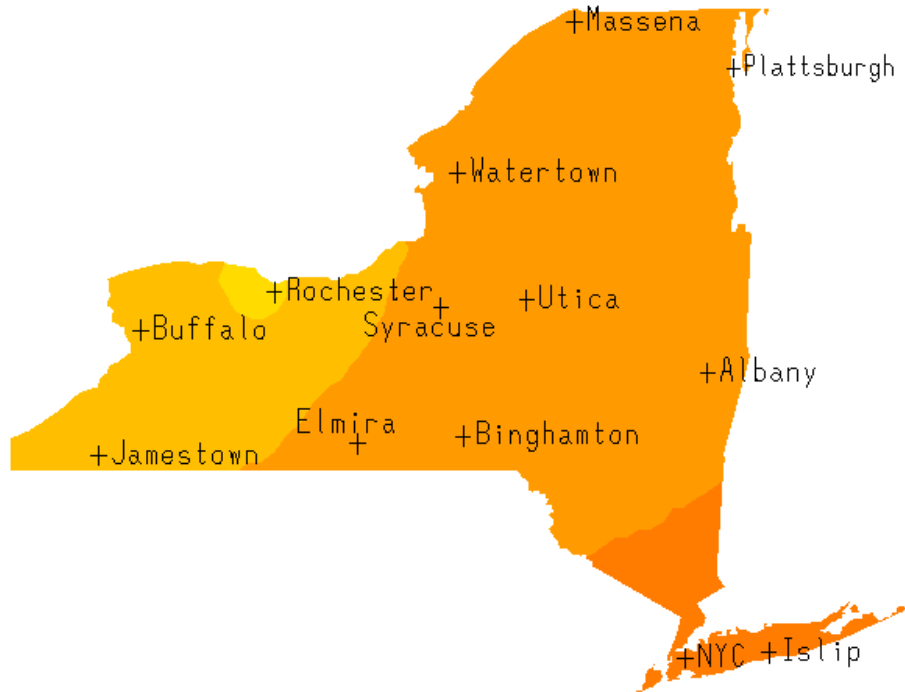
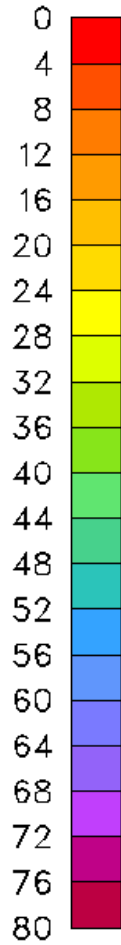
Payback (years)

System ID 931

Simple Payback  
Flat Plate Model "C" - 3 Collectors

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric

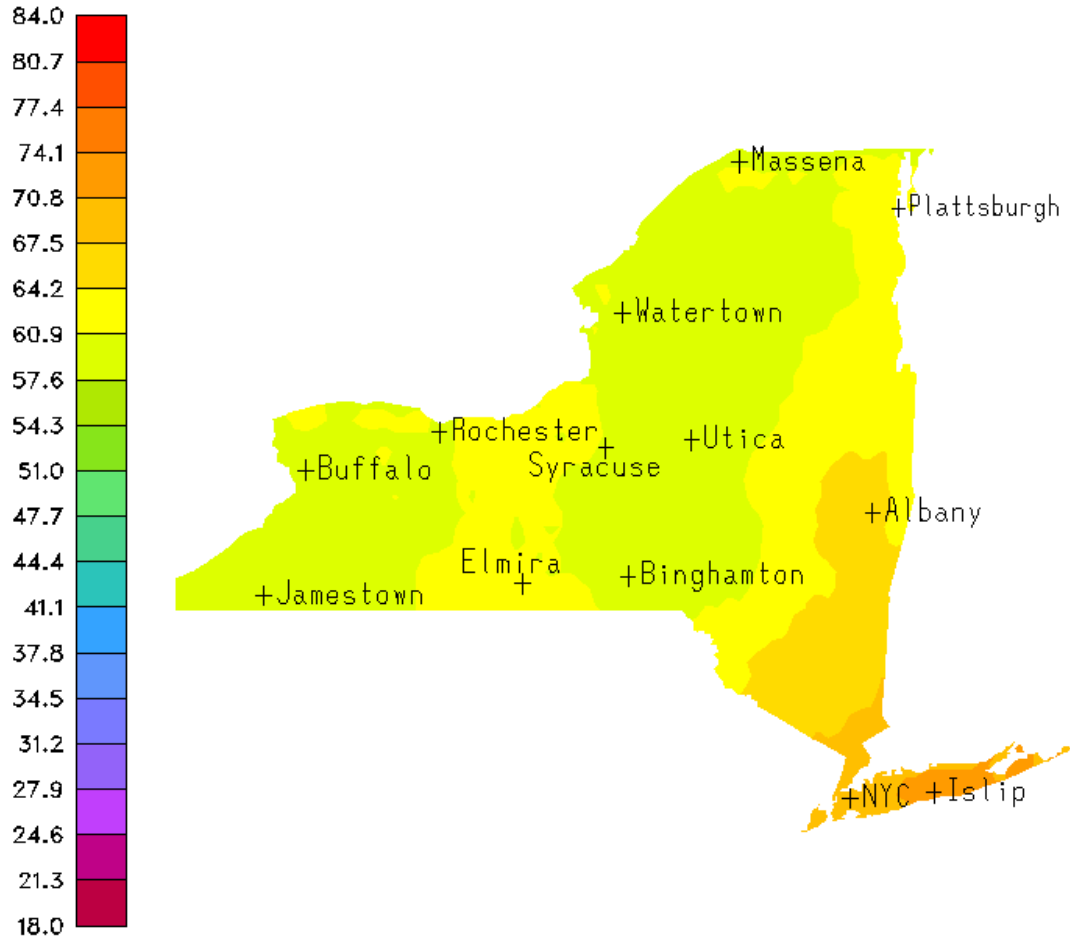


Payback (years)

System ID 1021

Solar Fraction  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State

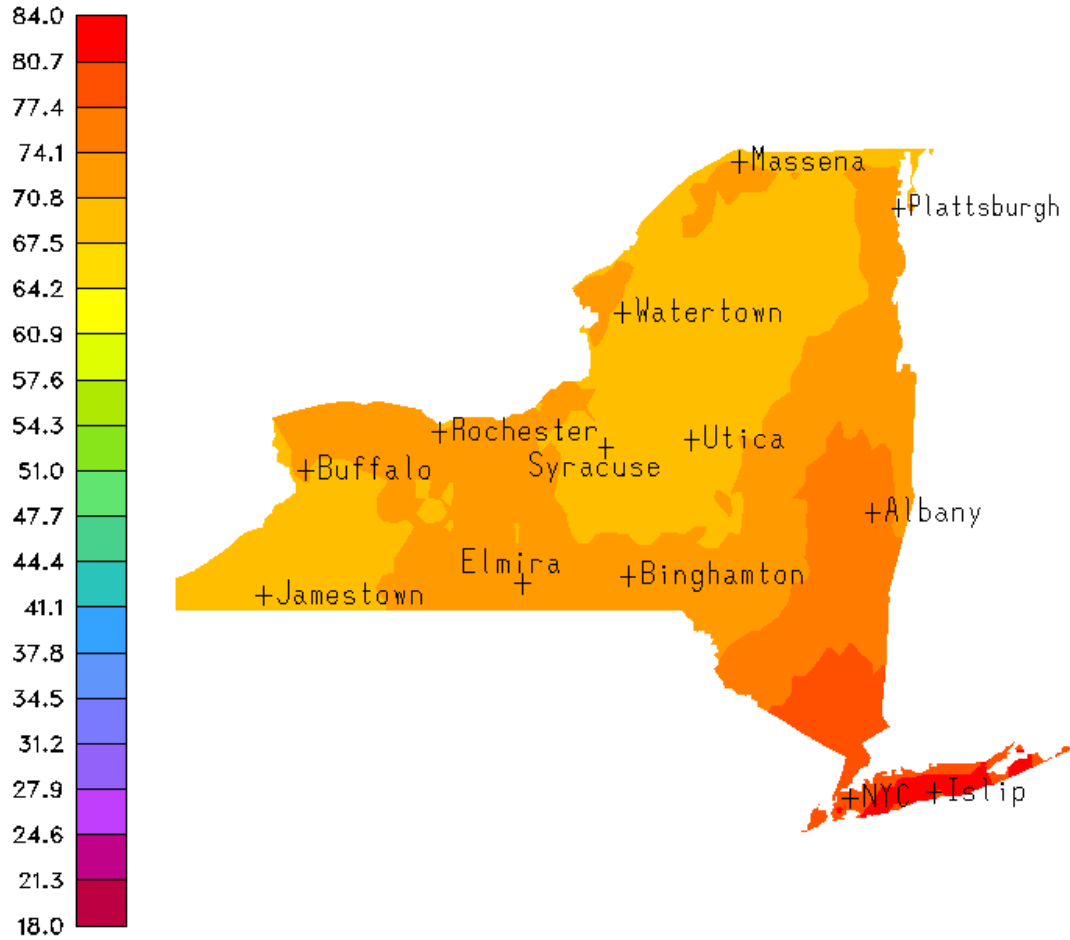


(% Solar Fraction)

System ID 100

Solar Fraction  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat tank/Conventional Tank  
 Electric

New York State

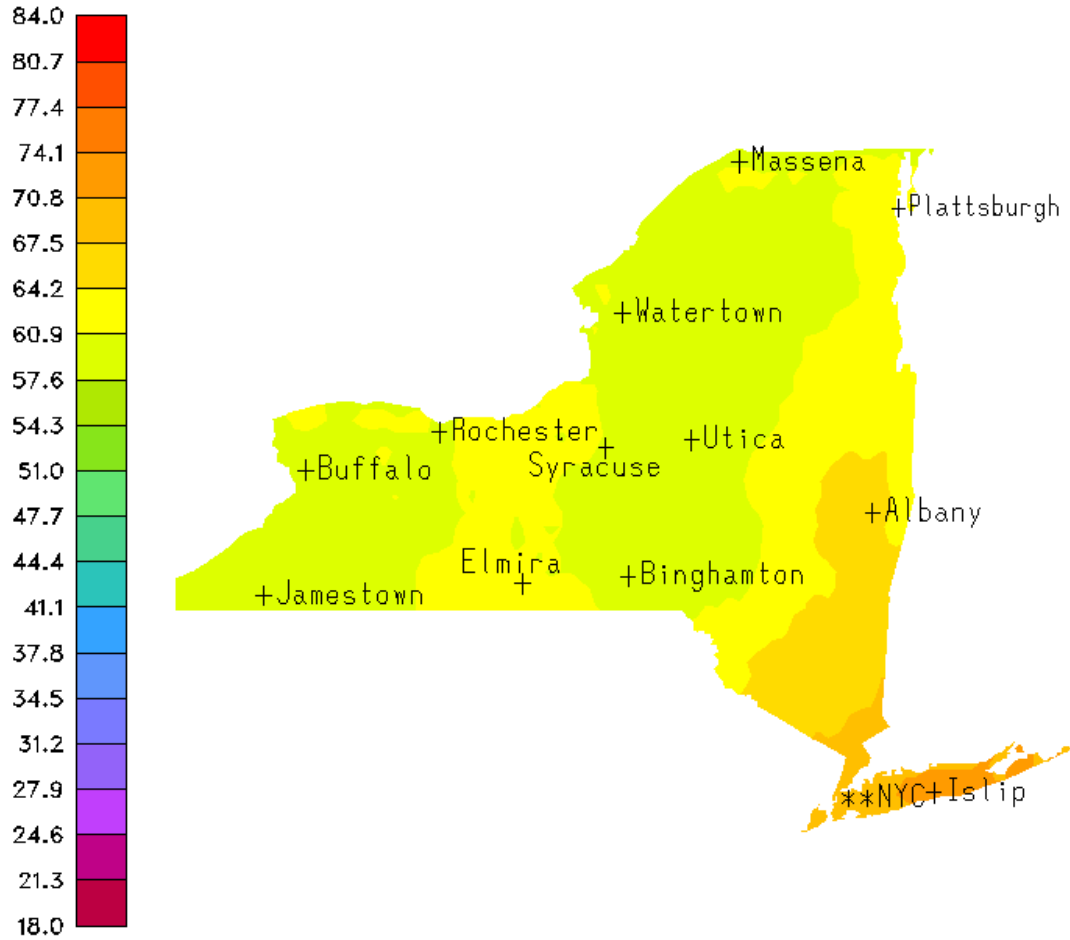


(% Solar Fraction)

System ID 101

Solar Fraction  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat tank/Conventional Tank  
 Propane

New York State

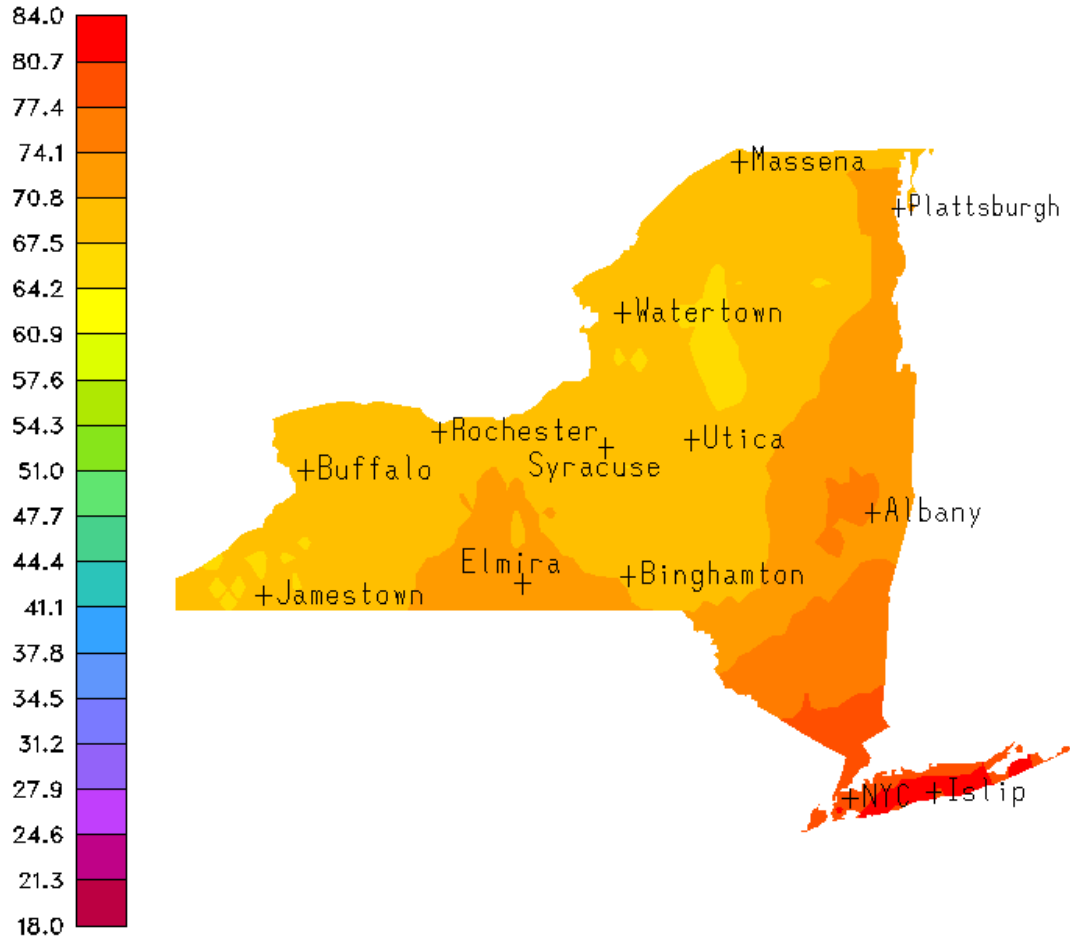


(% Solar Fraction)

System ID 102

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat tank/Instantaneous (tankless)  
 Natural Gas

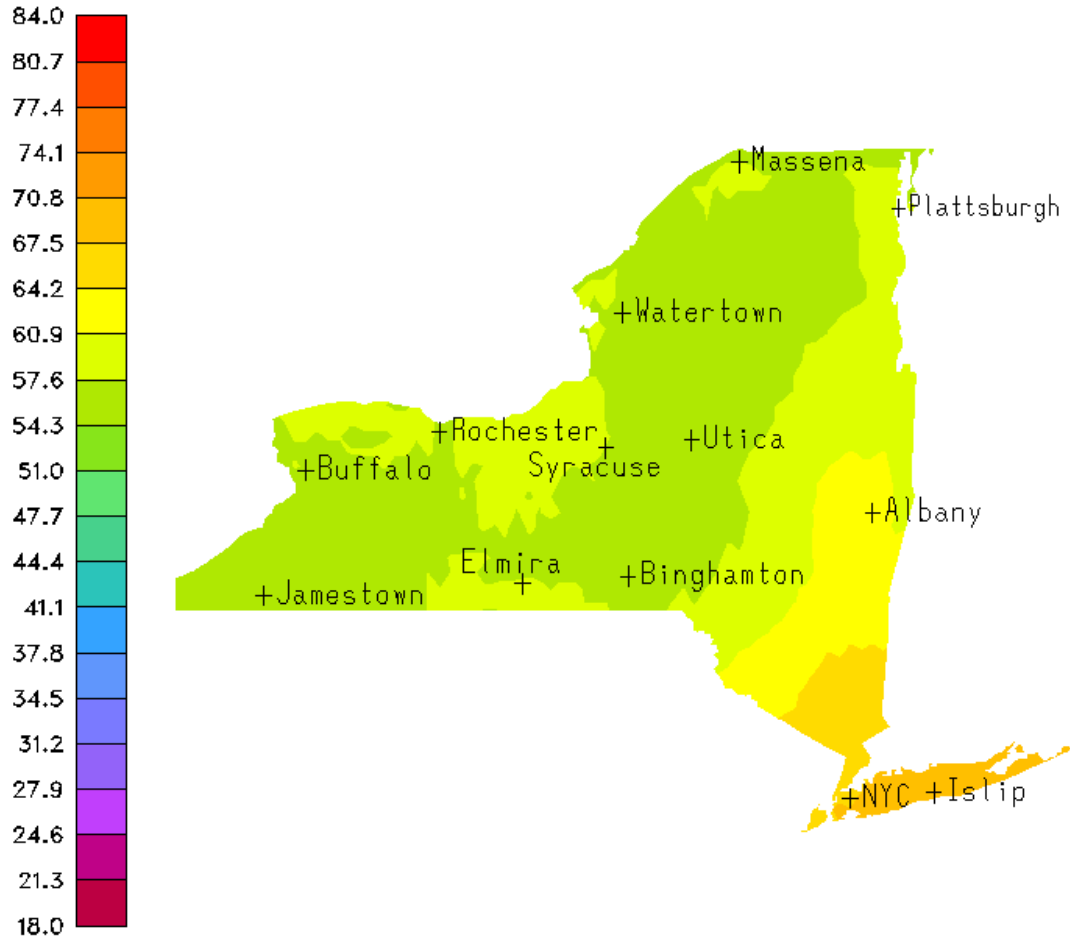


(% Solar Fraction)

System ID 110

Solar Fraction  
Flat Plate Model "A" - 3 Collectors  
Double Heat Exchanger Tank  
Oil

New York State

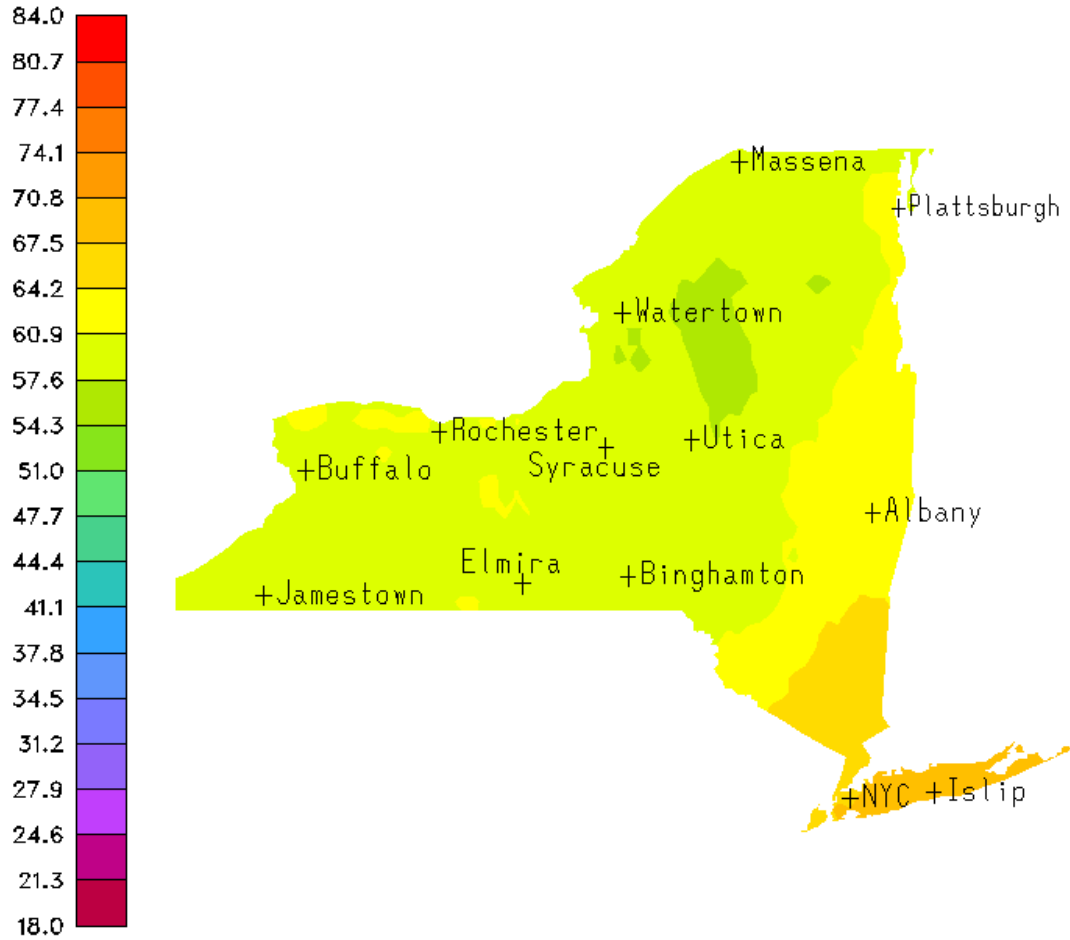


(% Solar Fraction)

System ID 143

Solar Fraction  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State

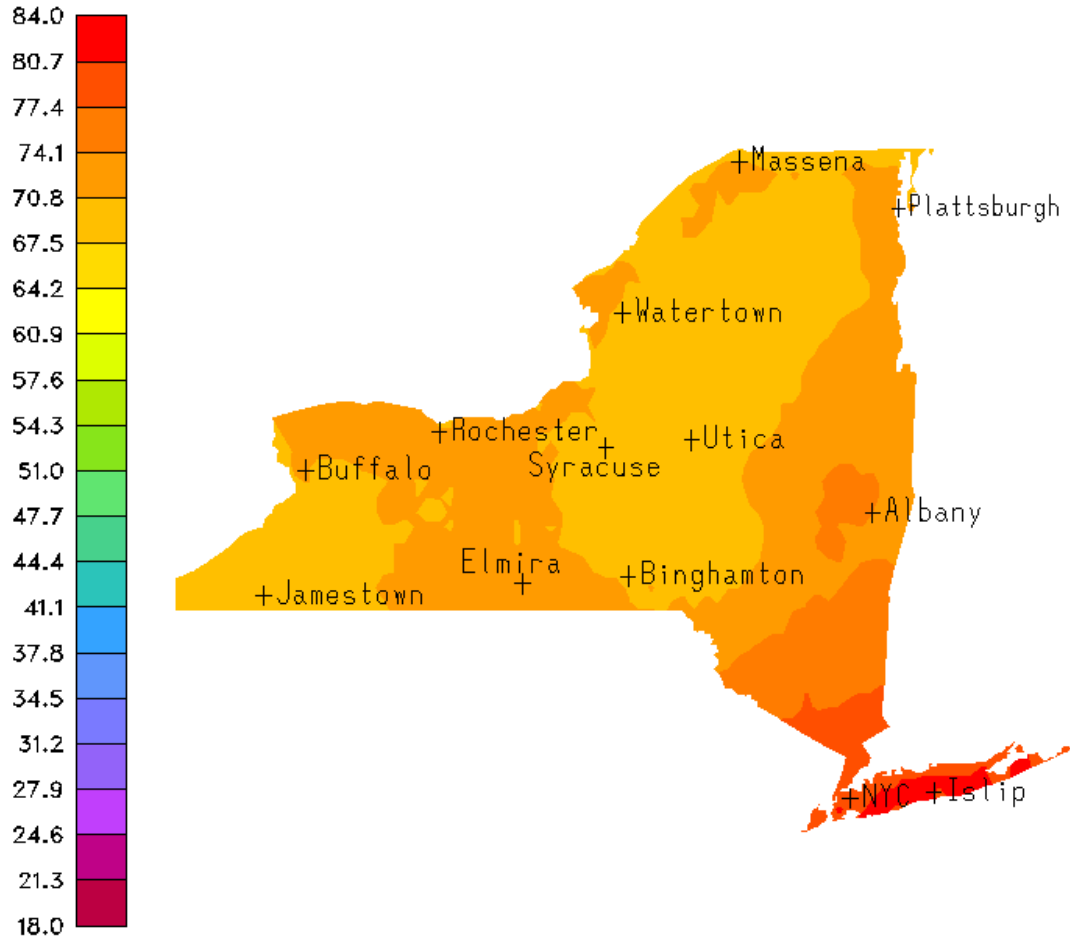


(% Solar Fraction)

System ID 200

Solar Fraction  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Electric

New York State

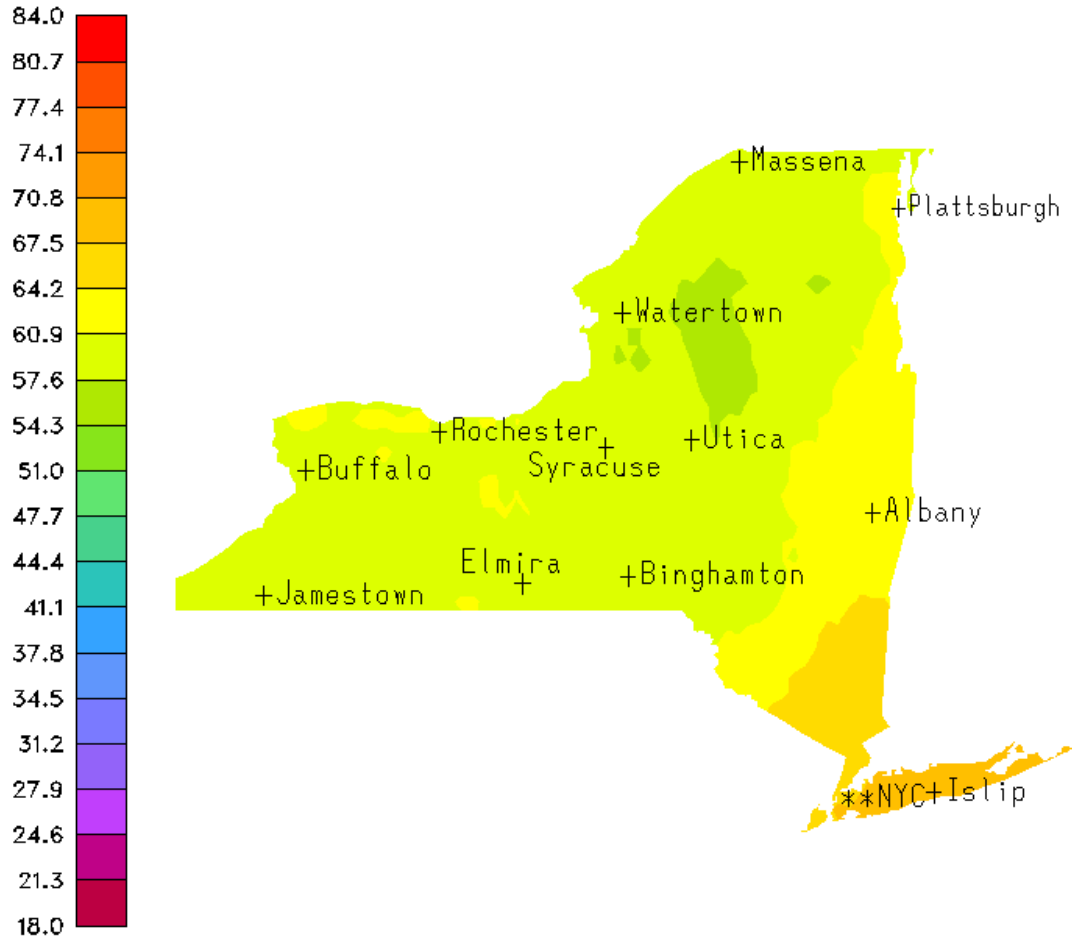


(% Solar Fraction)

System ID 201

Solar Fraction  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



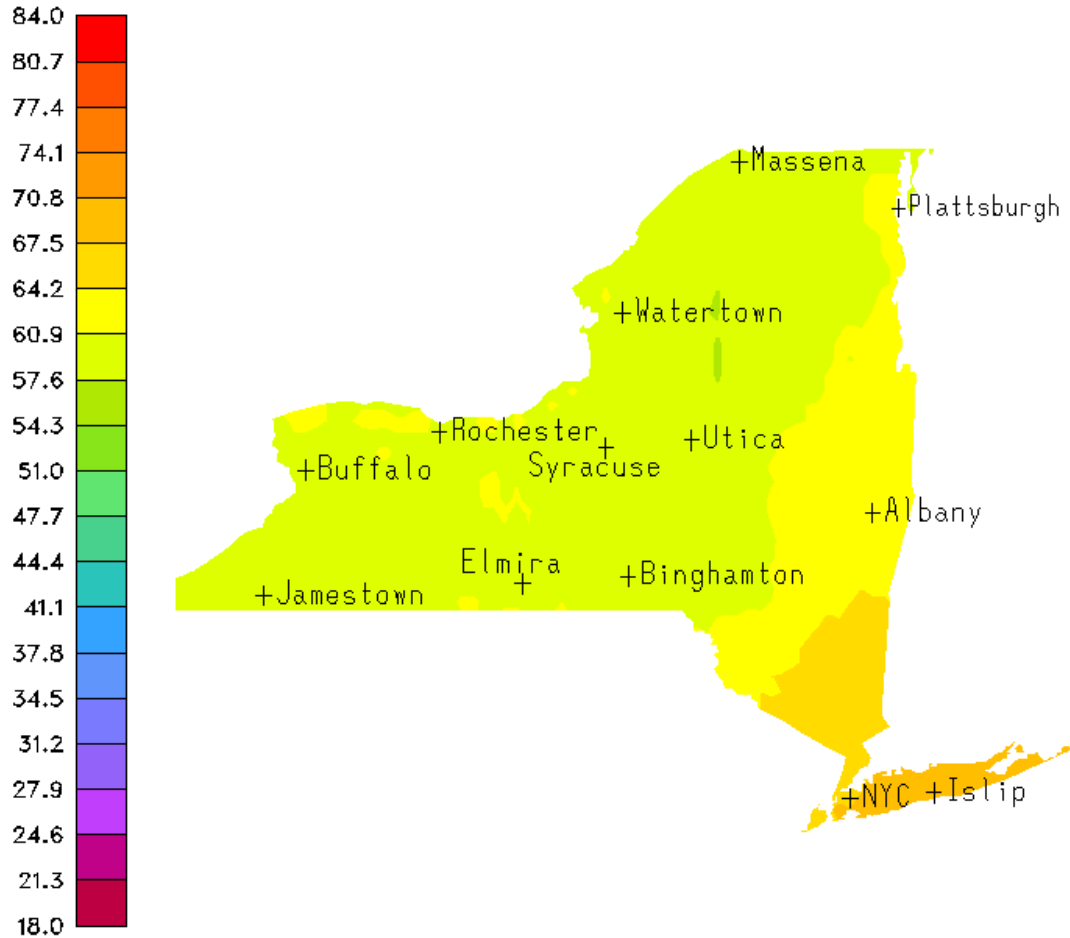
(% Solar Fraction)

System ID 202

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Evacuated Tube Model "A" - 24 Tubes  
 Double Heat Exchanger Tank  
 Oil

New York State

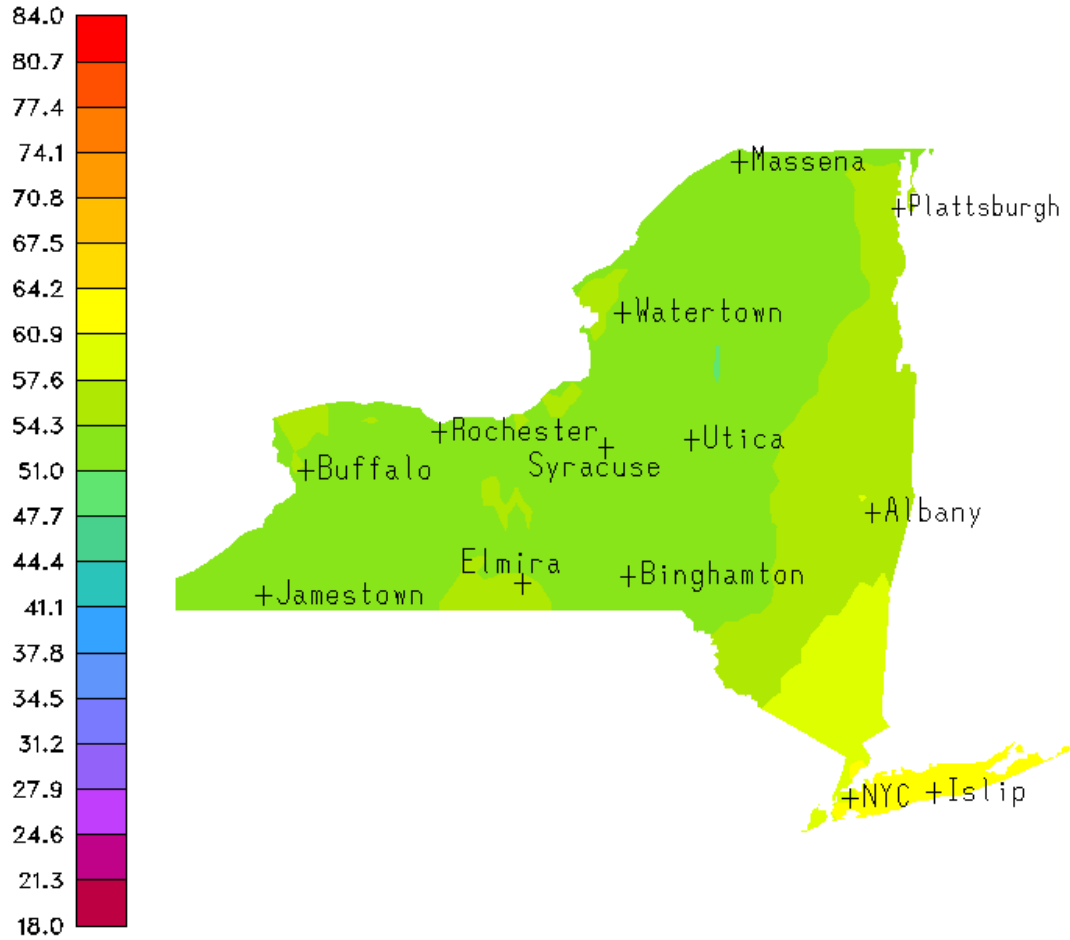


(% Solar Fraction)

System ID 243

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State

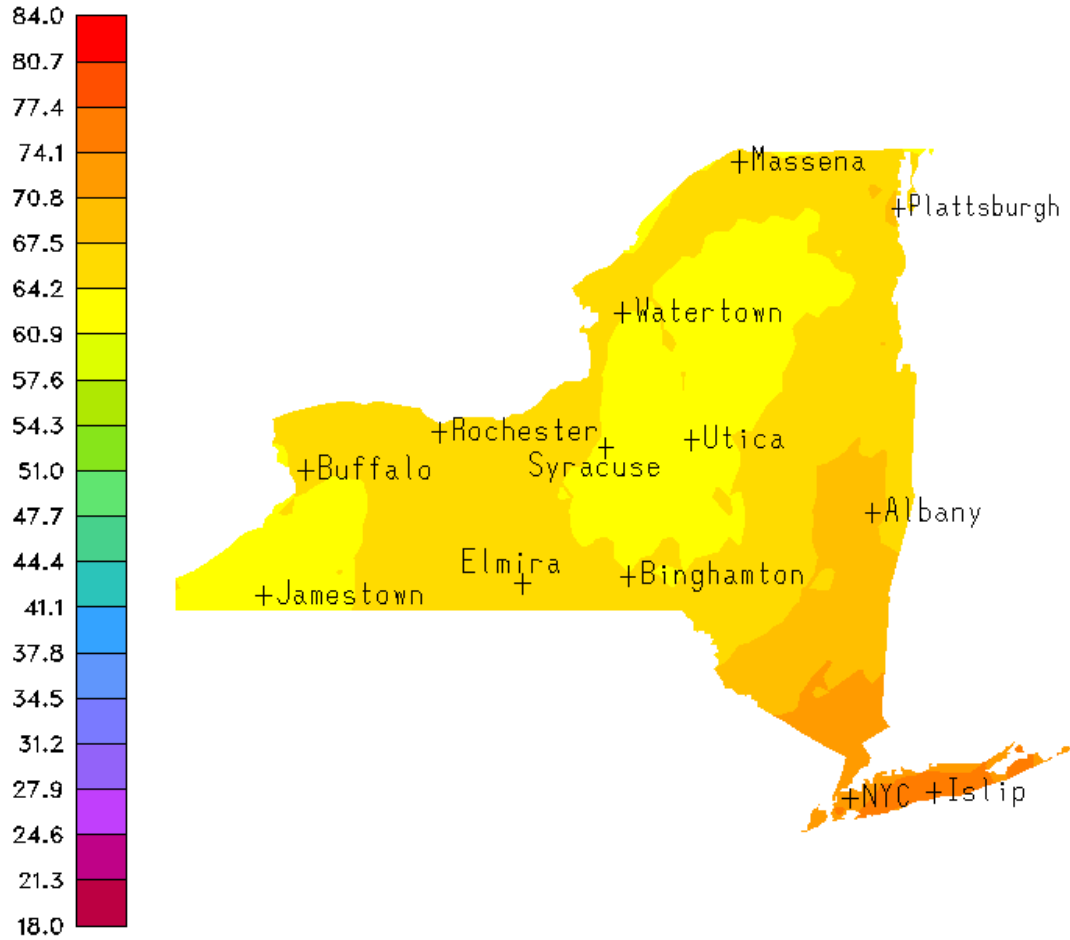


(% Solar Fraction)

System ID 300

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Electric

New York State

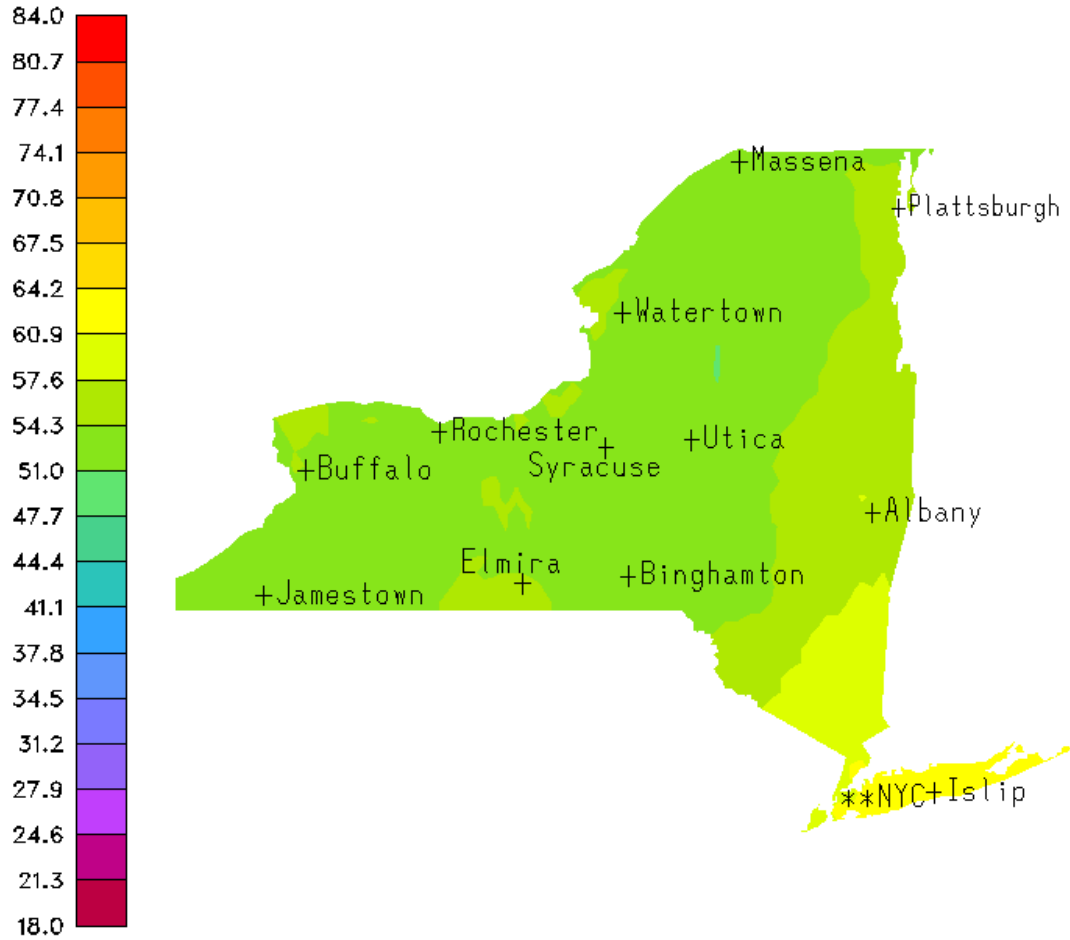


(% Solar Fraction)

System ID 301

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Propane

New York State

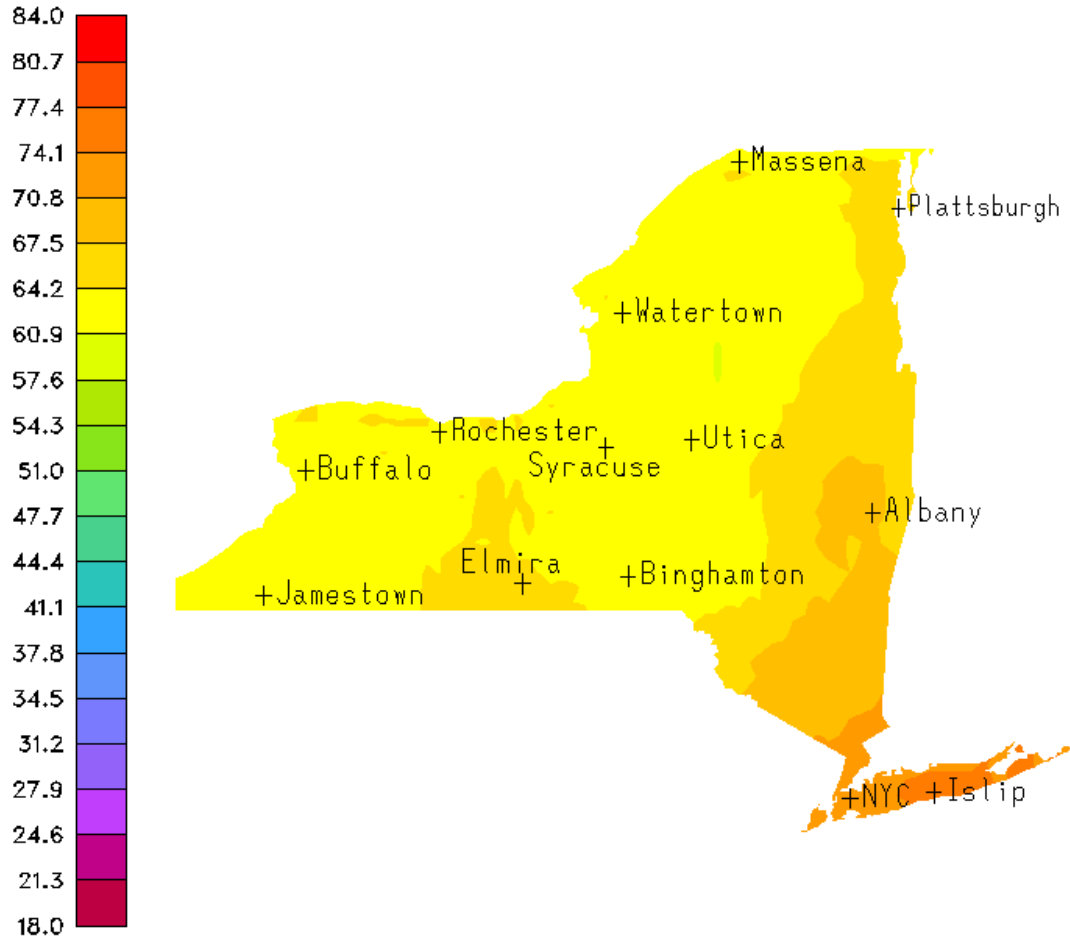


(% Solar Fraction)

System ID 302

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Instantaneous (tankless)  
 Natural Gas

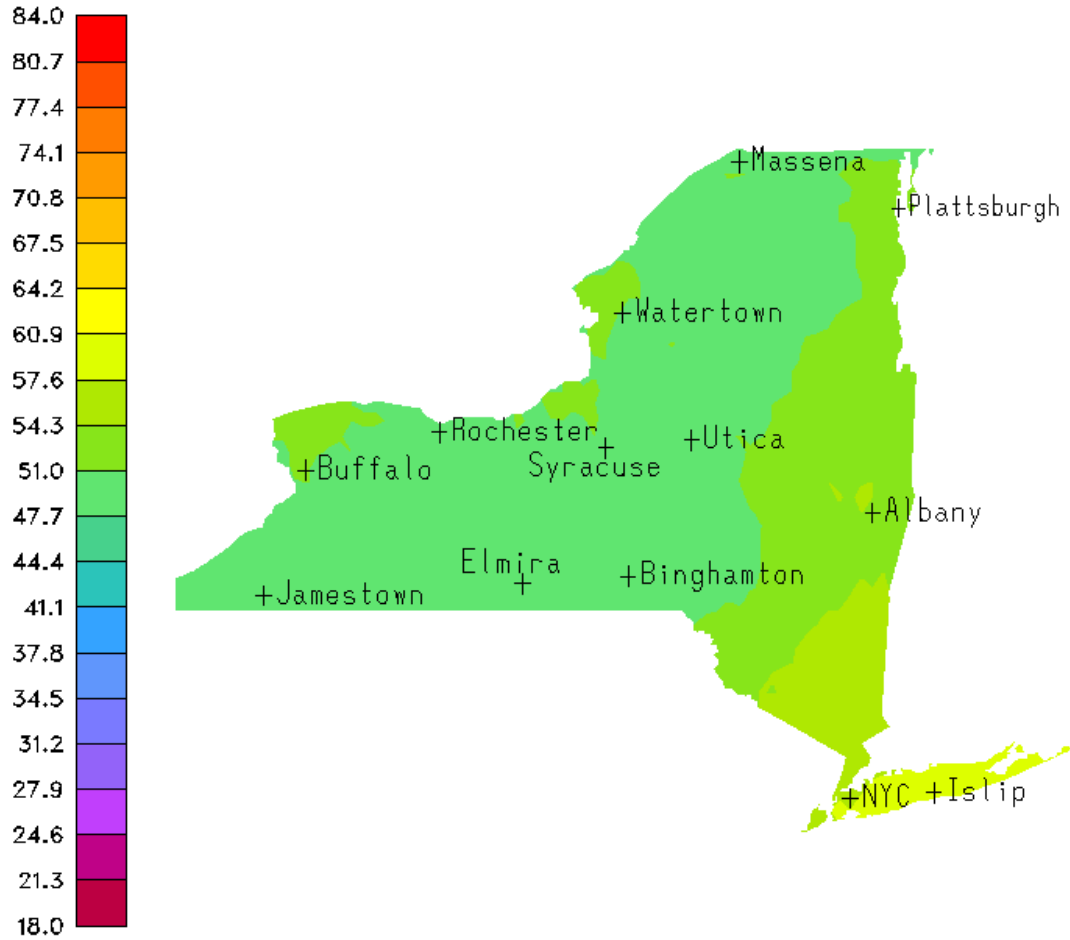


(% Solar Fraction)

System ID 310

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Conventional Tank/Ext Heat Exchanger  
 Electric

New York State

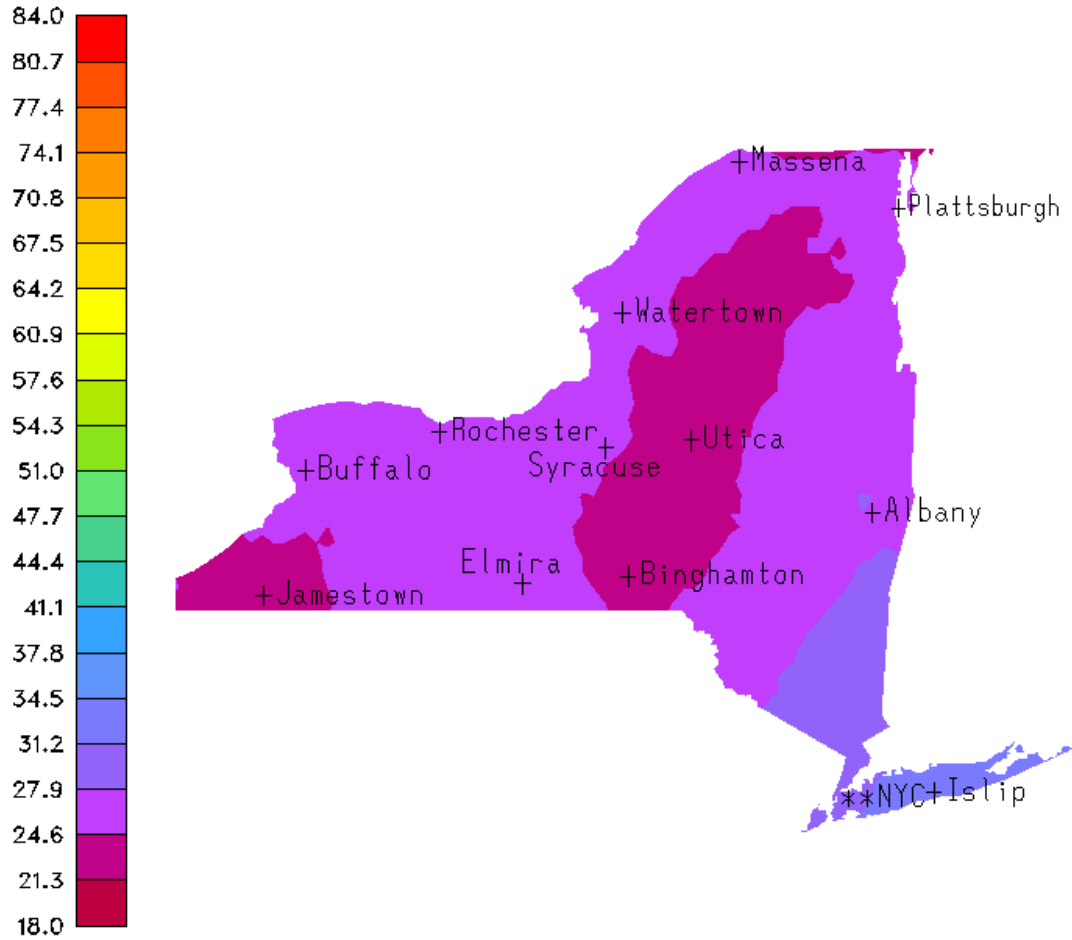


(% Solar Fraction)

System ID 331

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Conventional Tank/Ext Heat Exchanger  
 Propane

New York State



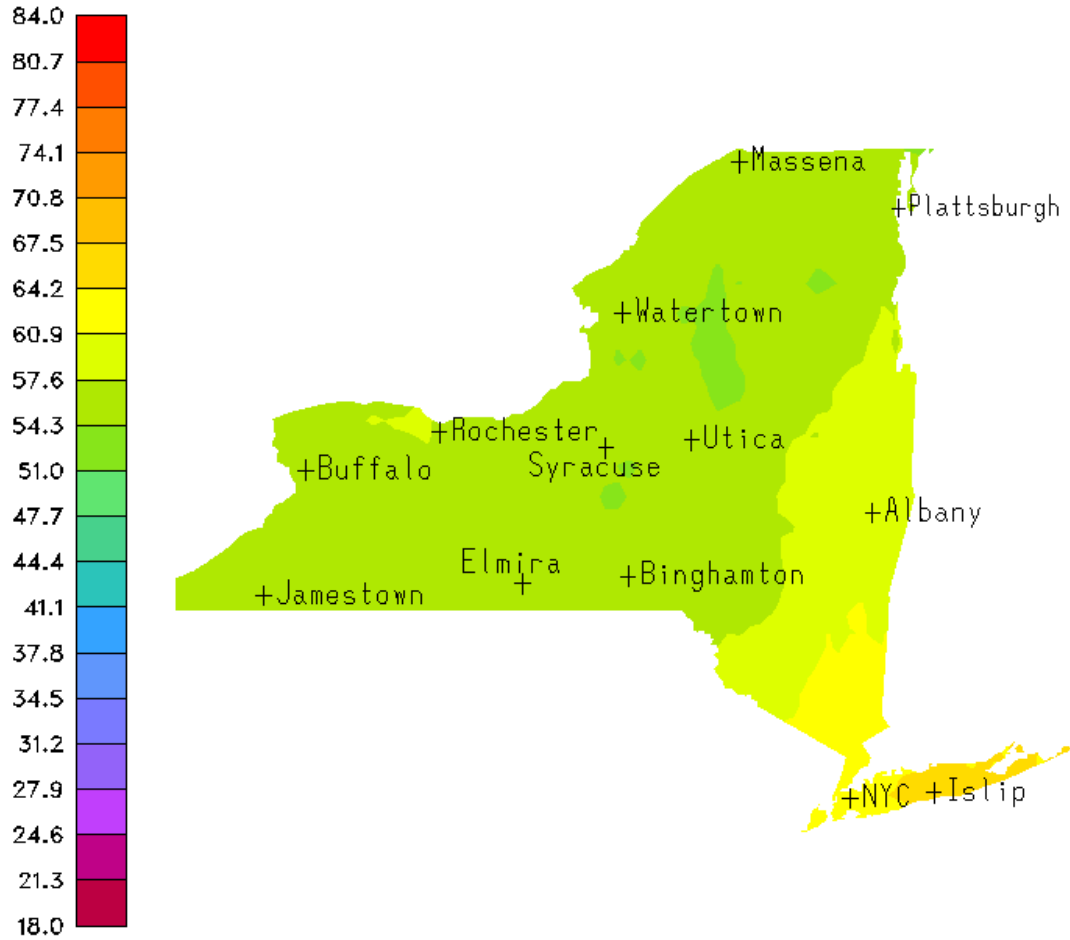
(% Solar Fraction)

System ID 332

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Evacuated Tube Model "B" - 24 Tubes  
 Double Heat Exchanger Tank  
 Oil

New York State

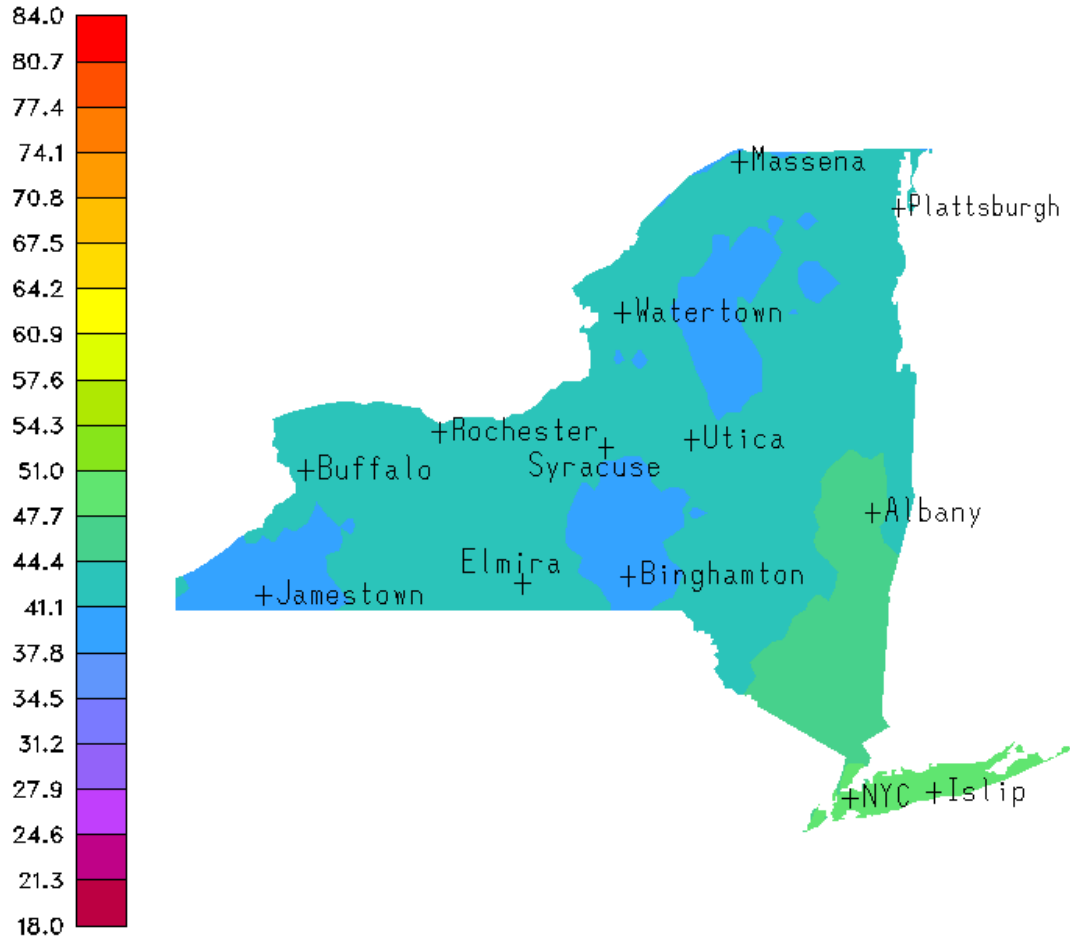


(% Solar Fraction)

System ID 343

Solar Fraction  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Natural Gas

New York State

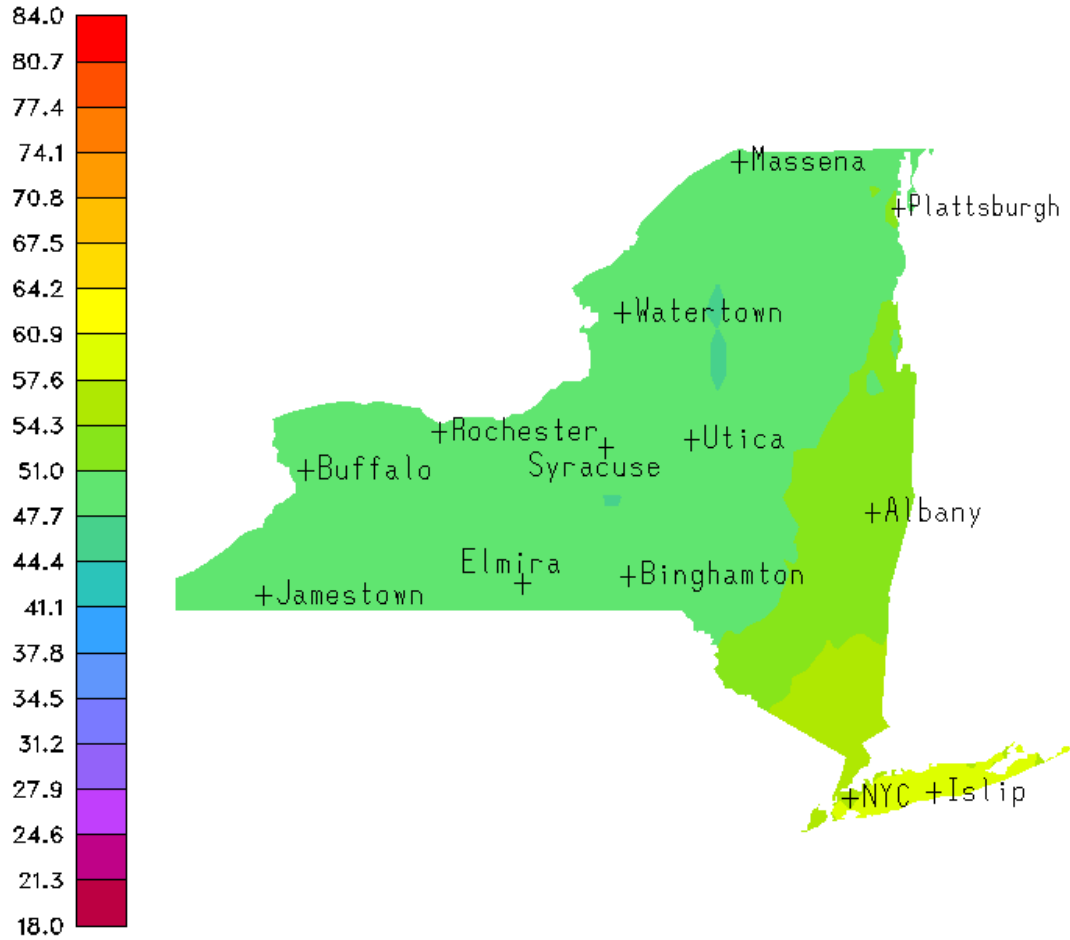


(% Solar Fraction)

System ID 520

Solar Fraction  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Electric

New York State

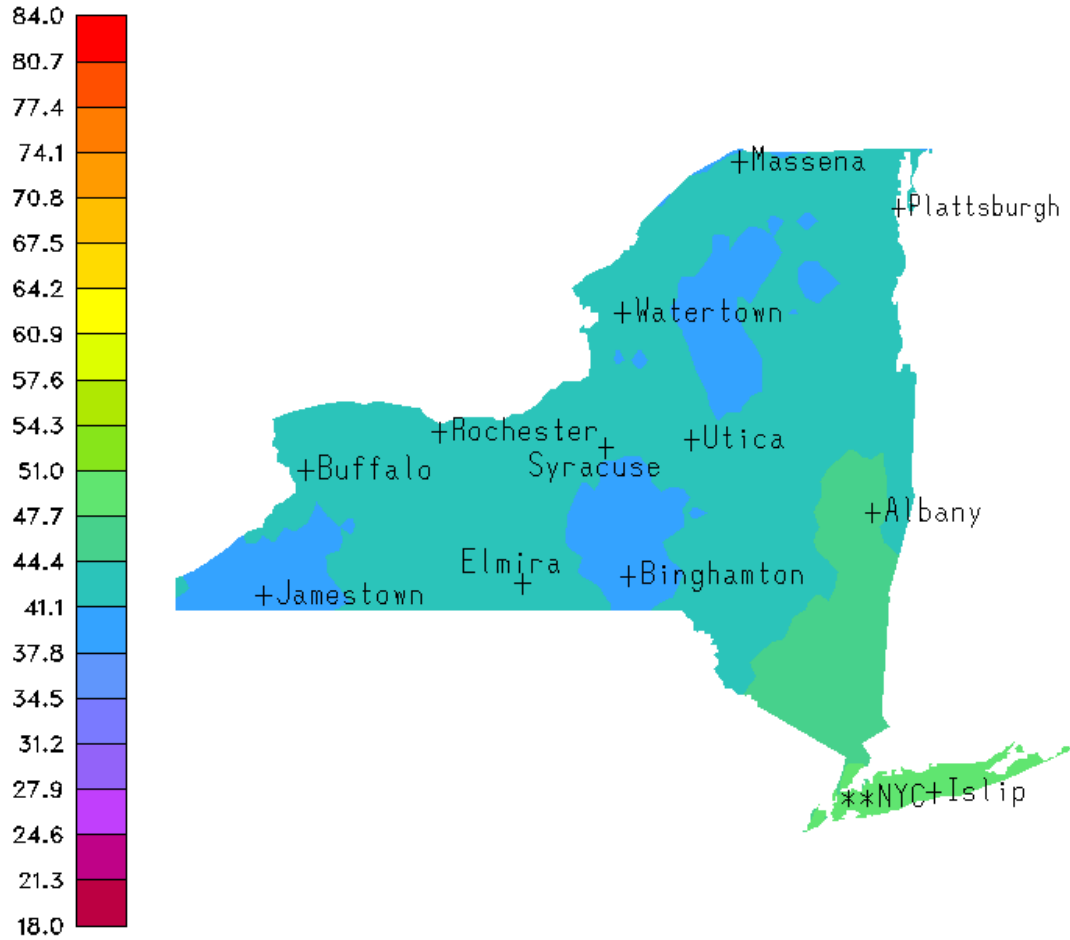


(% Solar Fraction)

System ID 521

Solar Fraction  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Propane

New York State



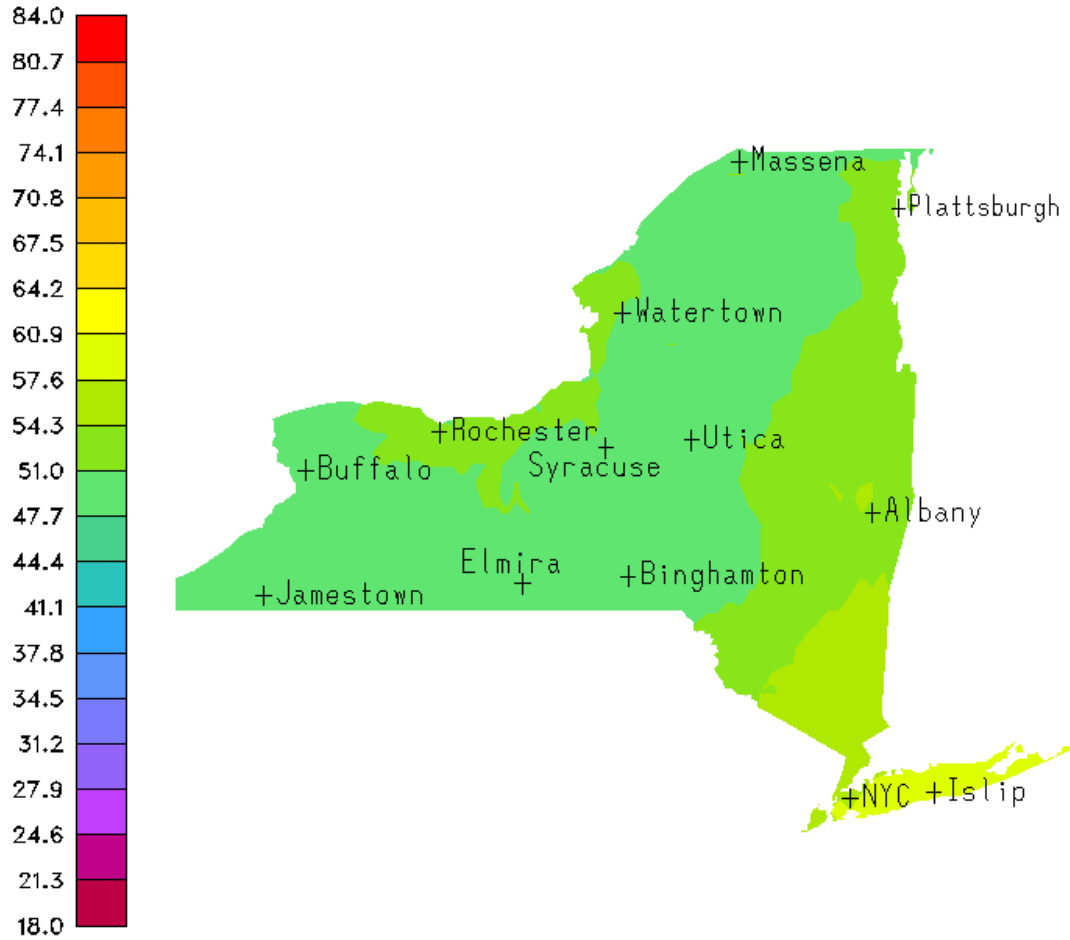
(% Solar Fraction)

System ID 522

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Flat Plate Model "B" - 2 Collectors  
 Conventional Tank/Ext Heat Exchanger  
 Electric

New York State

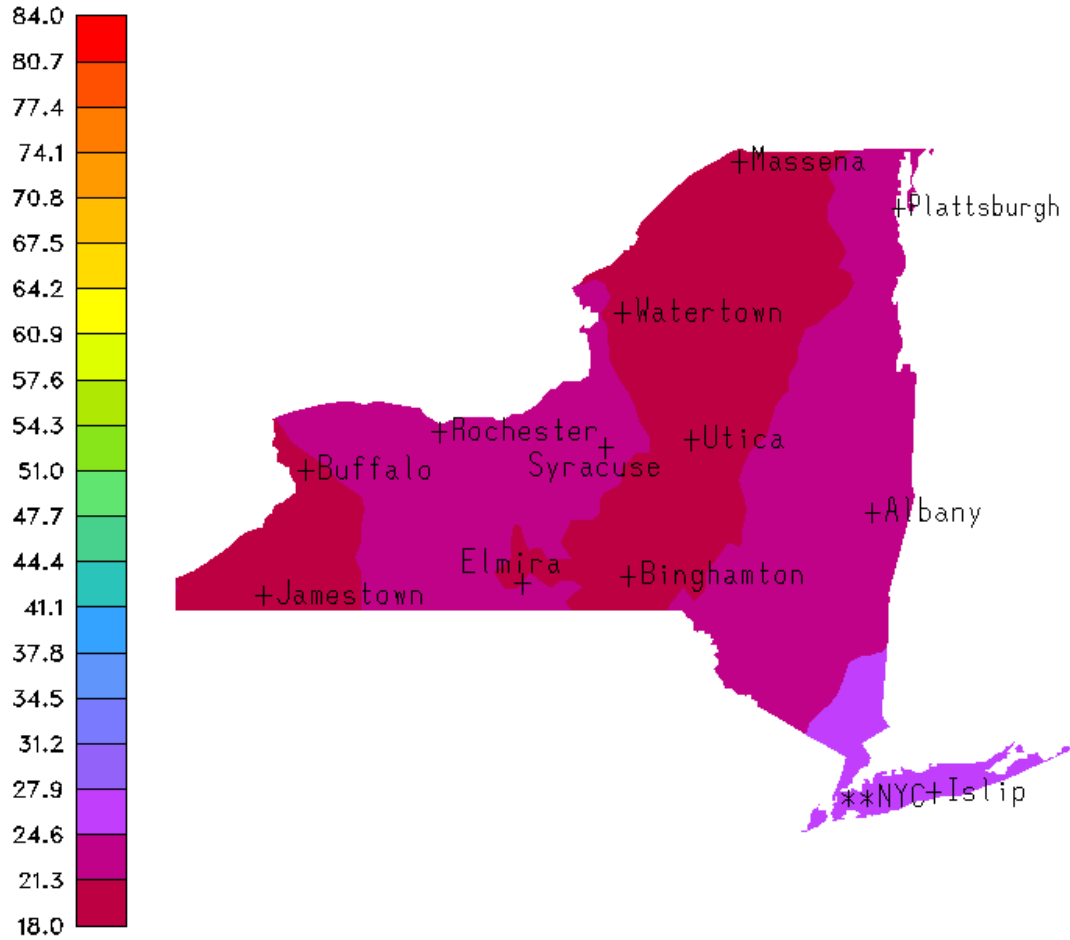


(% Solar Fraction)

System ID 531

Solar Fraction  
 Flat Plate Model "B" - 2 Collectors  
 Conventional Tank/Ext Heat Exchanger  
 Propane

New York State

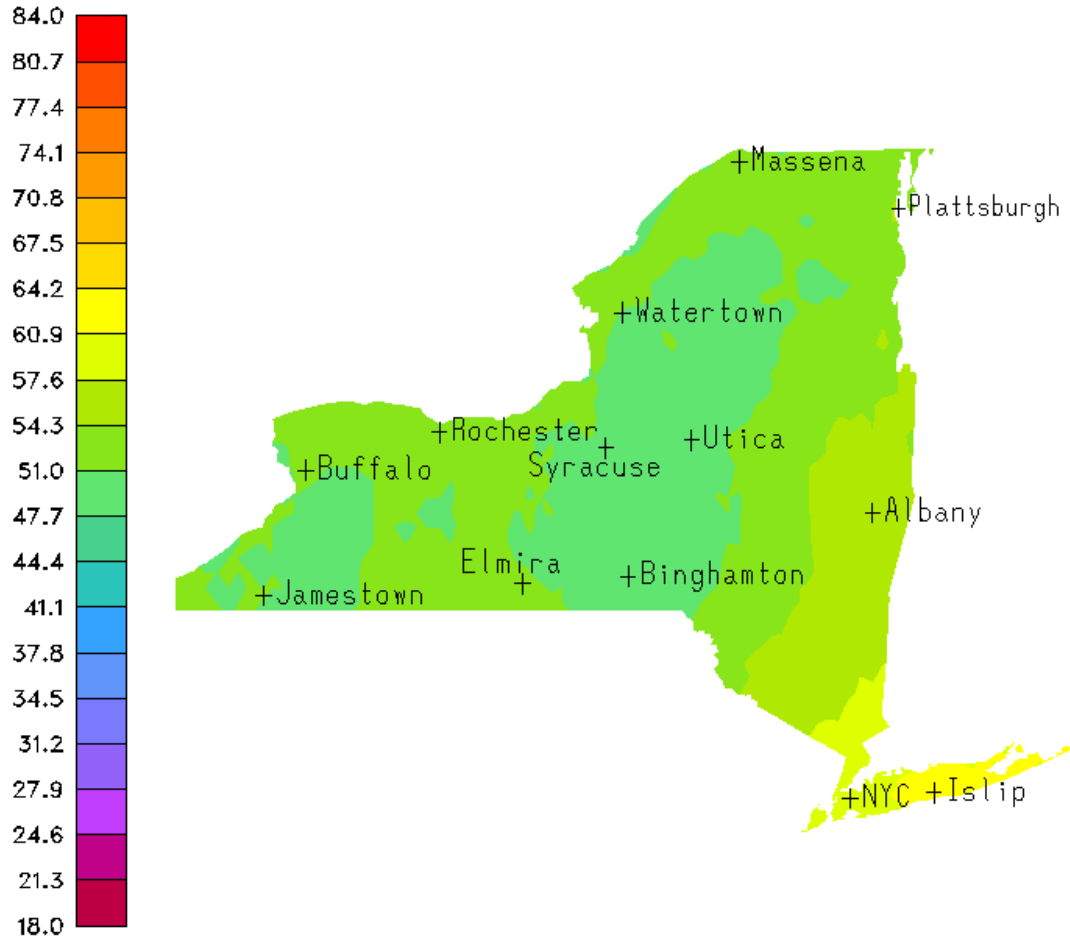


(% Solar Fraction)

System ID 532

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Evacuated Tube Model "C" - 30 Tubes  
 Solar preheat tank/Instantaneous (tankless)  
 Natural Gas

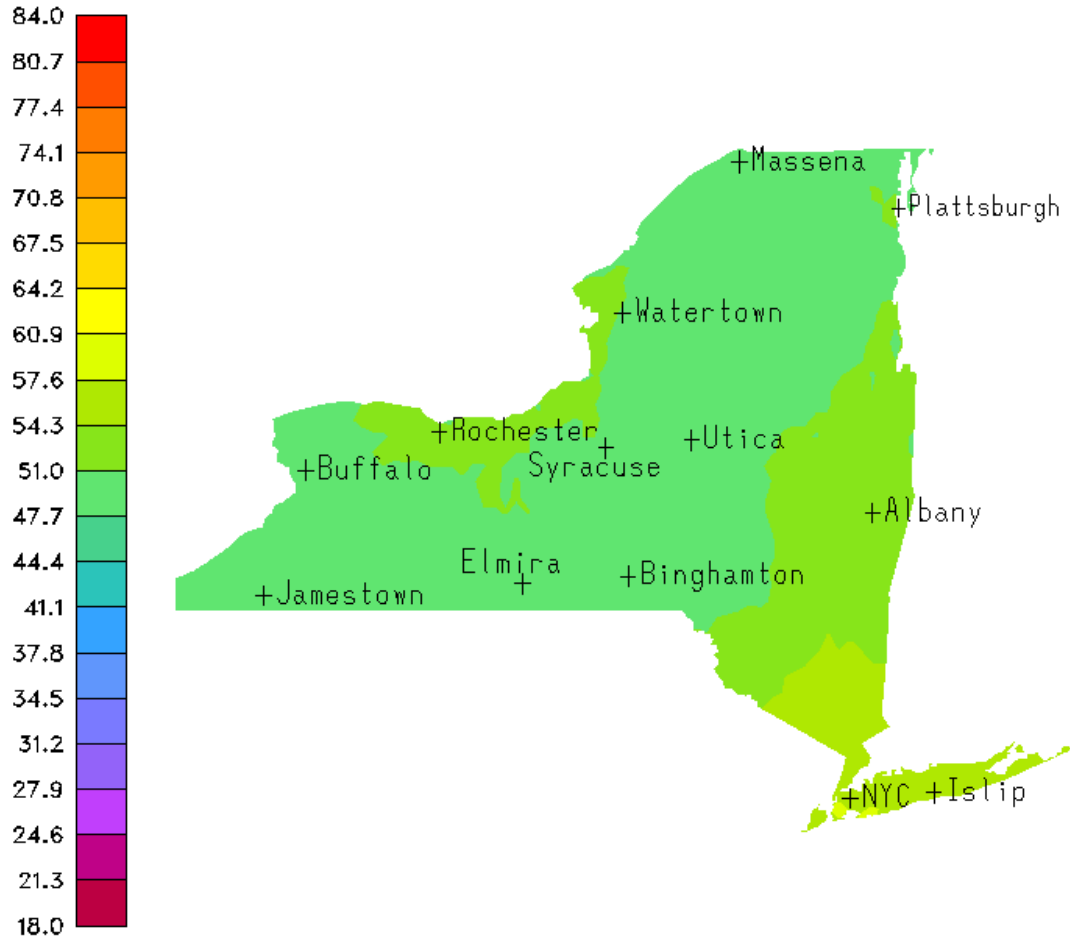


(% Solar Fraction)

System ID 610

Solar Fraction  
 Evacuated Tube Model "C" - 30 Tubes  
 Double Heat Exchanger Tank  
 Electric

New York State

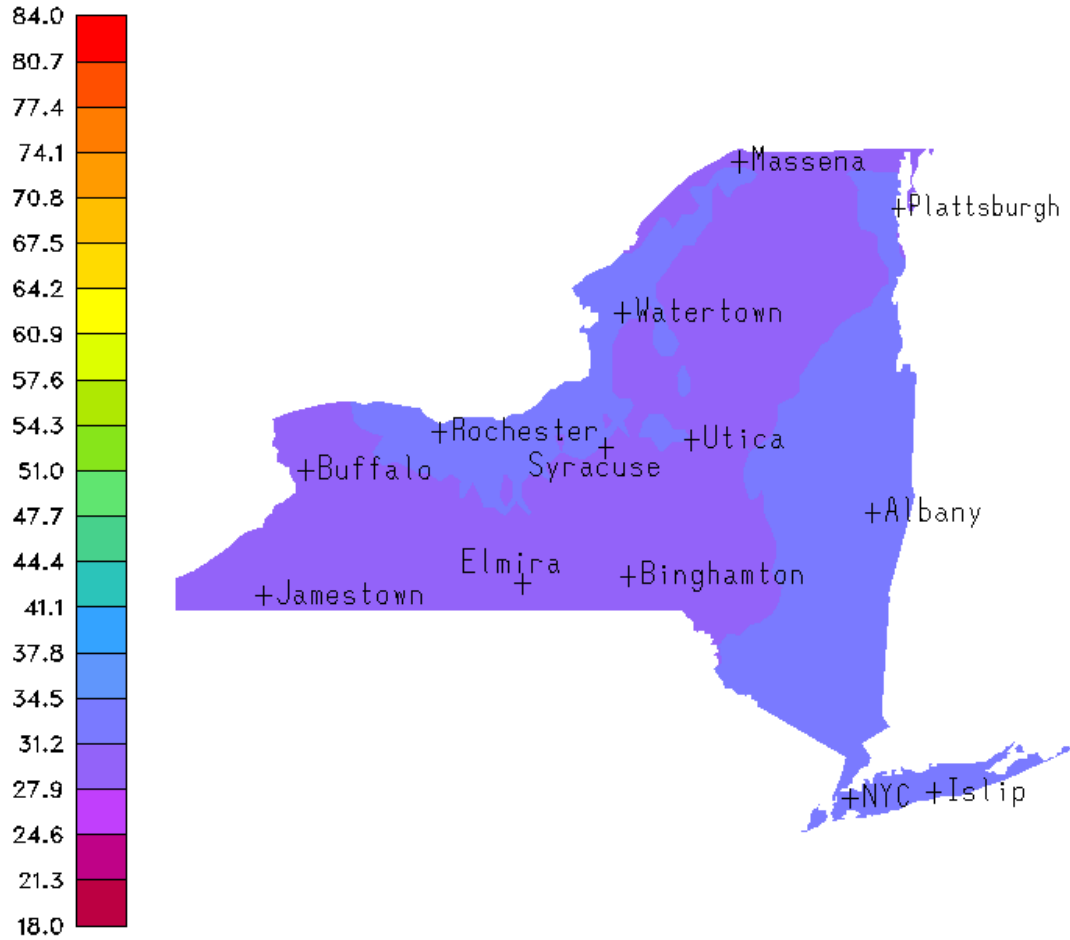


(% Solar Fraction)

System ID 641

Solar Fraction  
 Building Integrated - 600 Square Feet  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State

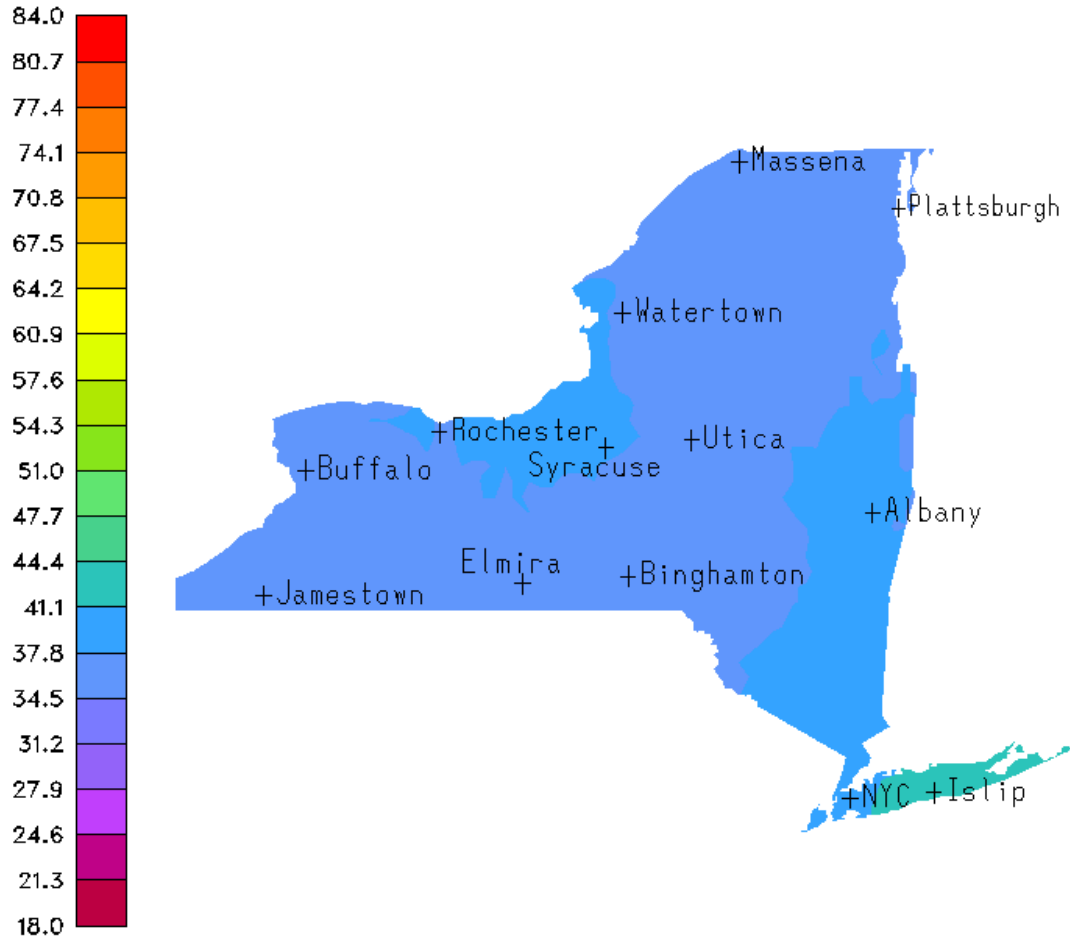


(% Solar Fraction)

System ID 700

Solar Fraction  
 Building Integrated - 600 Square Feet  
 Solar preheat tank/Conventional Tank  
 Electric

New York State

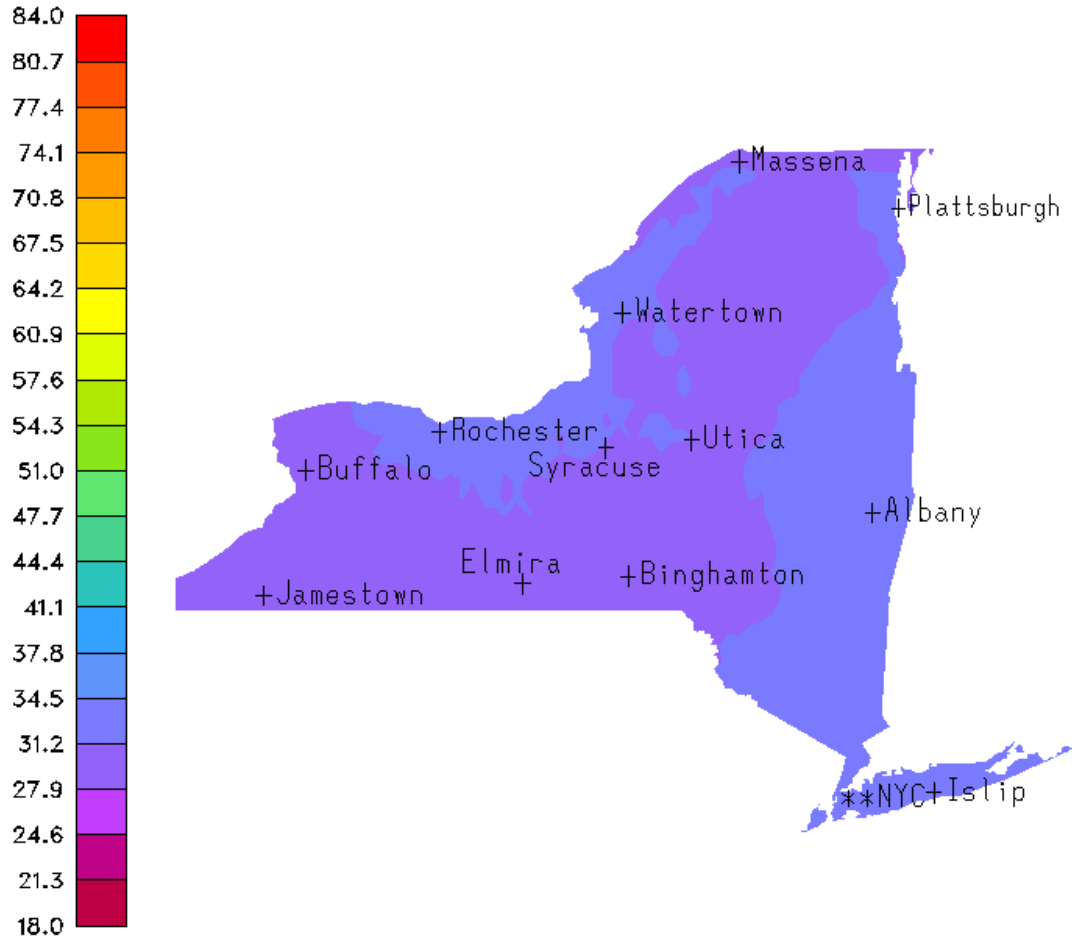


(% Solar Fraction)

System ID 701

Solar Fraction  
 Building Integrated - 600 Square Feet  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



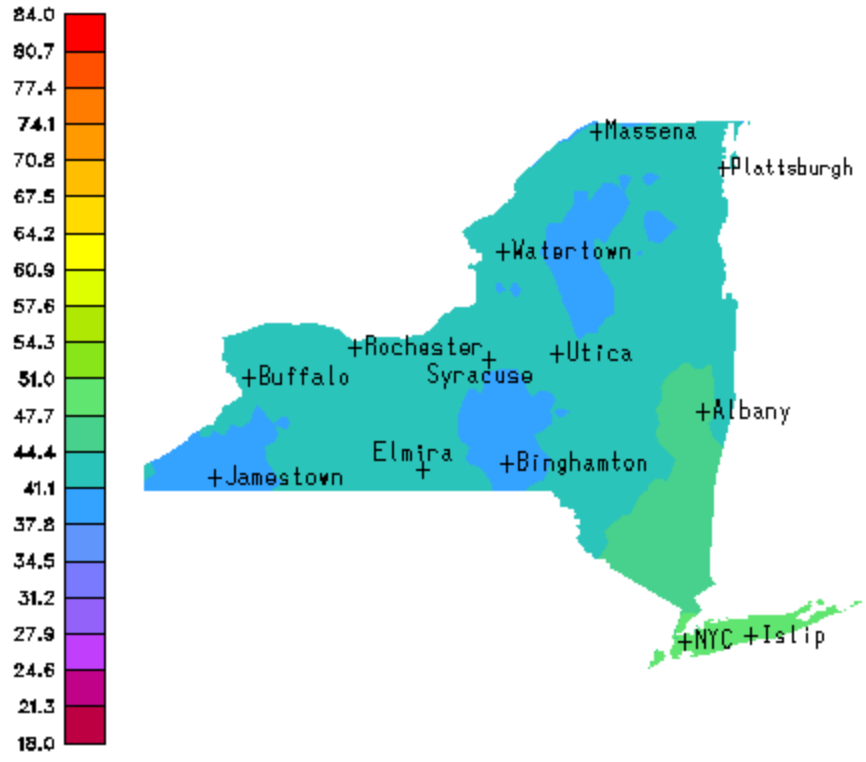
(% Solar Fraction)

System ID 702

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
 Flat Plate Model "C" - 1 Collector  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Electric

New York State

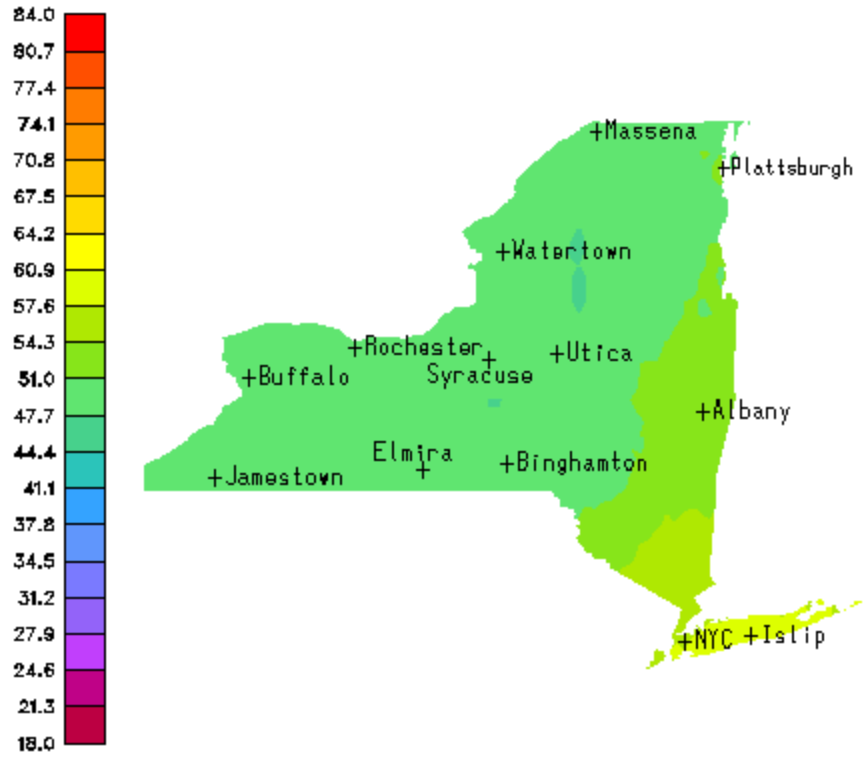


(% Solar Fraction)

System ID 821

Solar Fraction  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Natural Gas

New York State

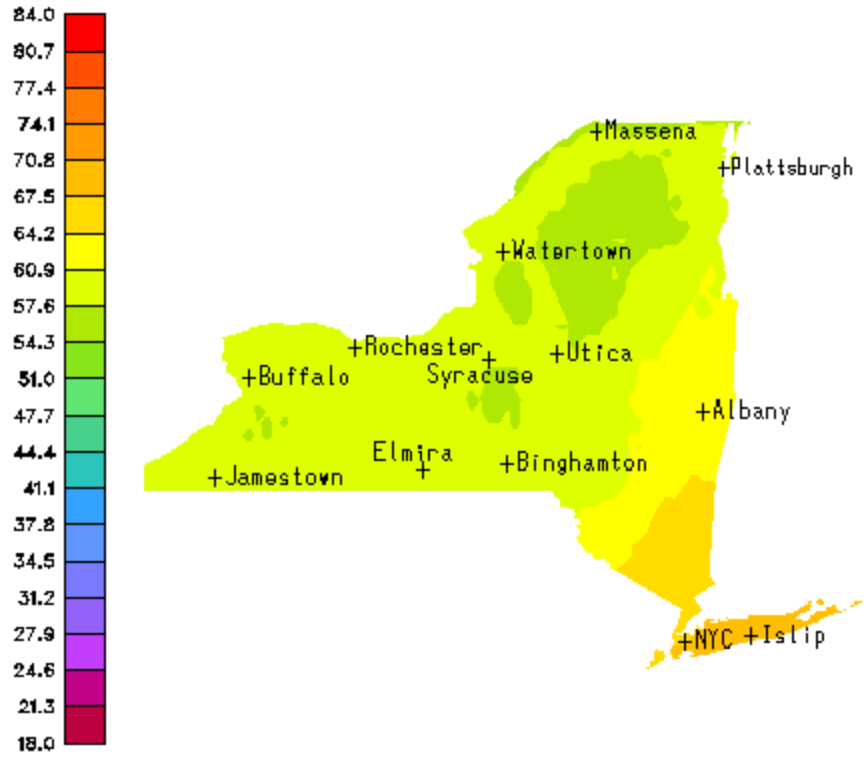


(% Solar Fraction)

System ID 920

Solar Fraction  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Electric

New York State

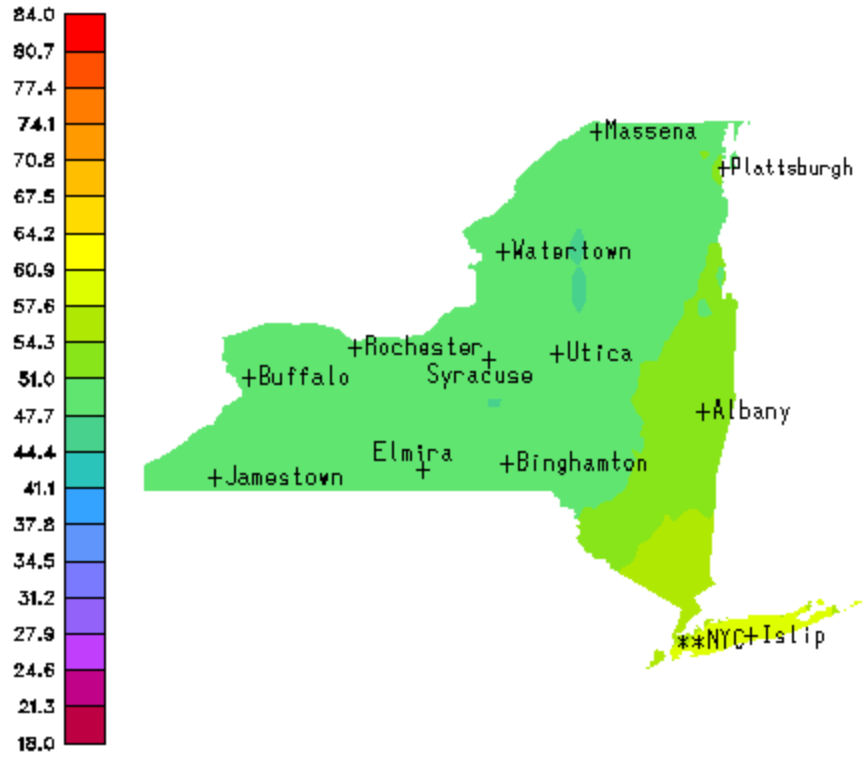


(% Solar Fraction)

System ID 921

Solar Fraction  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Propane

New York State



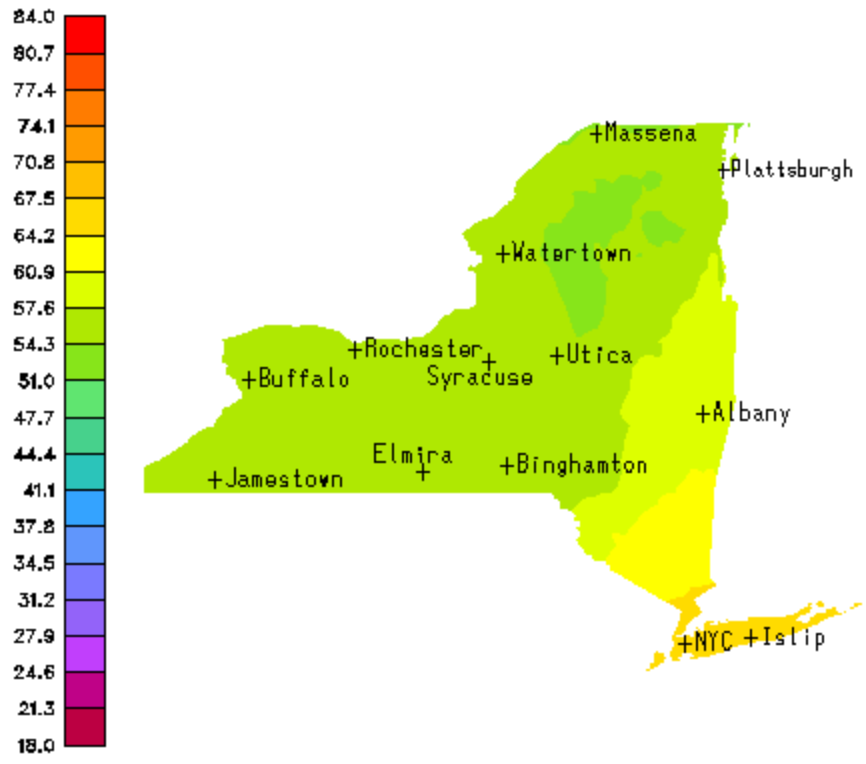
(% Solar Fraction)

System ID 922

\*\*Propane not available for heating in the NYC AREA

Solar Fraction  
Flat Plate Model "C" - 2 Collectors  
Conventional Tank/Ext Heat Exchanger  
Electric

New York State

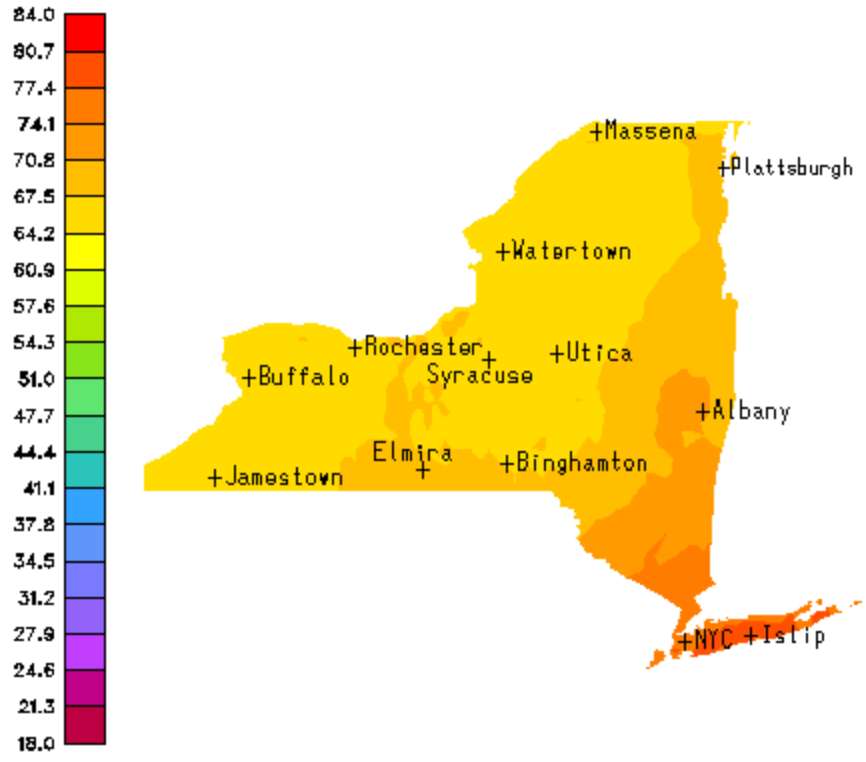


(% Solar Fraction)

System ID 931

Solar Fraction  
 Flat Plate Model "C" - 3 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Electric

New York State

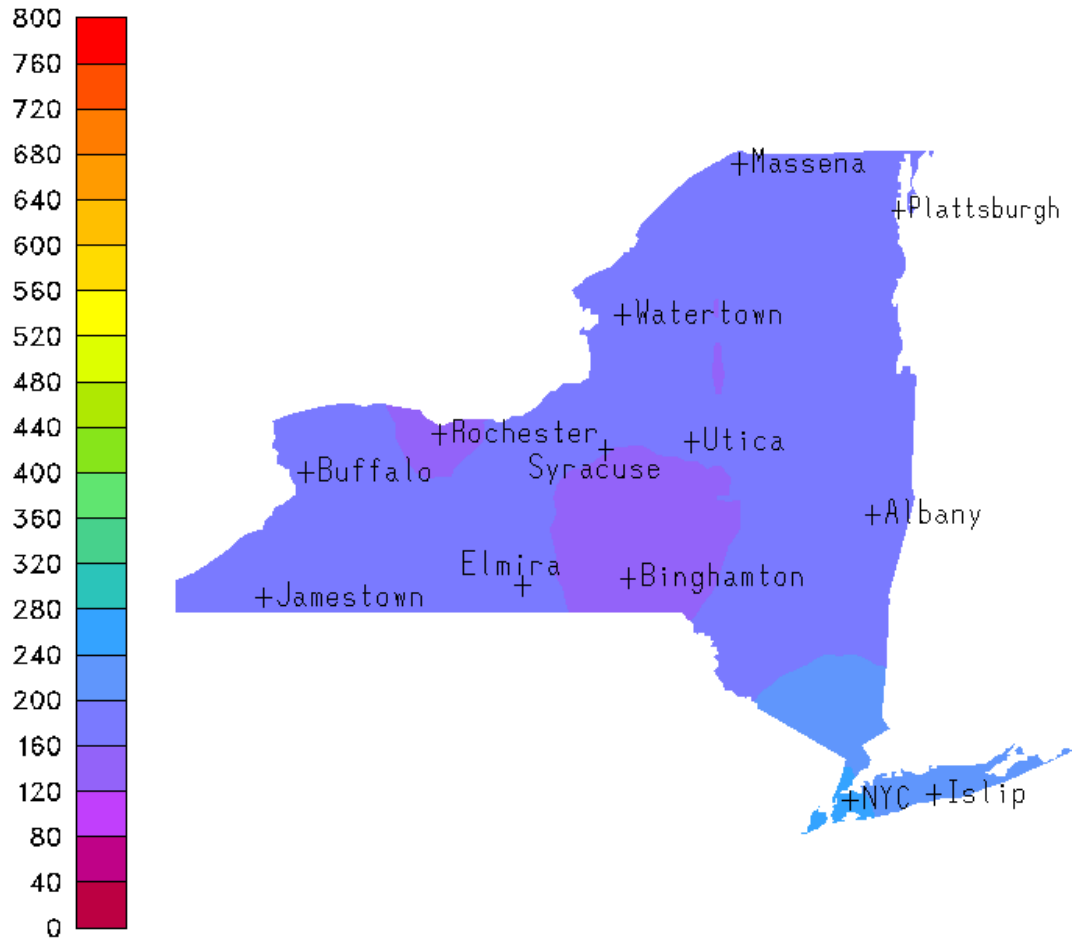


(% Solar Fraction)

System ID 1021

Year 1 Fuel Bill Savings  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat + Conventional Tank  
 Natural Gas

New York State

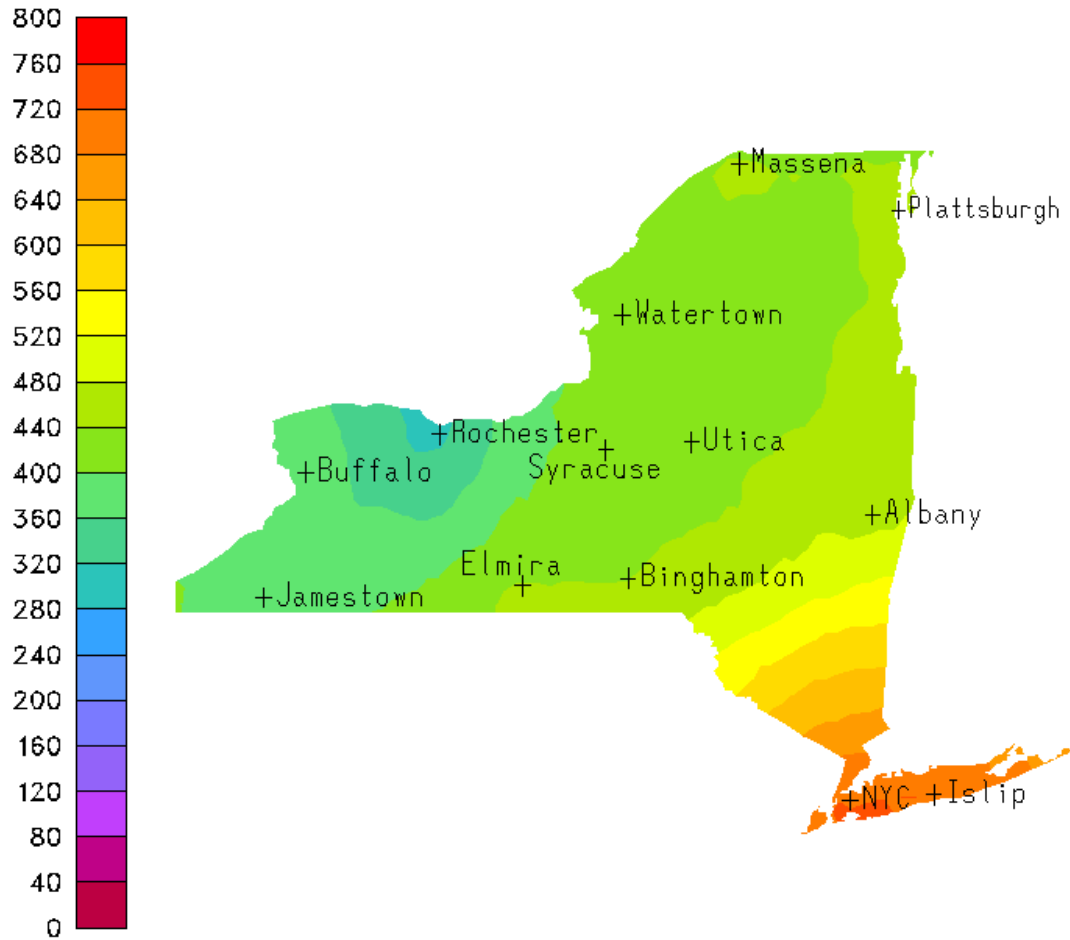


Year 1 Savings (\$)

System ID 100

Year 1 Fuel Bill Savings  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat + Conventional Tank  
 Electric

New York State

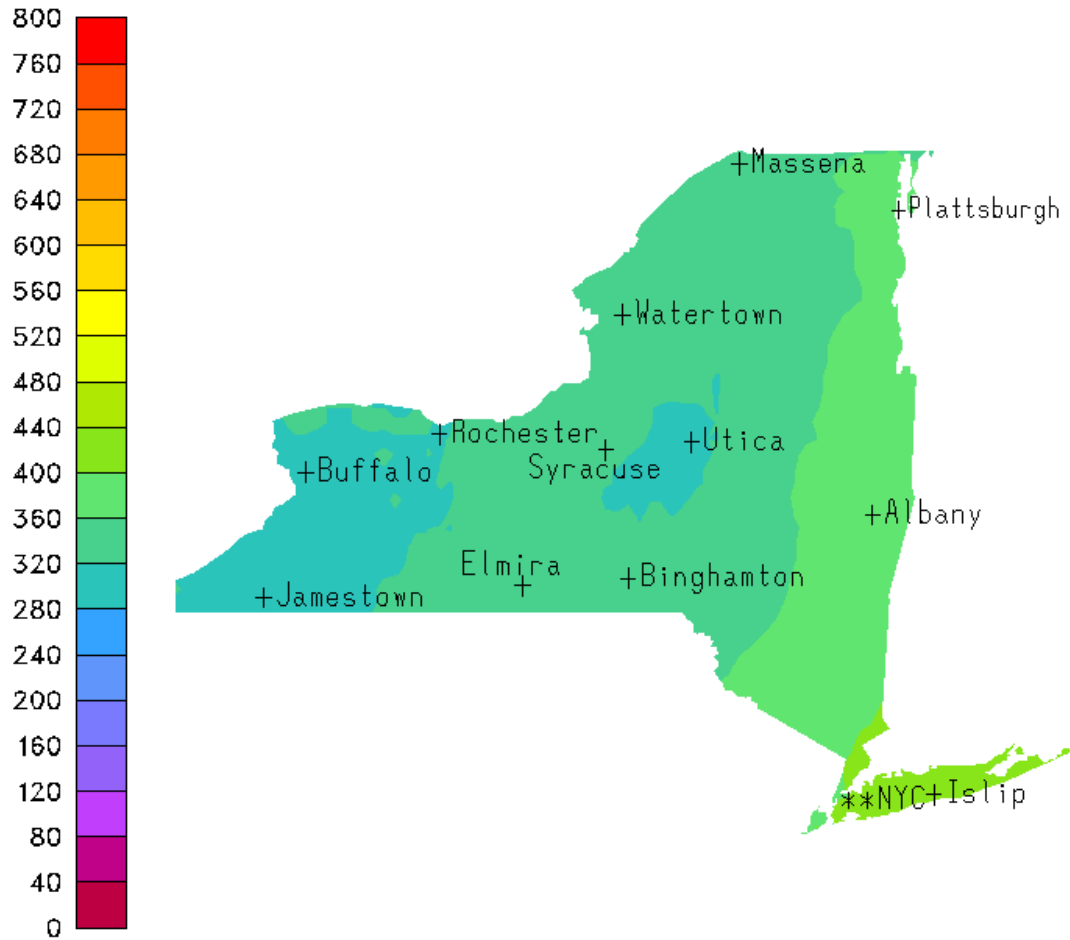


Year 1 Savings (\$)

System ID 101

Year 1 Fuel Bill Savings  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat + Conventional Tank  
 Propane

New York State



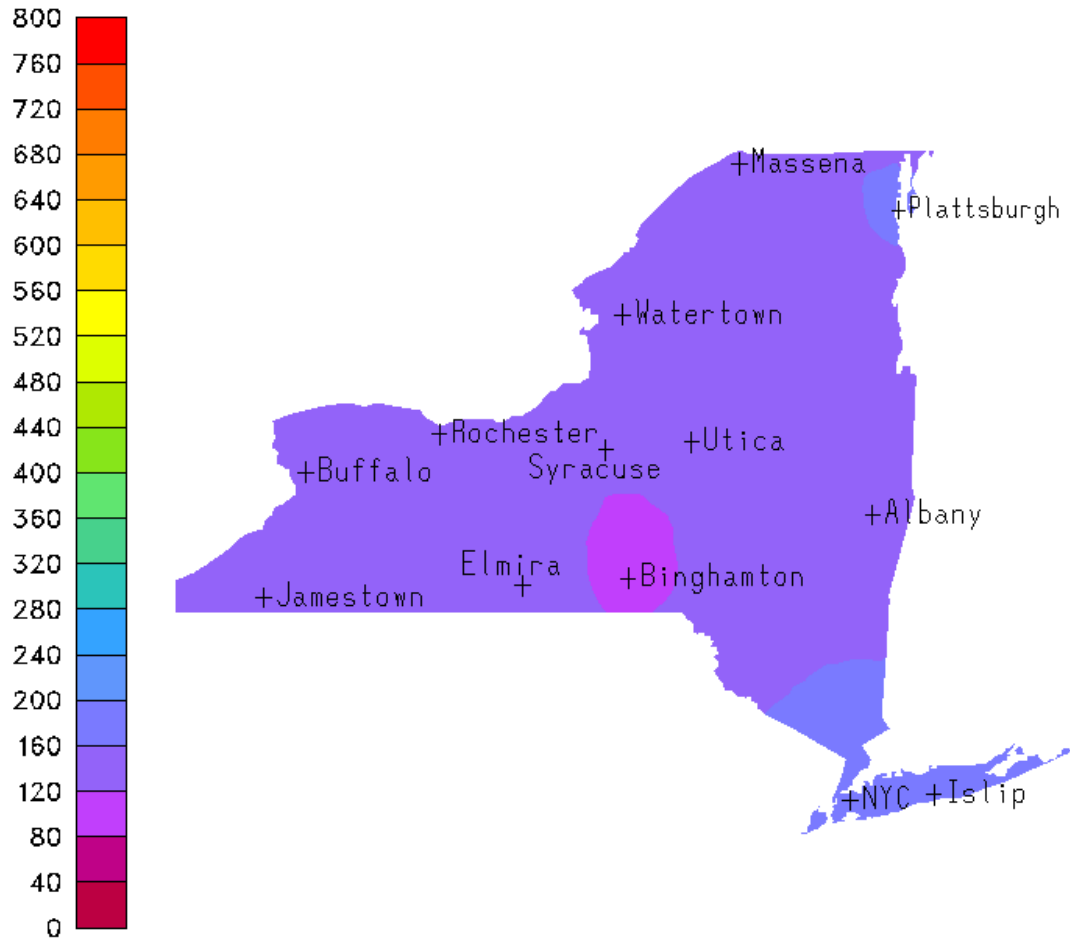
Year 1 Savings (\$)

System ID 102

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat + Instantaneous (tankless)  
 Natural Gas

New York State

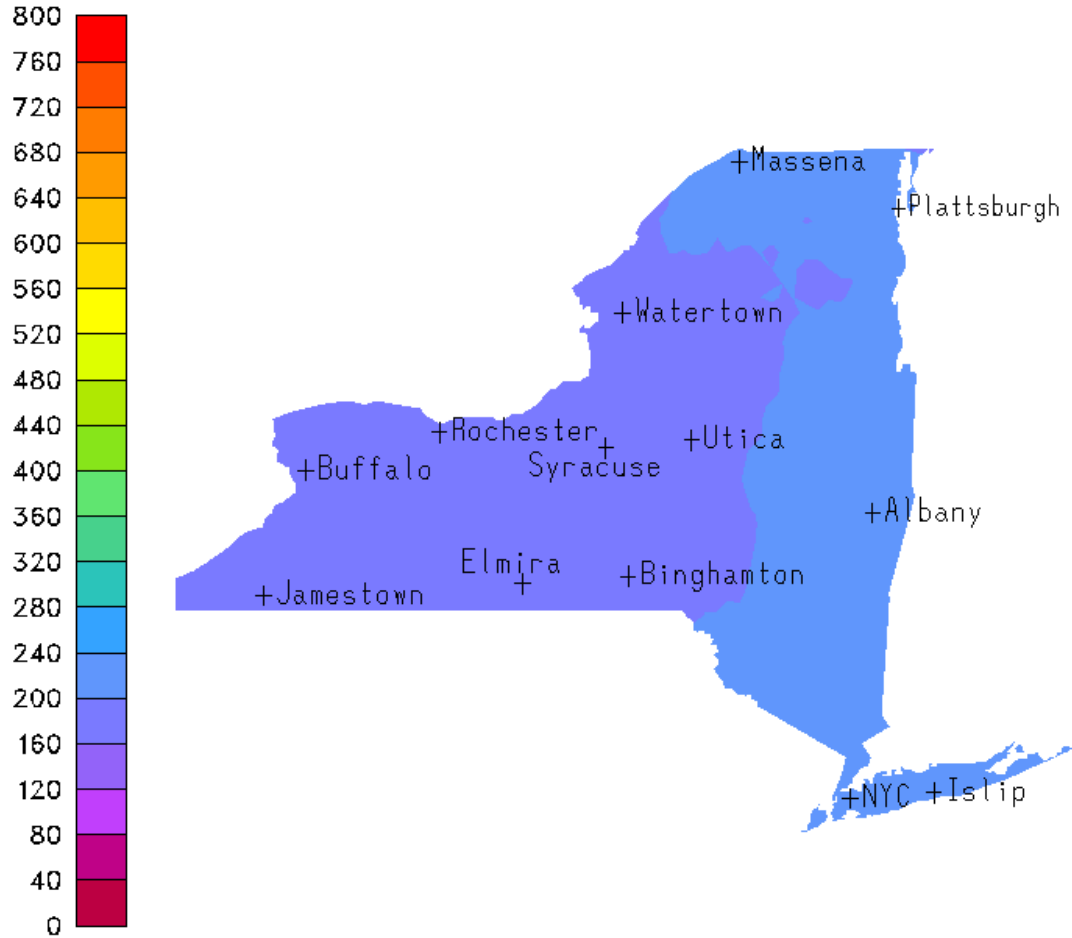


Year 1 Savings (\$)

System ID 110

Year 1 Fuel Bill Savings  
 Flat Plate Model "A" - 3 Collectors  
 Double Heat Exchanger Tank  
 Oil

New York State

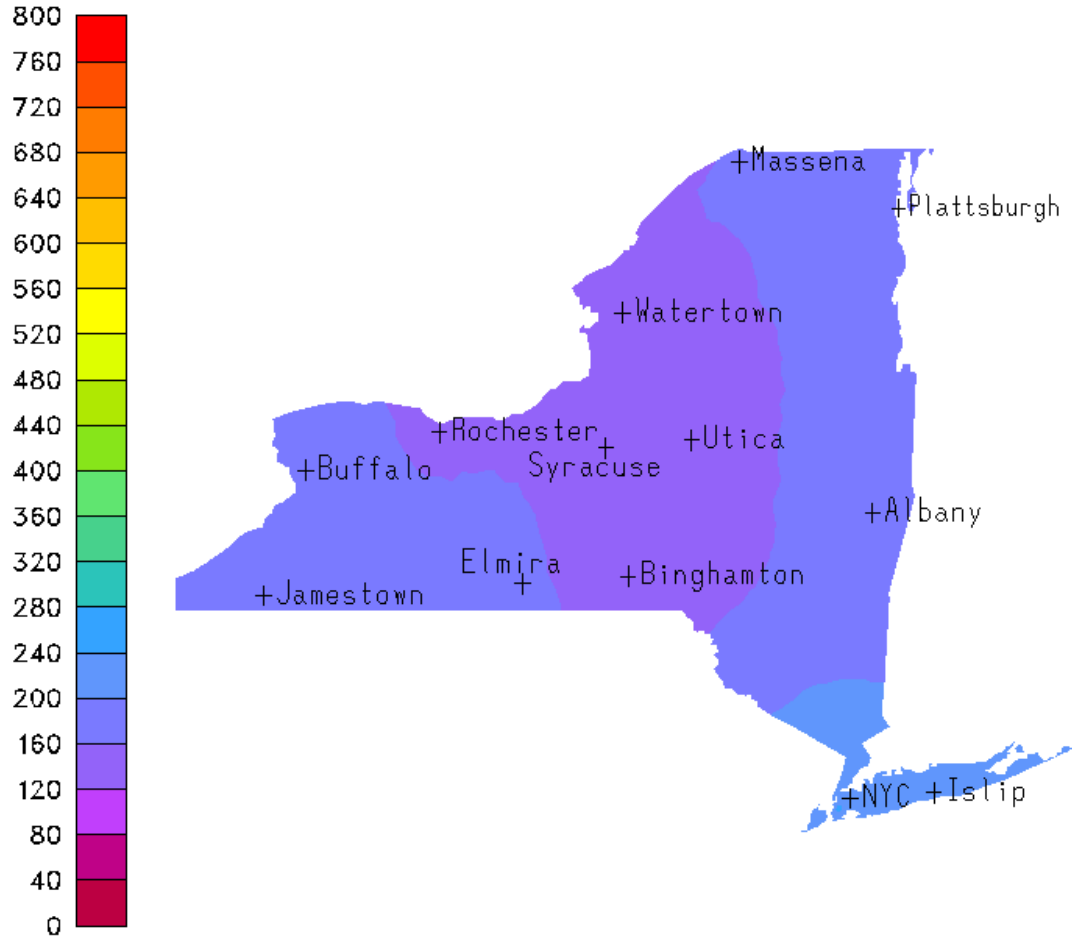


Year 1 Savings (\$)

System ID 143

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Natural Gas

New York State

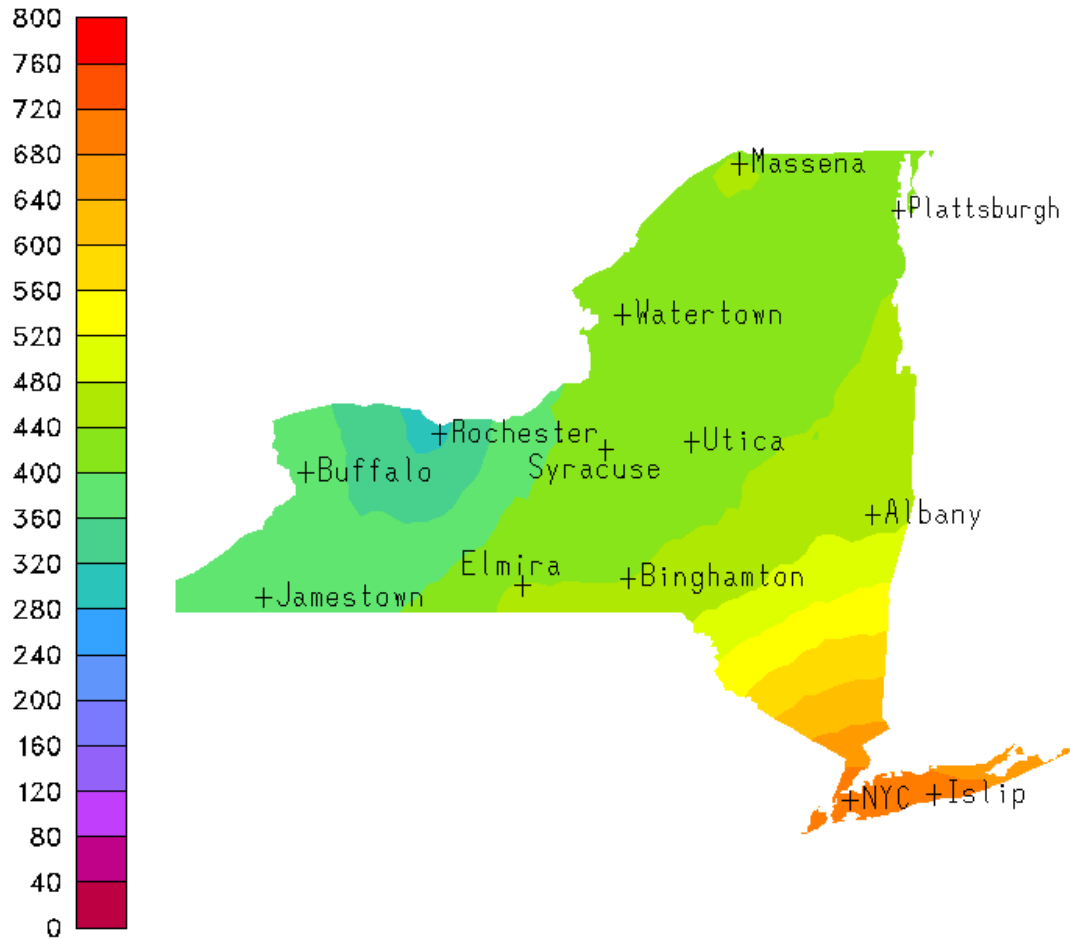


Year 1 Savings (\$)

System ID 200

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Electric

New York State

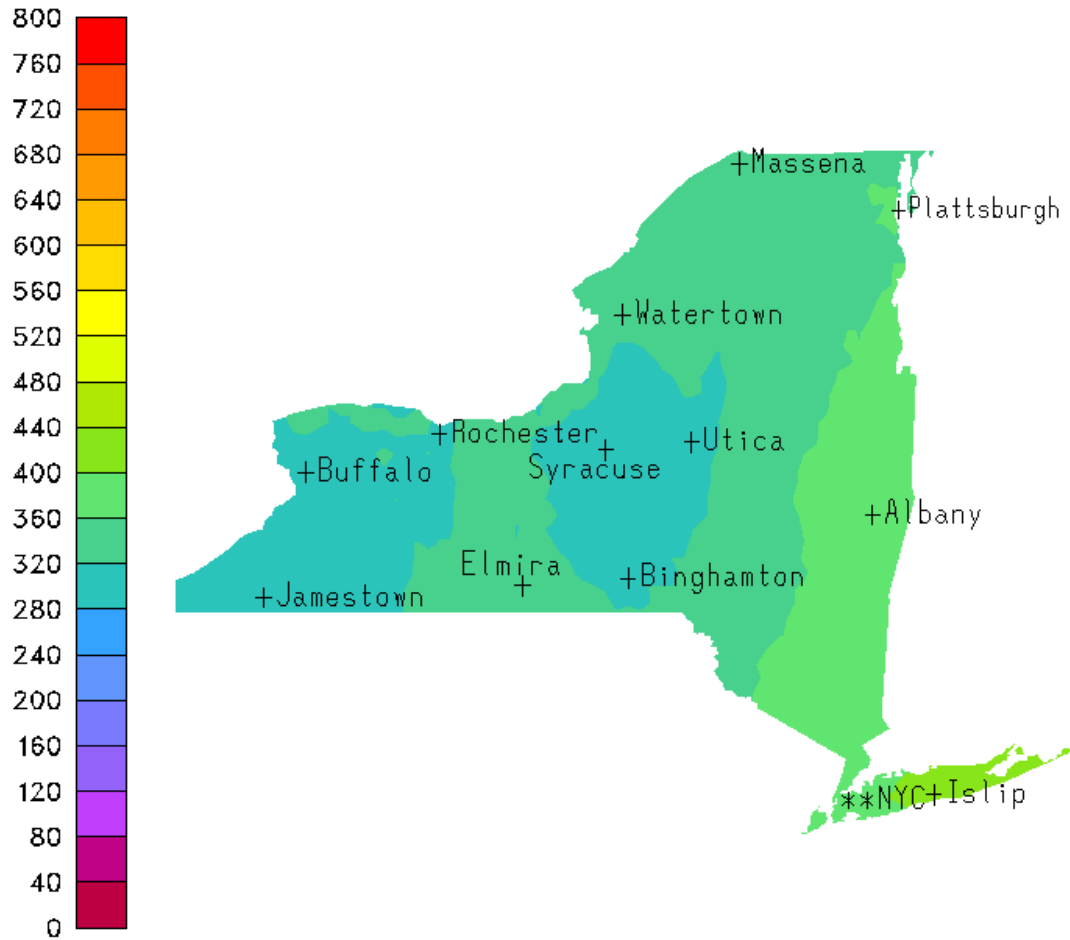


Year 1 Savings (\$)

System ID 201

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Propane

New York State



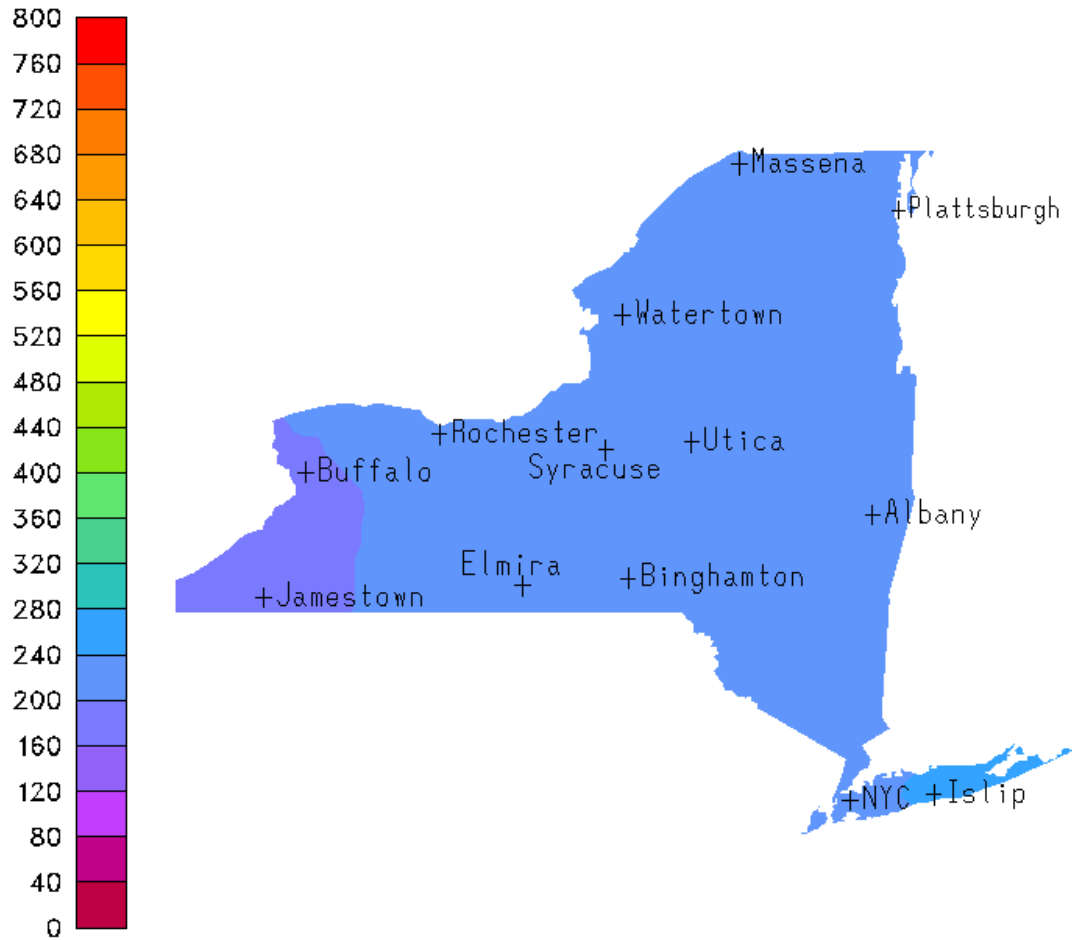
Year 1 Savings (\$)

System ID 202

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "A" - 24 Tubes  
 Double Heat Exchanger Tank  
 Oil

New York State

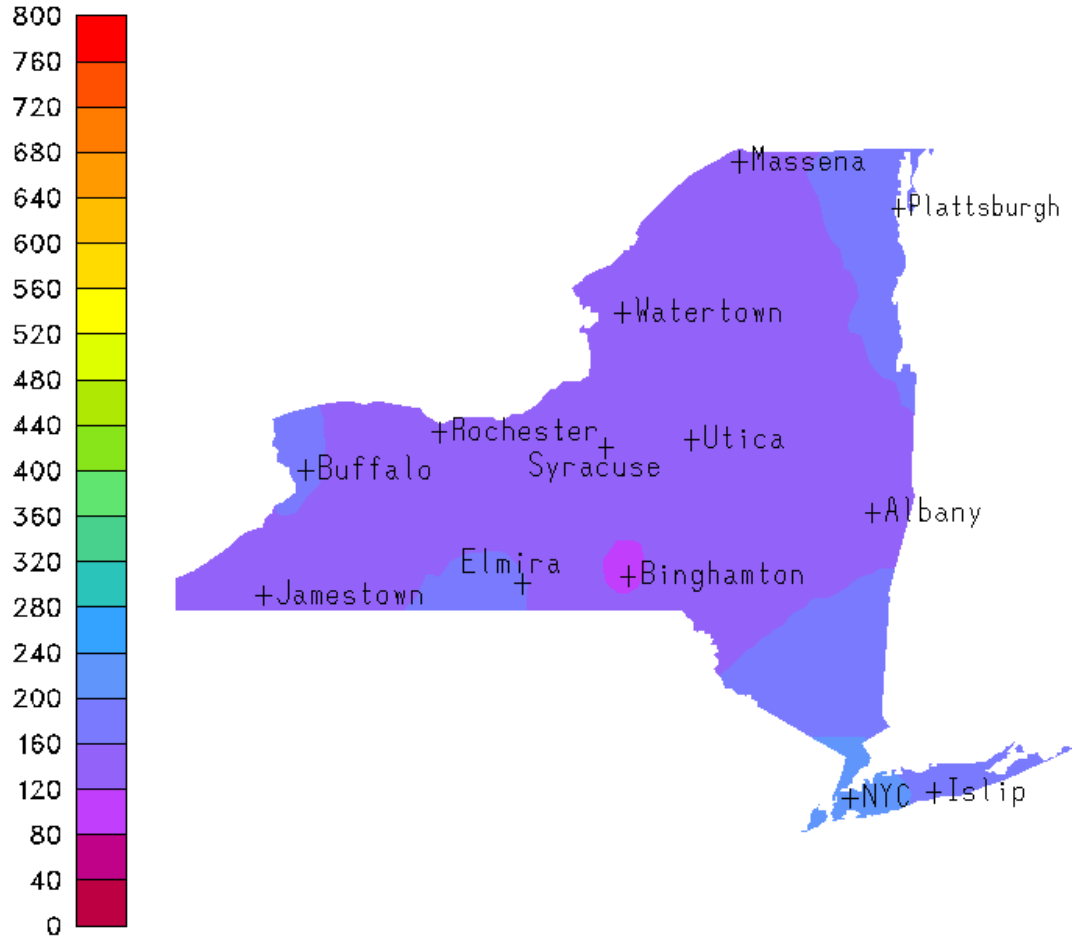


Year 1 Savings (\$)

System ID 243

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Natural Gas

New York State

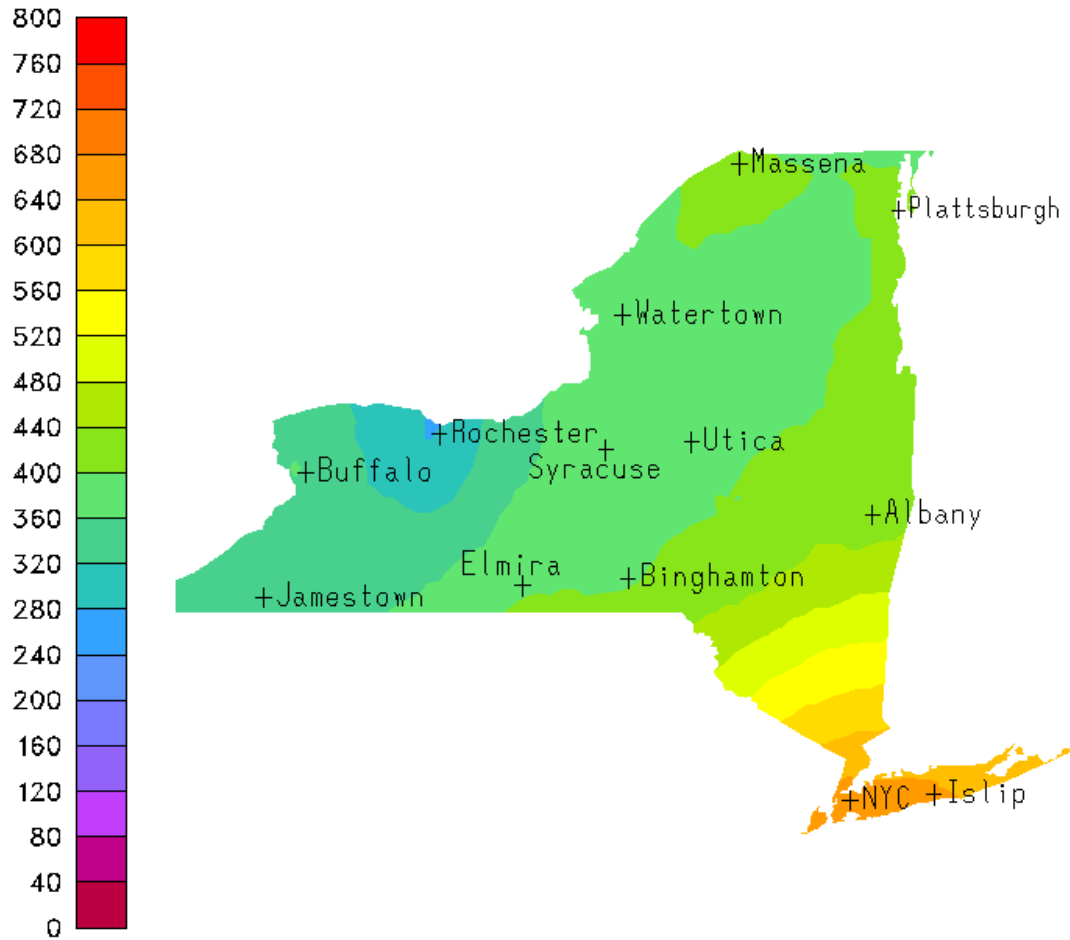


Year 1 Savings (\$)

System ID 300

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Electric

New York State

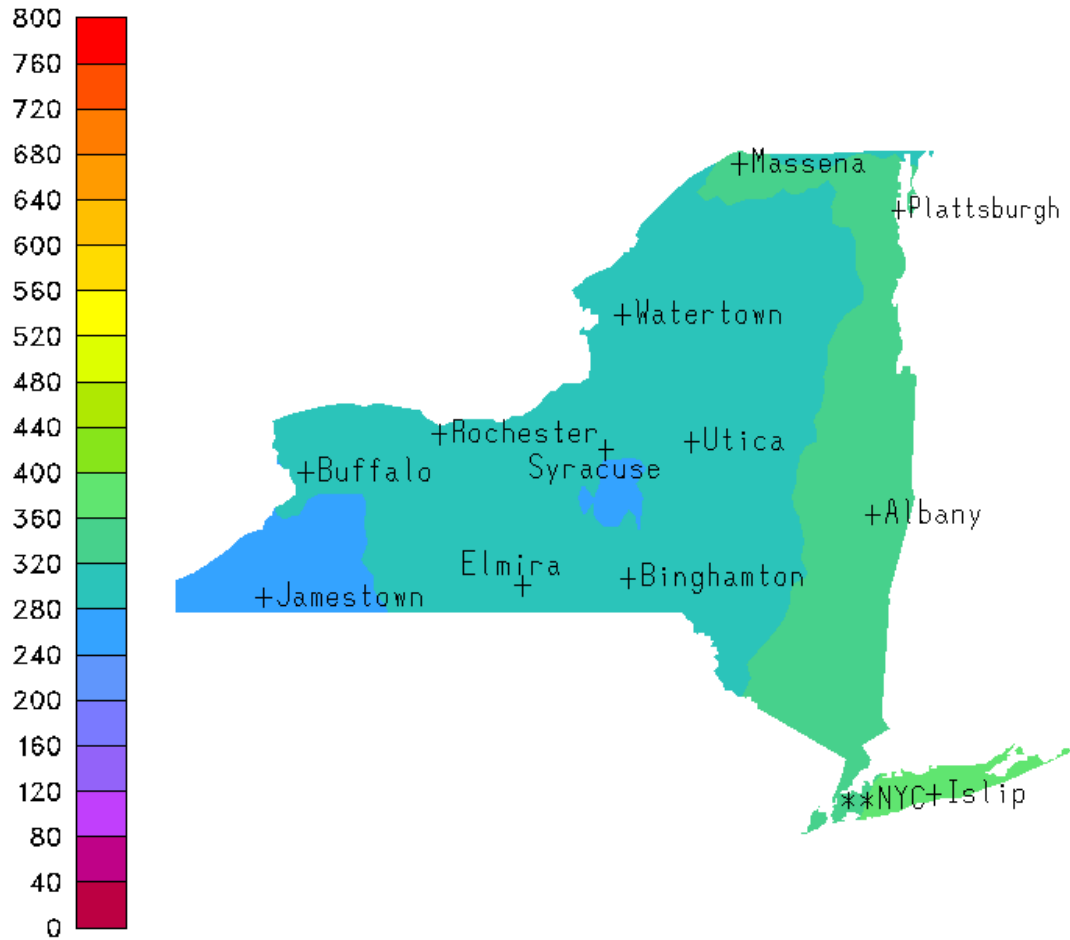


Year 1 Savings (\$)

System ID 301

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat + Conventional Tank  
 Propane

New York State



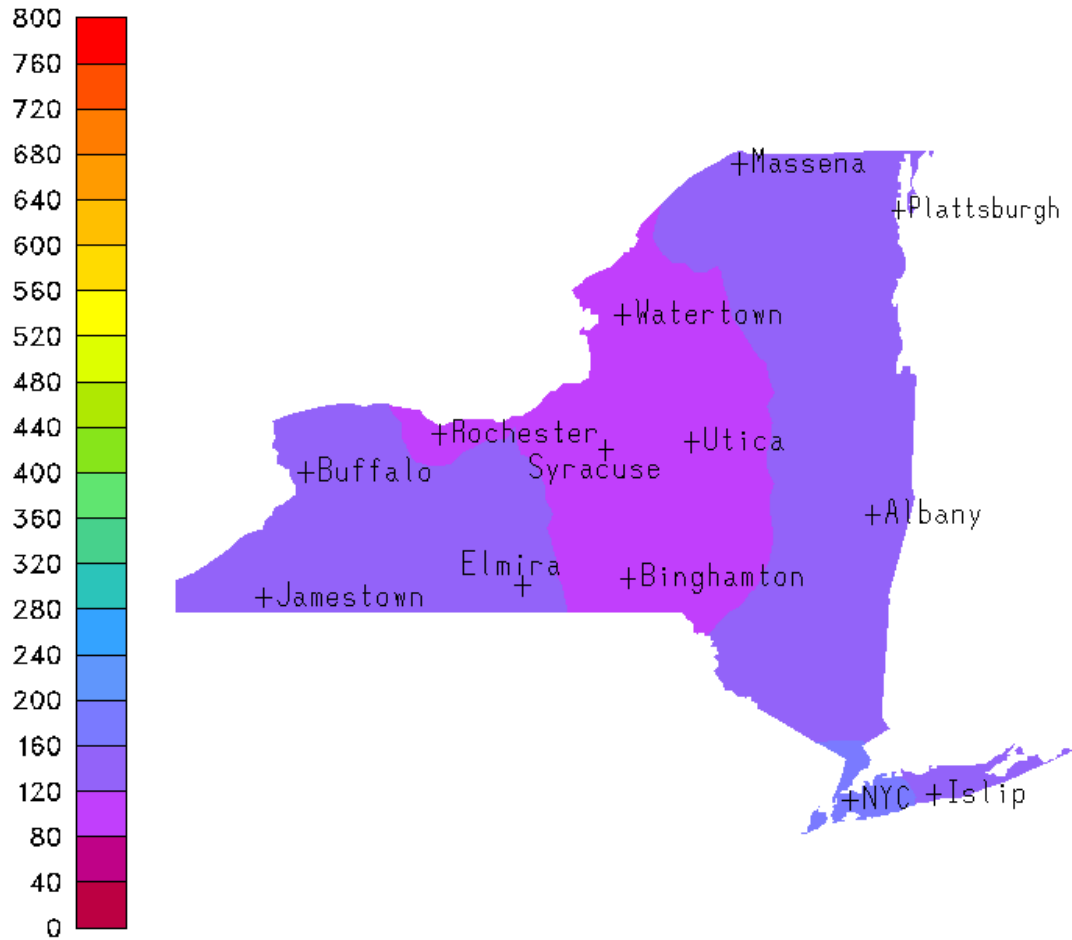
Year 1 Savings (\$)

System ID 302

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat + Instantaneous (tankless)  
 Natural Gas

New York State



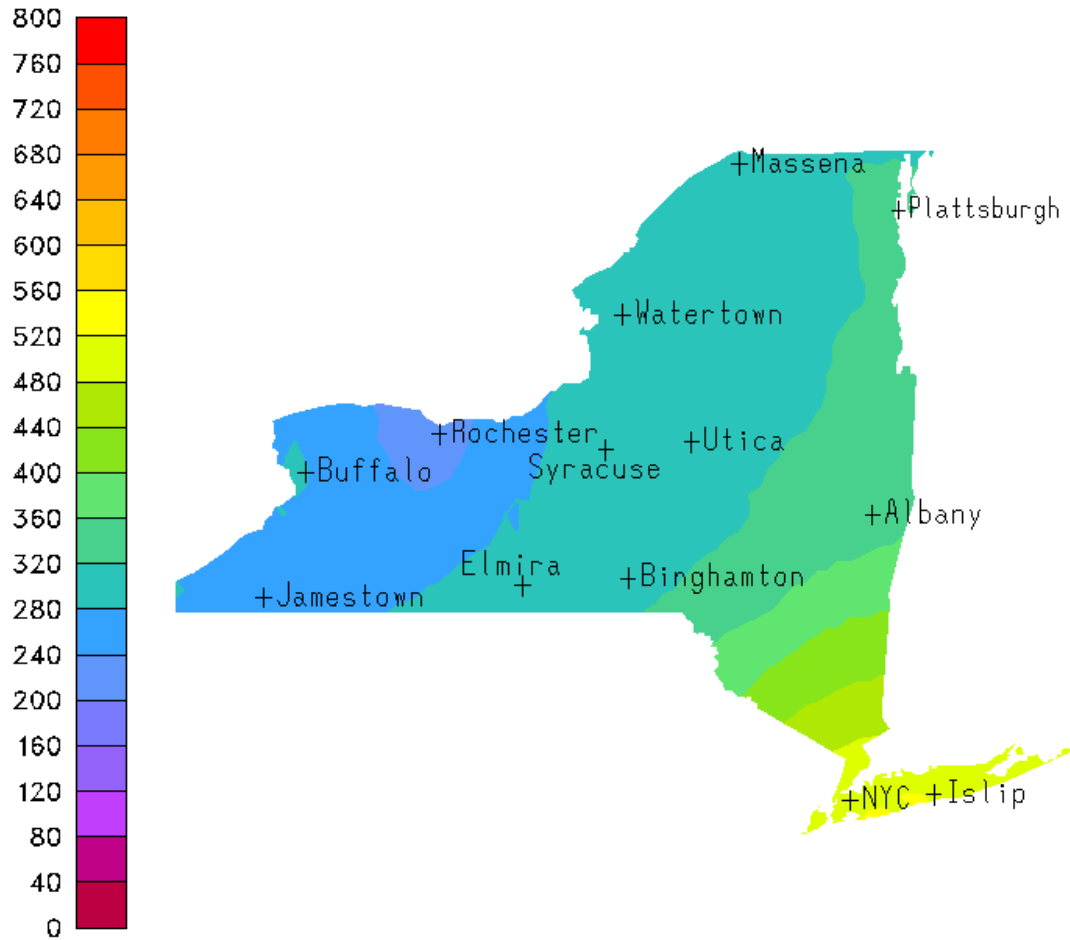
Year 1 Savings (\$)

System ID 310

Year 1 Fuel Bill Savings  
Evacuated Tube Model "B" - 24 Tubes

New York State

Conventional Tank with External Heat Exchanger  
Electric



Year 1 Savings (\$)

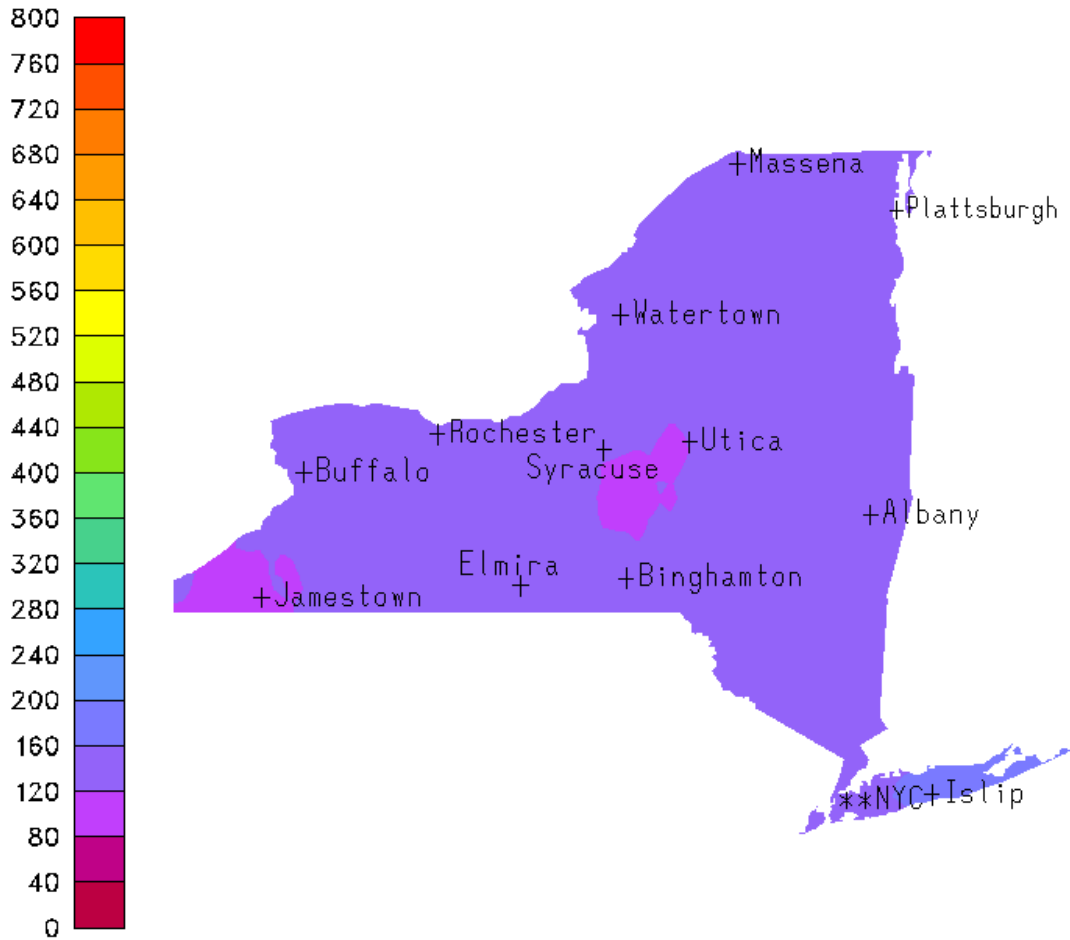
System ID 331

Year 1 Fuel Bill Savings  
Evacuated Tube Model "B" - 24 Tubes

New York State

Conventional Tank with External Heat Exchanger

Propane



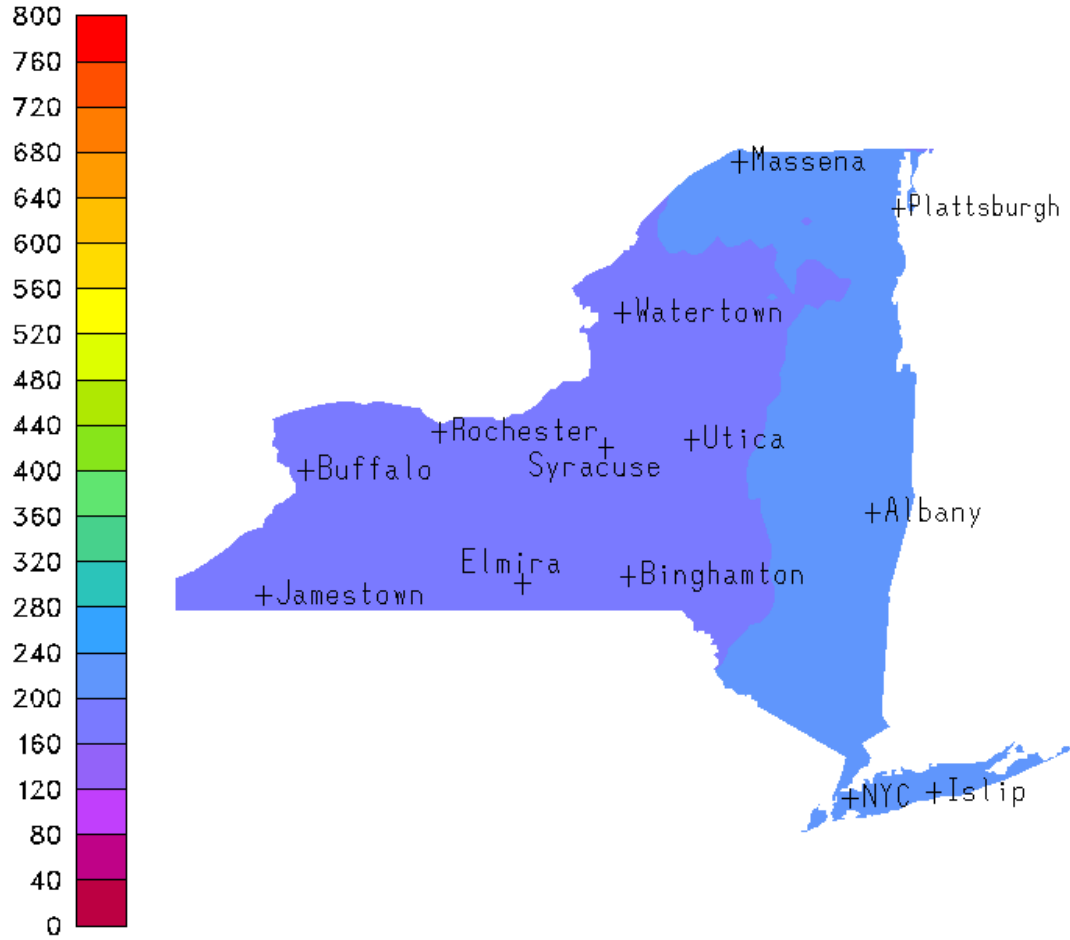
Year 1 Savings (\$)

System ID 332

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "B" - 24 Tubes  
 Double Heat Exchanger Tank  
 Oil

New York State

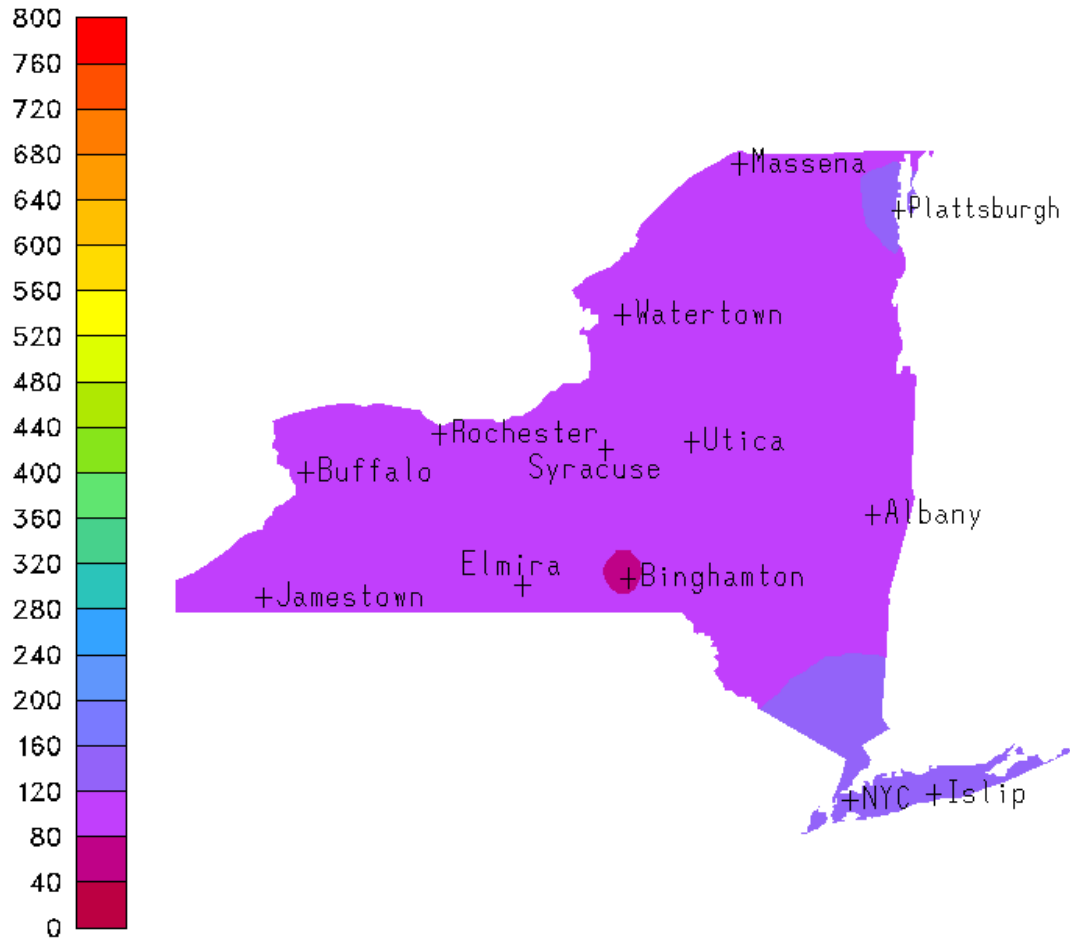


Year 1 Savings (\$)

System ID 343

Year 1 Fuel Bill Savings  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat with External Heat Exchanger + Conventional  
 Natural Gas

New York State



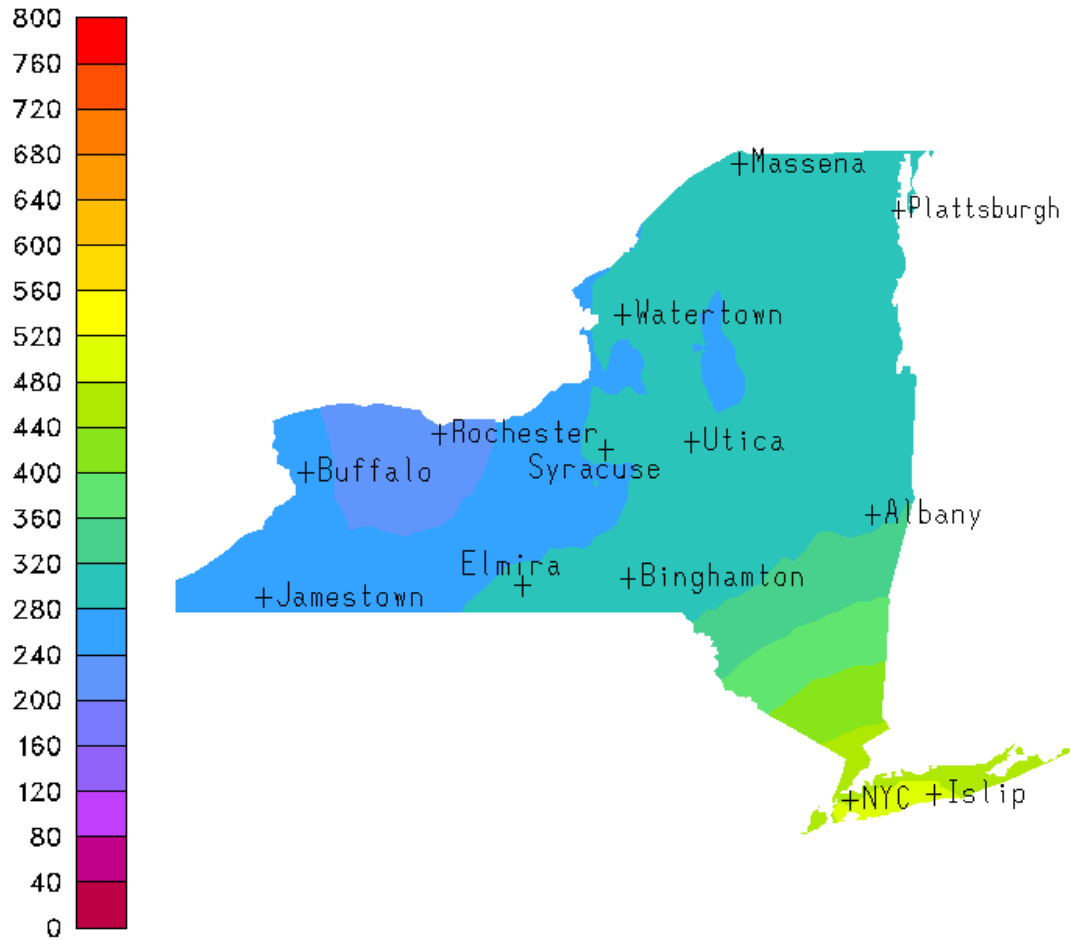
Year 1 Savings (\$)

System ID 520

Year 1 Fuel Bill Savings  
 Flat Plate Model "B" - 2 Collectors

New York State

Solar preheat with External Heat Exchanger + Conventional Electric

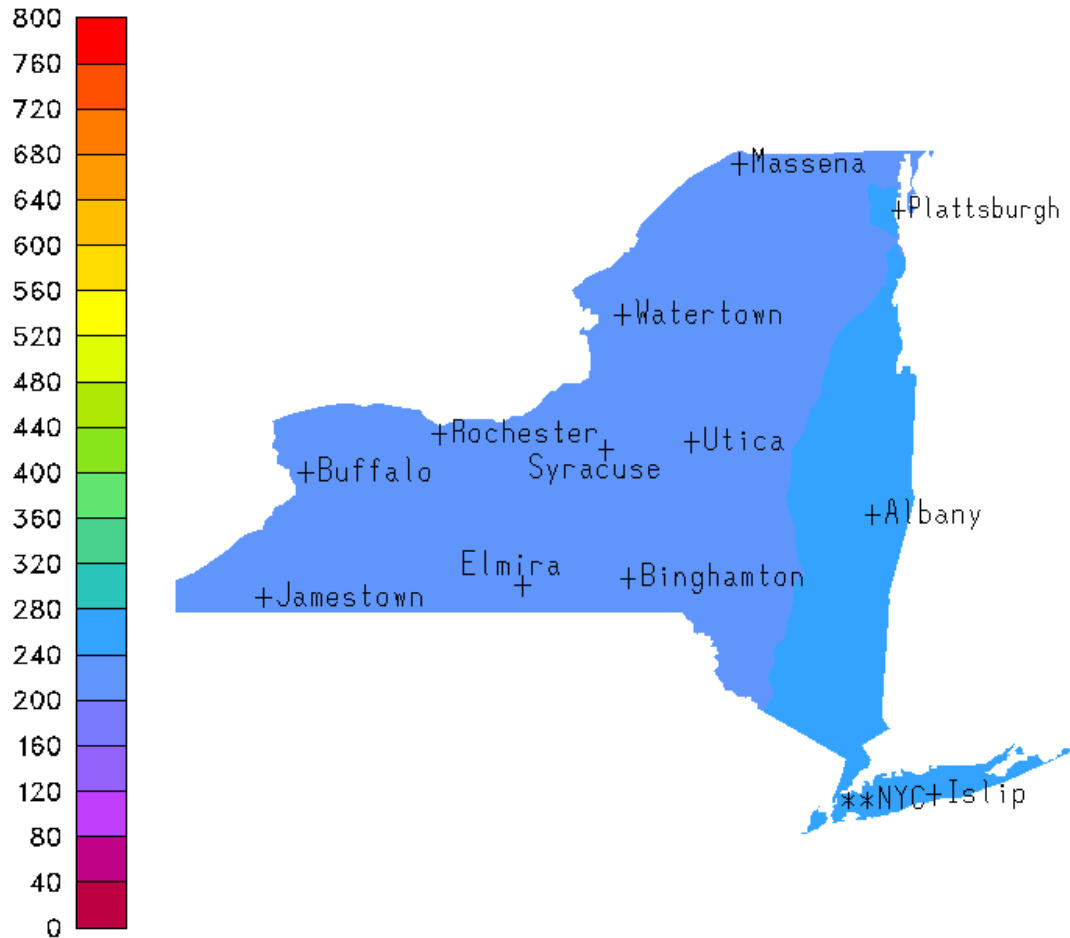


Year 1 Savings (\$)

System ID 521

Year 1 Fuel Bill Savings  
 Flat Plate Model "B" - 2 Collectors  
 Solar preheat with External Heat Exchanger + Conventional  
 Propane

New York State



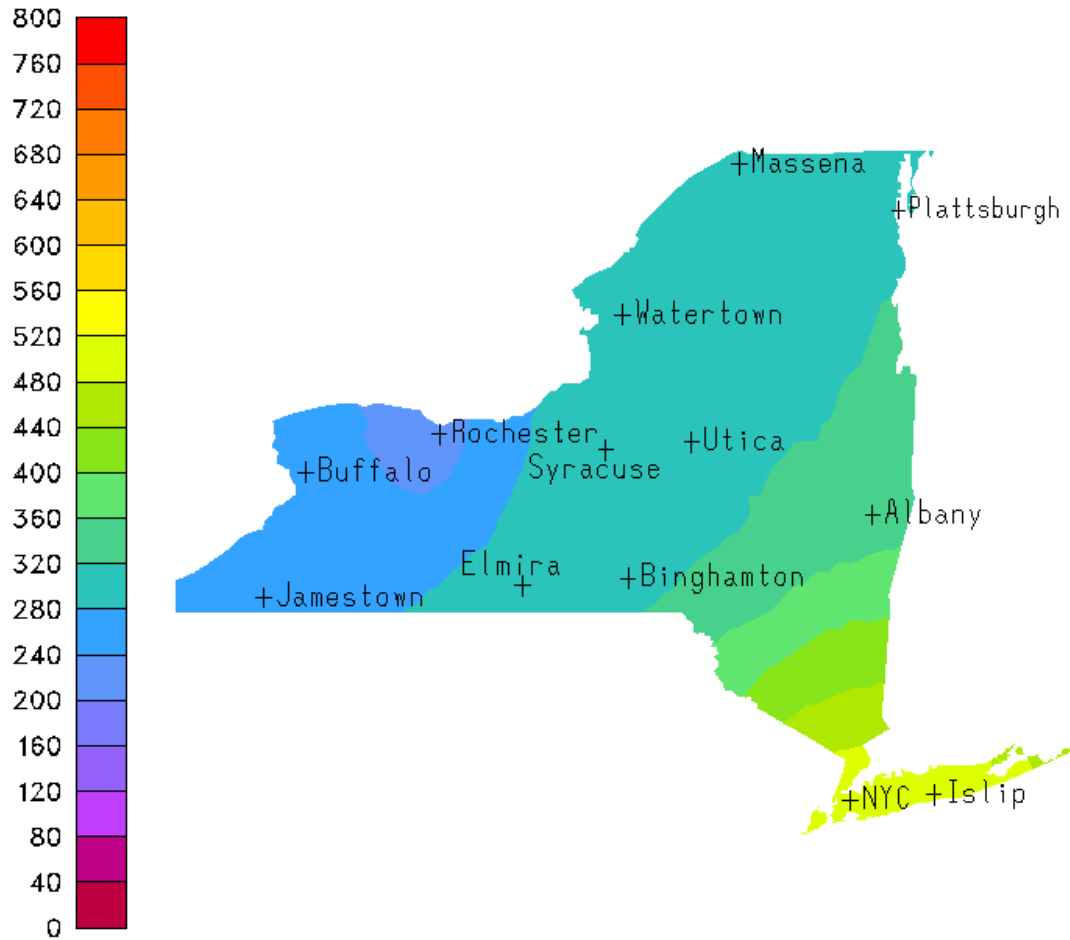
Year 1 Savings (\$)

System ID 522

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Flat Plate Model "B" - 2 Collectors  
 Conventional Tank with External Heat Exchanger  
 Electric

New York State



Year 1 Savings (\$)

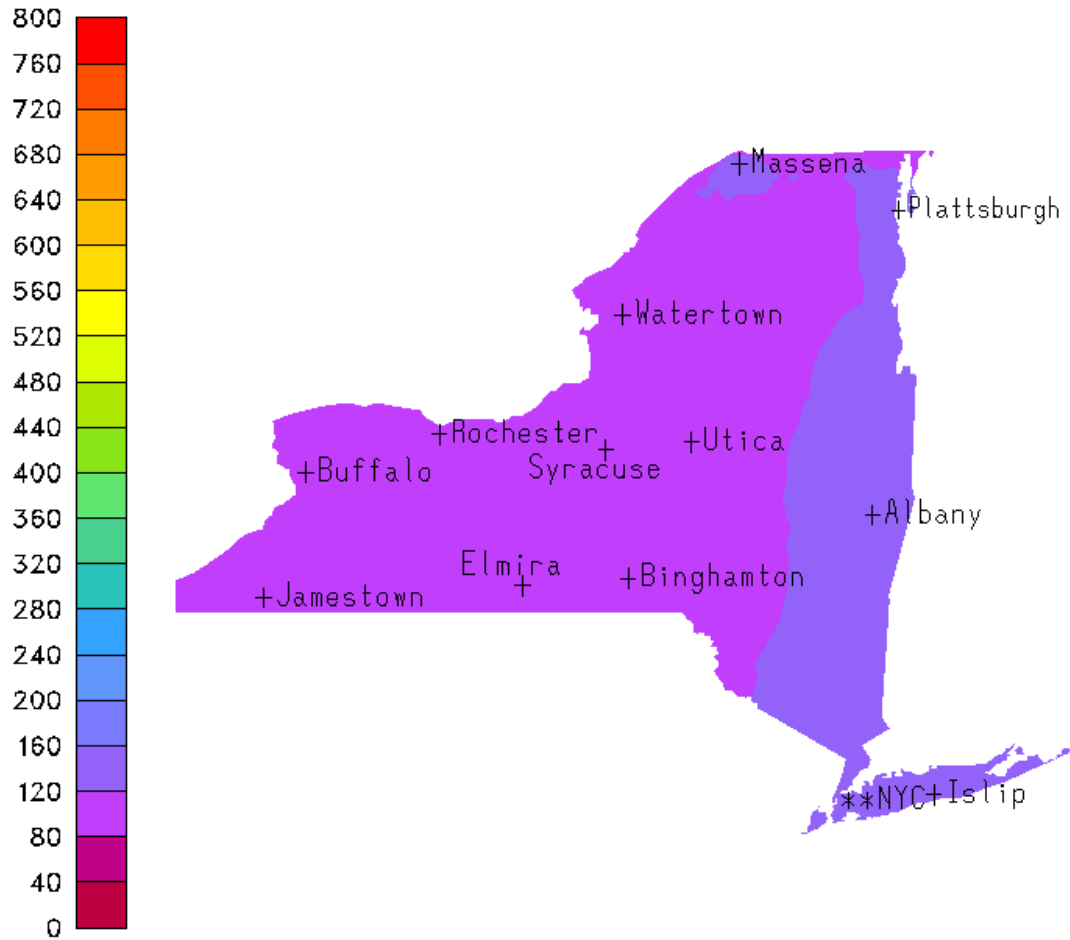
System ID 531

Year 1 Fuel Bill Savings  
 Flat Plate Model "B" - 2 Collectors

New York State

Conventional Tank with External Heat Exchanger

Propane



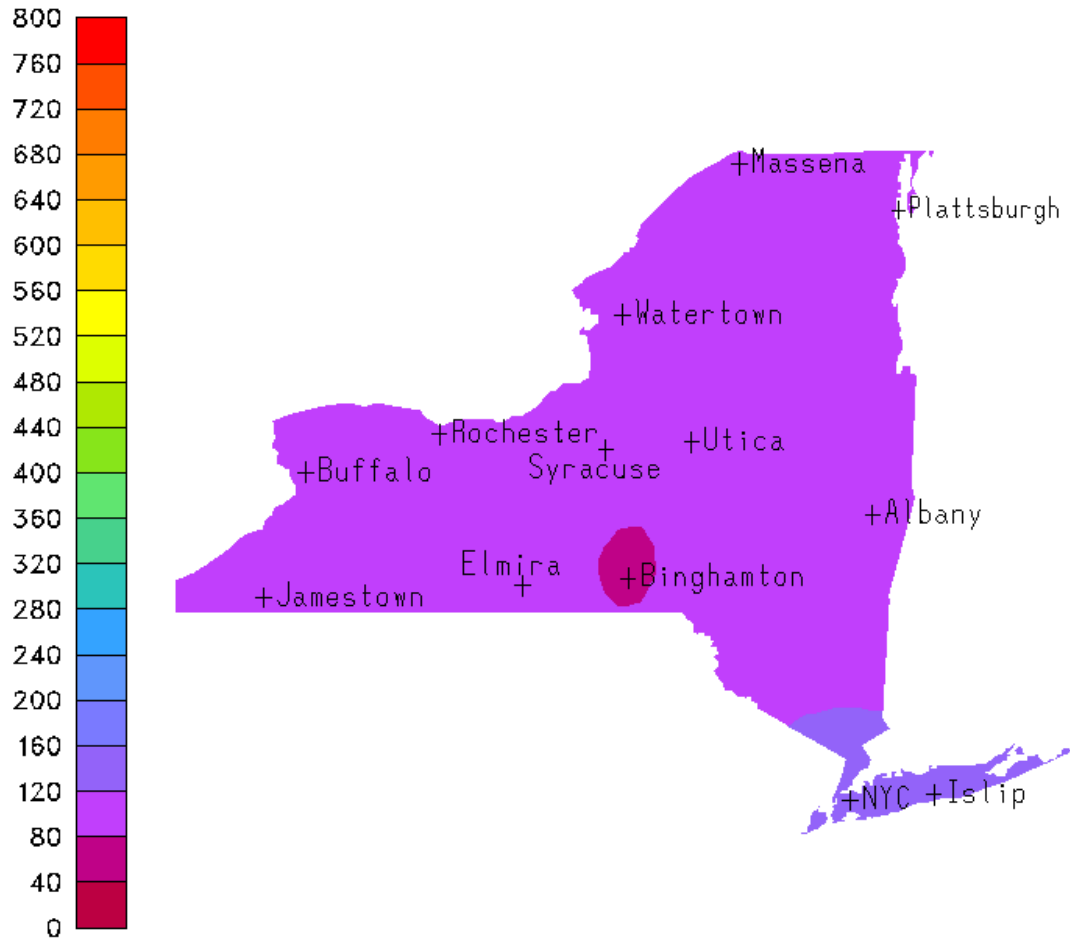
Year 1 Savings (\$)

System ID 532

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "C" - 30 Tubes  
 Solar preheat + Instantaneous (tankless)  
 Natural Gas

New York State

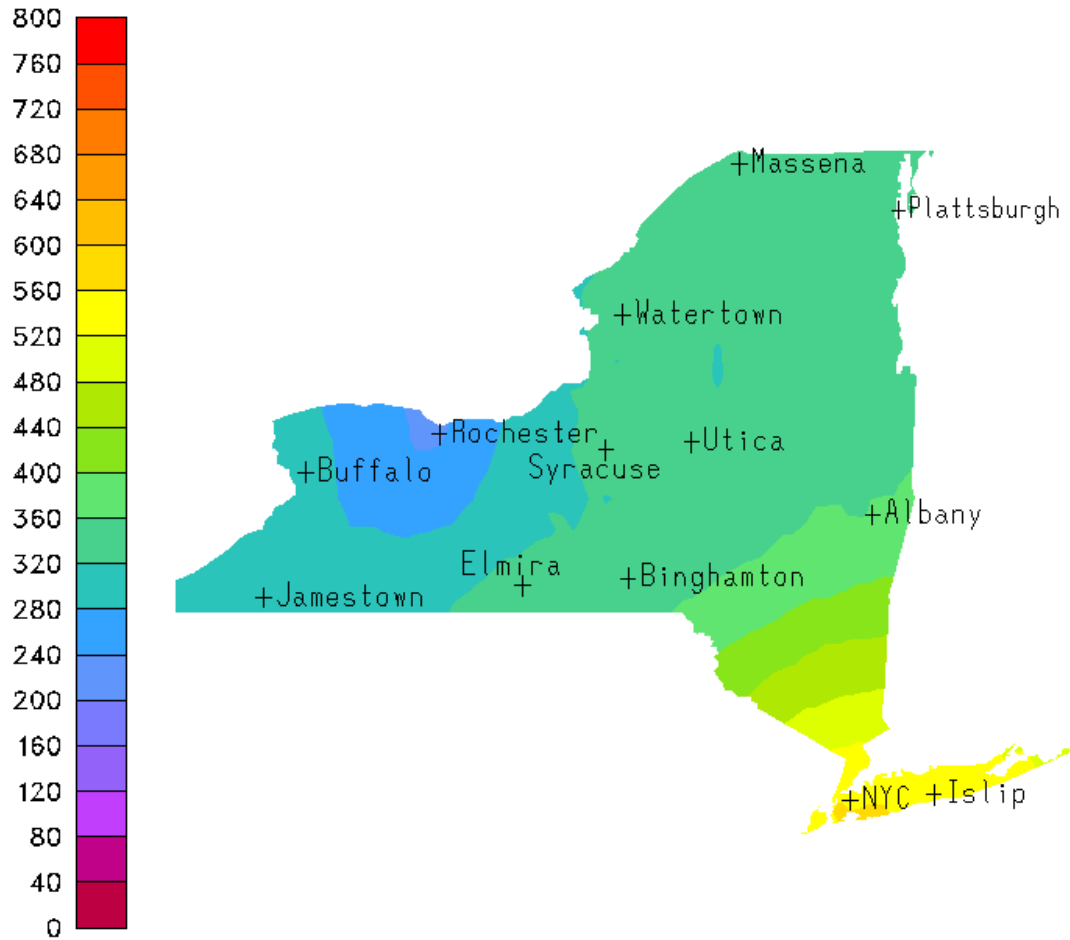


Year 1 Savings (\$)

System ID 610

Year 1 Fuel Bill Savings  
 Evacuated Tube Model "C" - 30 Tubes  
 Double Heat Exchanger Tank  
 Electric

New York State

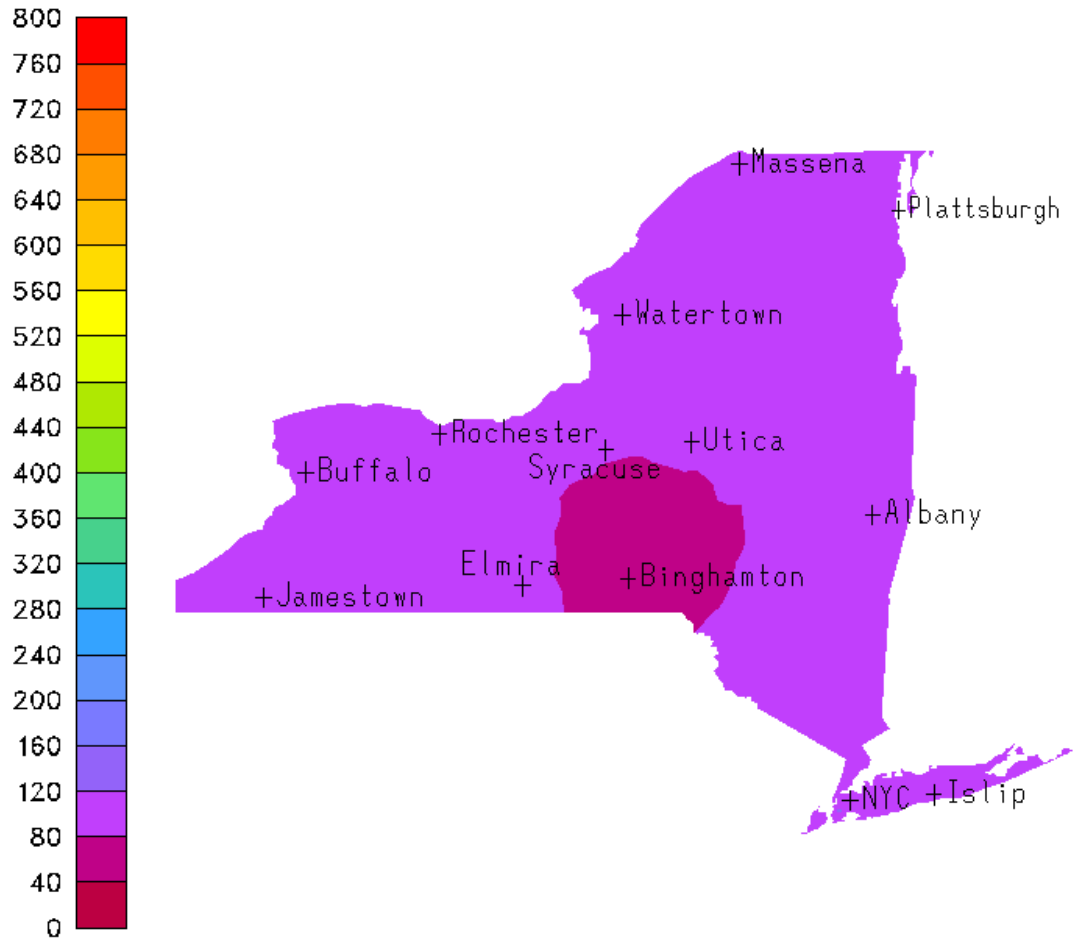


Year 1 Savings (\$)

System ID 641

Year 1 Fuel Bill Savings  
 Building Integrated - 600 Square Feet  
 Solar preheat + Conventional Tank  
 Natural Gas

New York State

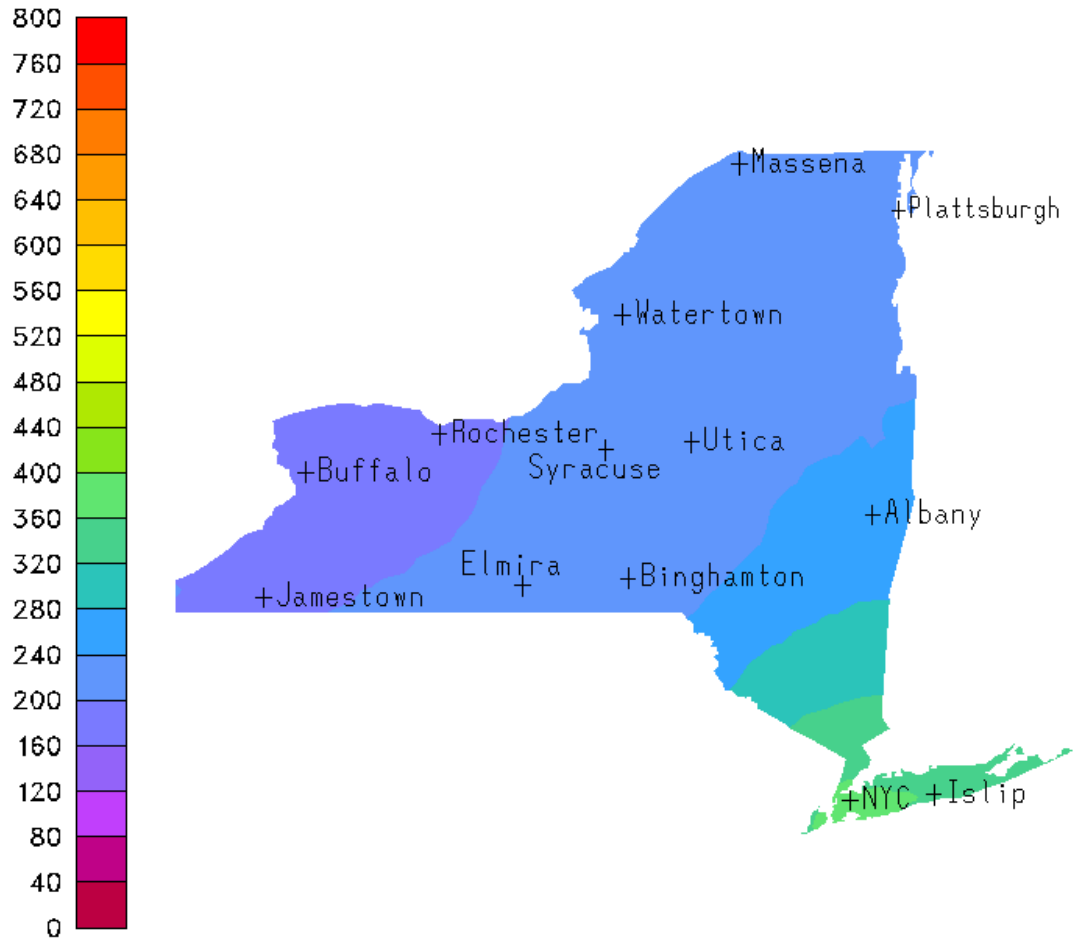


Year 1 Savings (\$)

System ID 700

Year 1 Fuel Bill Savings  
 Building Integrated - 600 Square Feet  
 Solar preheat + Conventional Tank  
 Electric

New York State

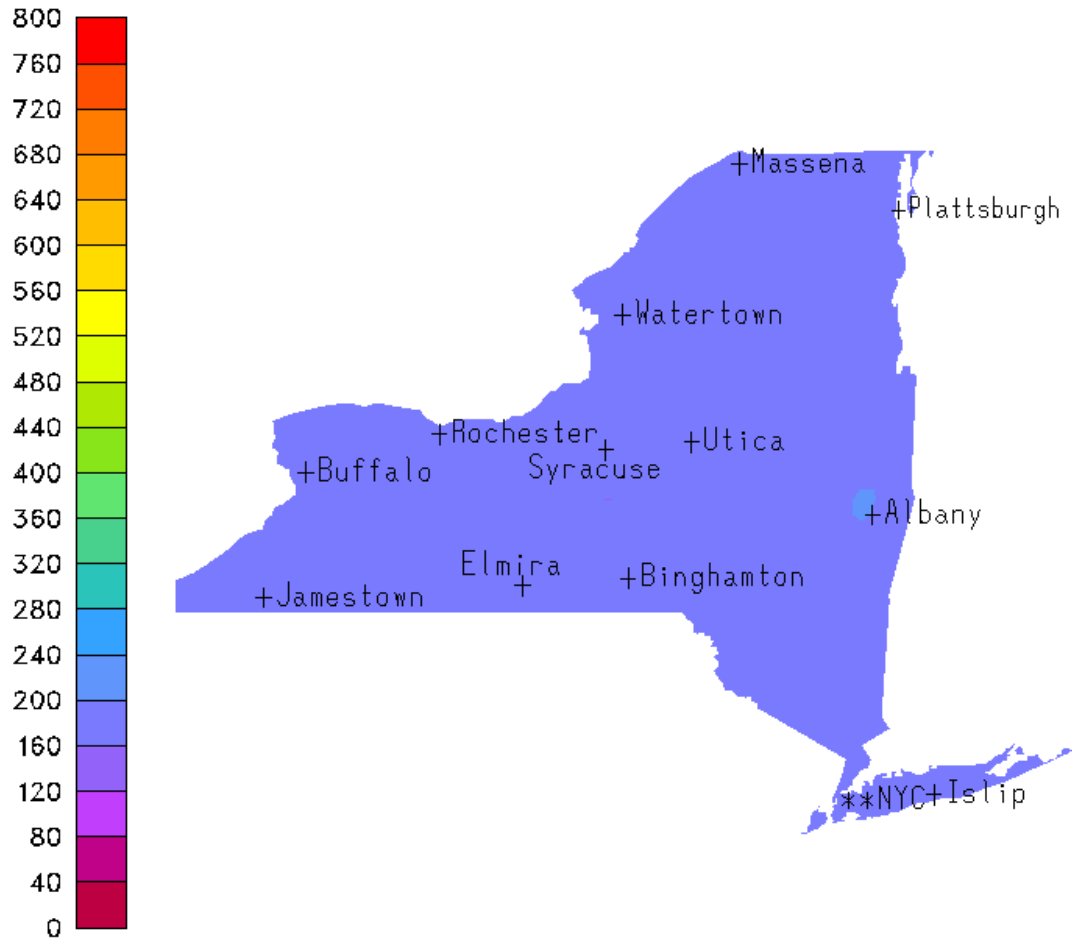


Year 1 Savings (\$)

System ID 701

Year 1 Fuel Bill Savings  
 Building Integrated - 600 Square Feet  
 Solar preheat + Conventional Tank  
 Propane

New York State



Year 1 Savings (\$)

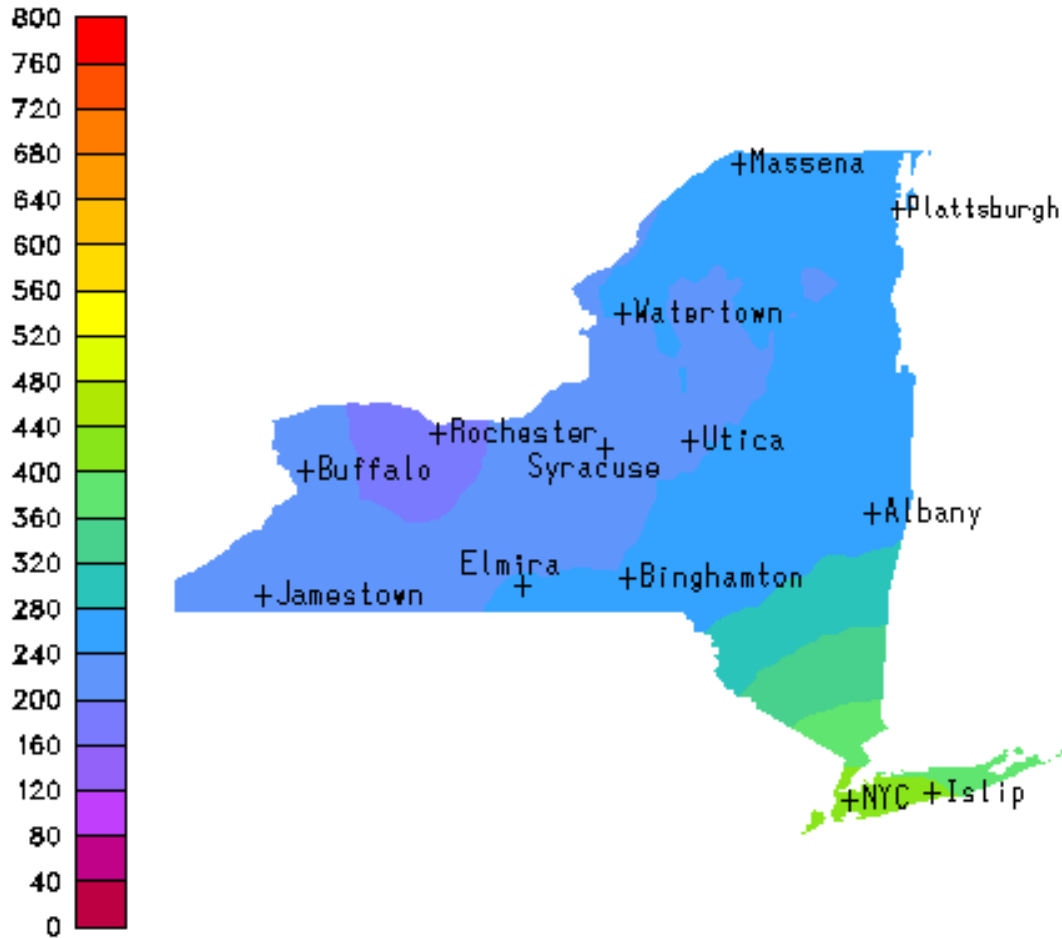
System ID 702

\*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
Flat Plate Model "C" - 1 Collector

New York State

Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric

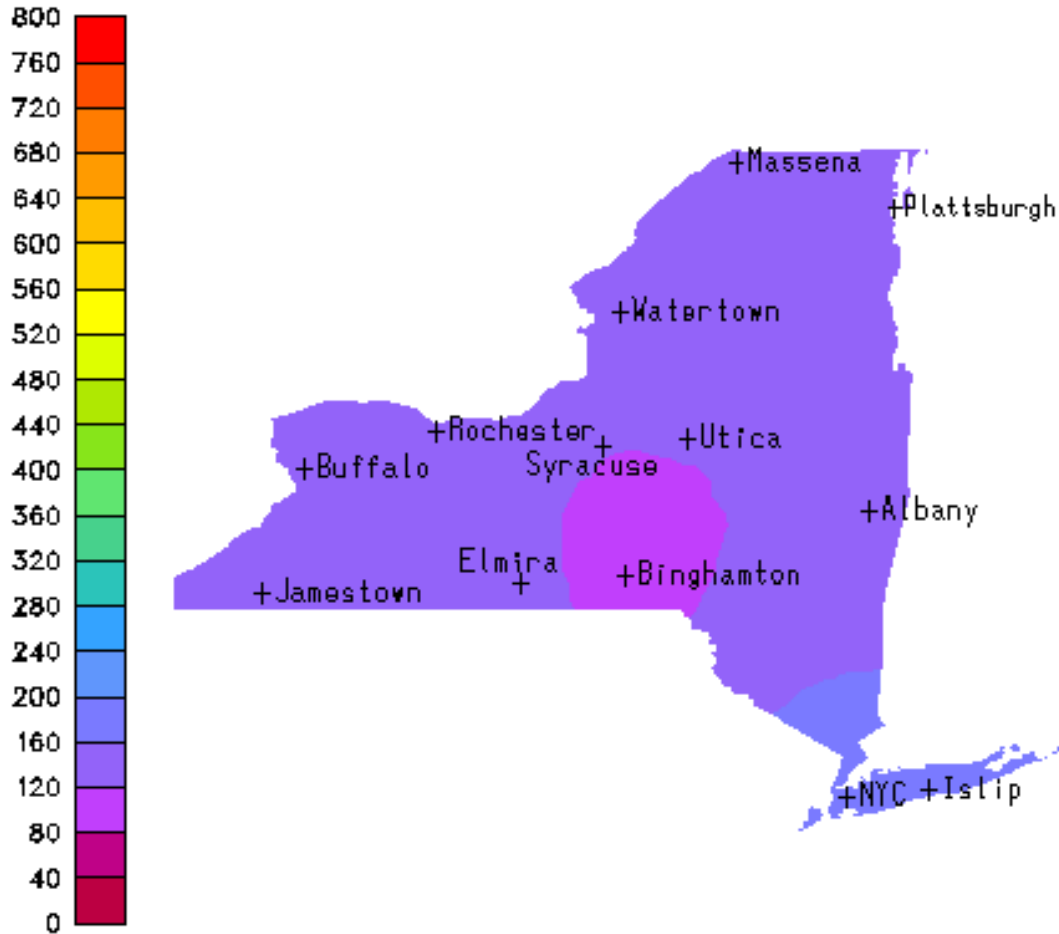


Year 1 Savings (\$)

System ID 821

Year 1 Fuel Bill Savings  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Natural Gas

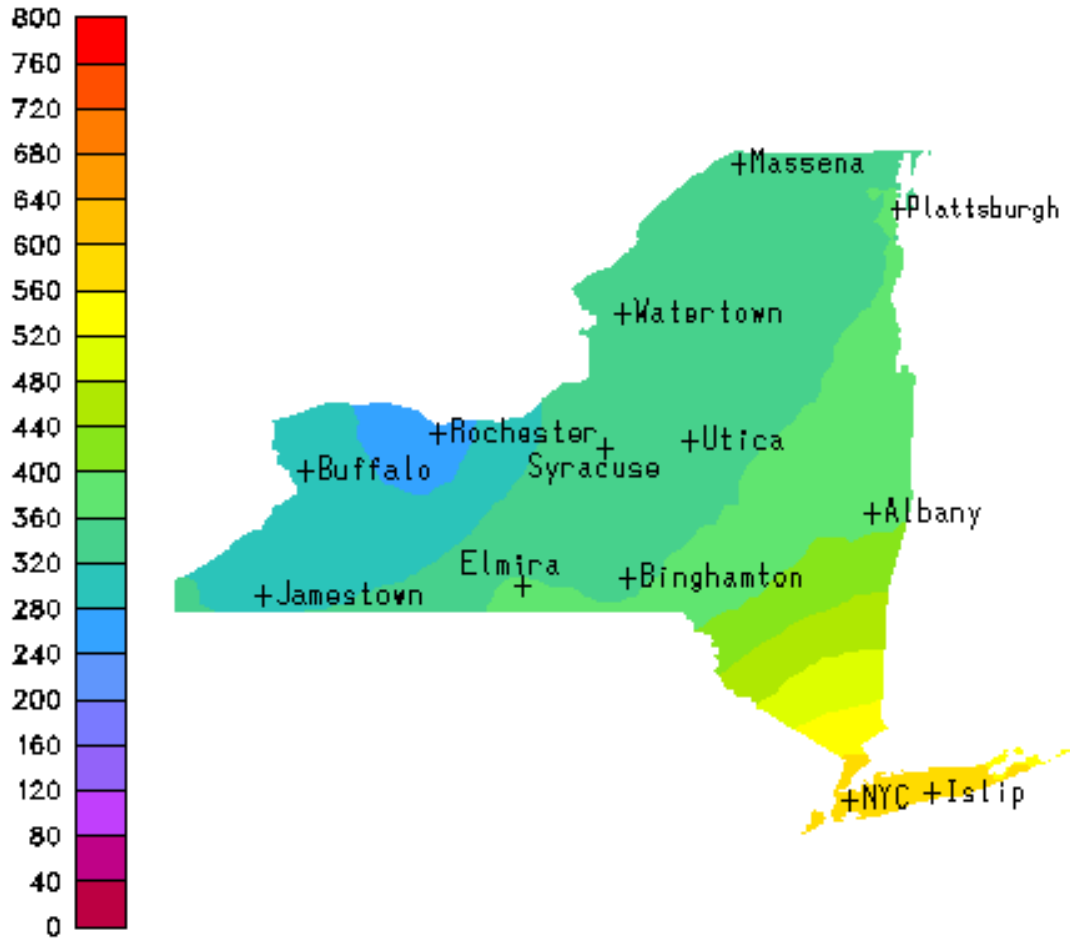
New York State



Year 1 Savings (\$)

System ID 920

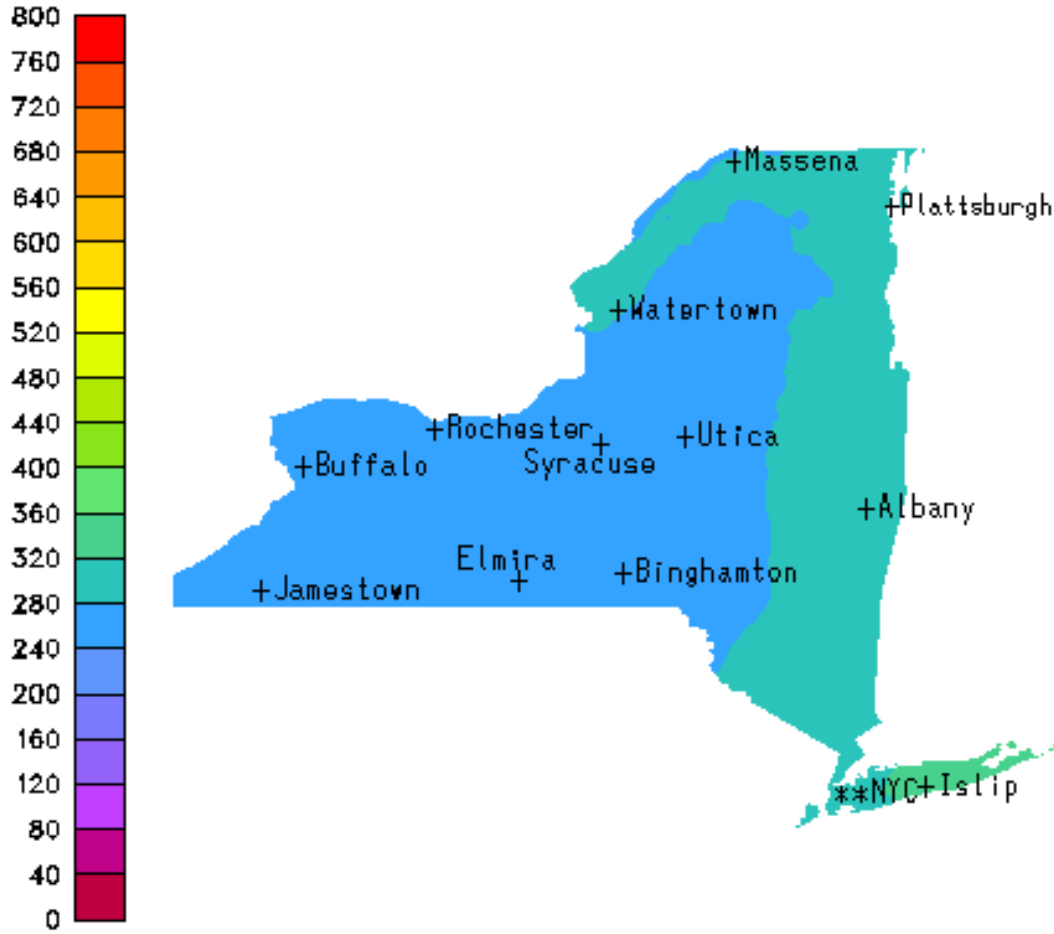
Year 1 Fuel Bill Savings  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Electric  
 New York State



Year 1 Savings (\$)

System ID 921

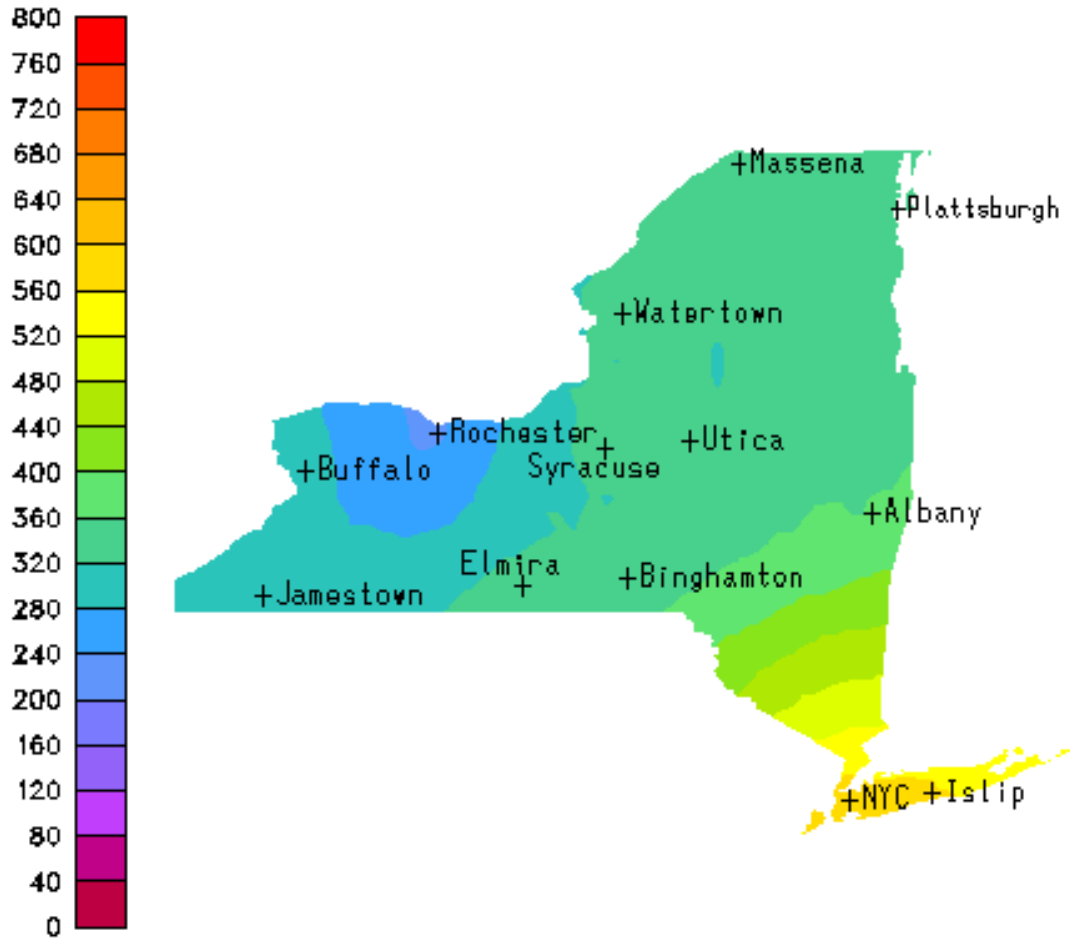
Year 1 Fuel Bill Savings  
 Flat Plate Model "C" - 2 Collectors  
 Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
 Propane



Year 1 Savings (\$) System ID 922  
 \*\*Propane not available for heating in the NYC AREA

Year 1 Fuel Bill Savings  
 Flat Plate Model "C" - 2 Collectors  
 Conventional Tank/Ext Heat Exchanger  
 Electric

New York State

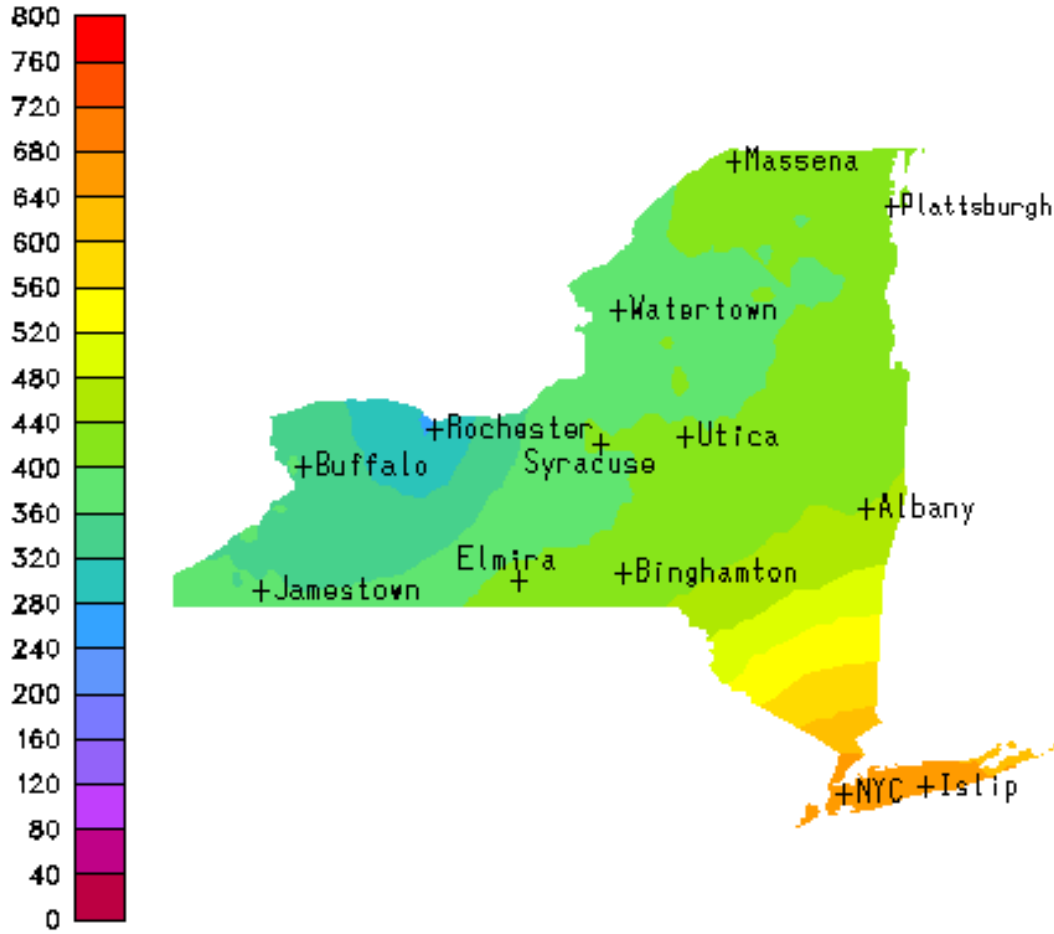


Year 1 Savings (\$)

System ID 931

Year 1 Fuel Bill Savings  
Flat Plate Model "C" - 3 Collectors  
Solar preheat tank/Ext Heat Exchanger/Conventional Tank  
Electric

New York State

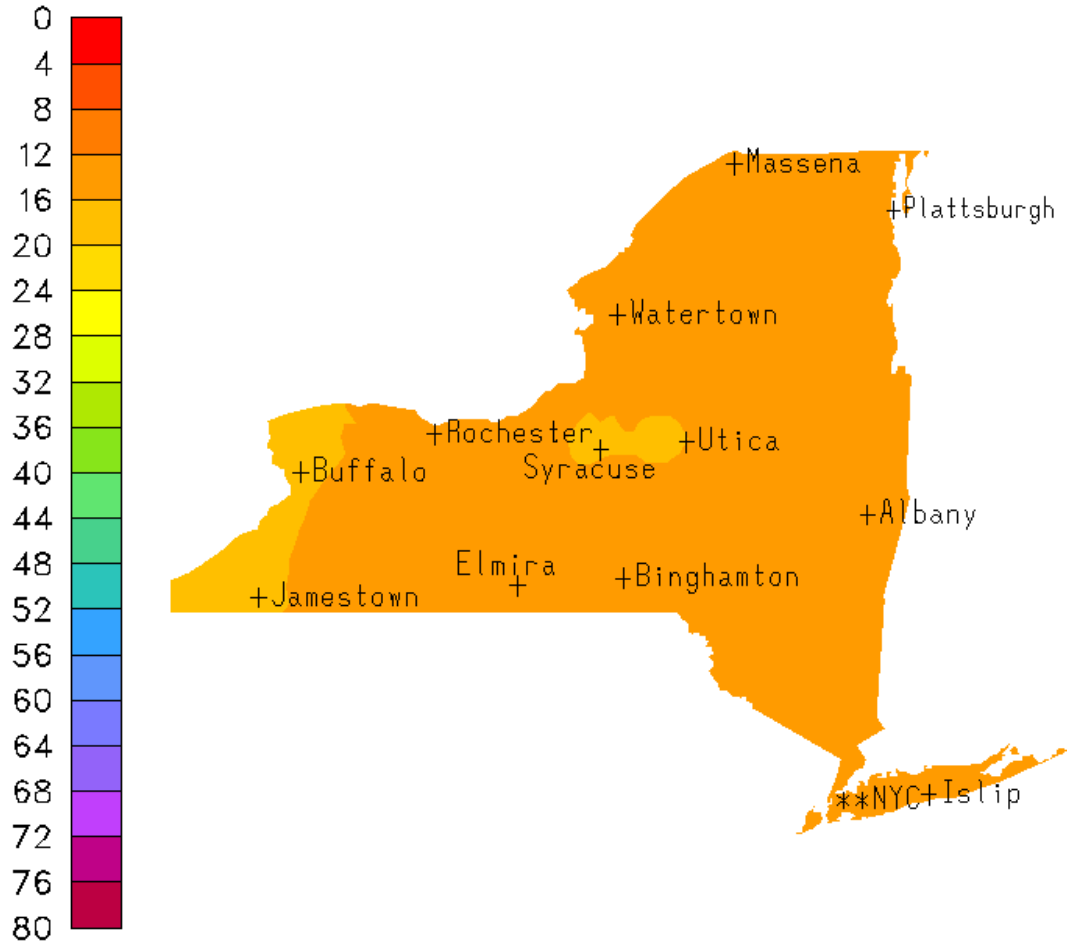


Year 1 Savings (\$)

System ID 1021

Simple Payback  
 Flat Plate Model "A" - 3 Collectors  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



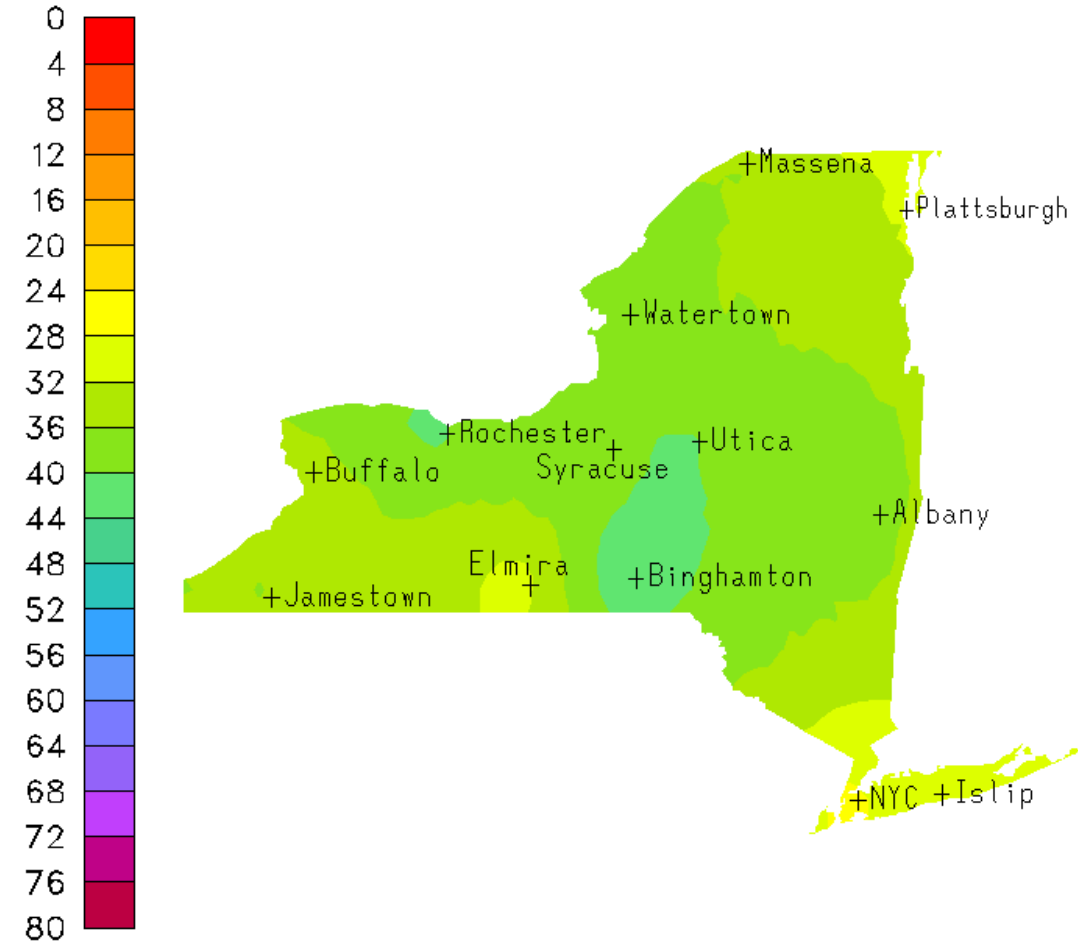
Payback (years)

System ID 102

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Flat Plate Model "A" - 3 Collectors  
Solar preheat tank/Instantaneous (tankless)  
Natural Gas

New York State

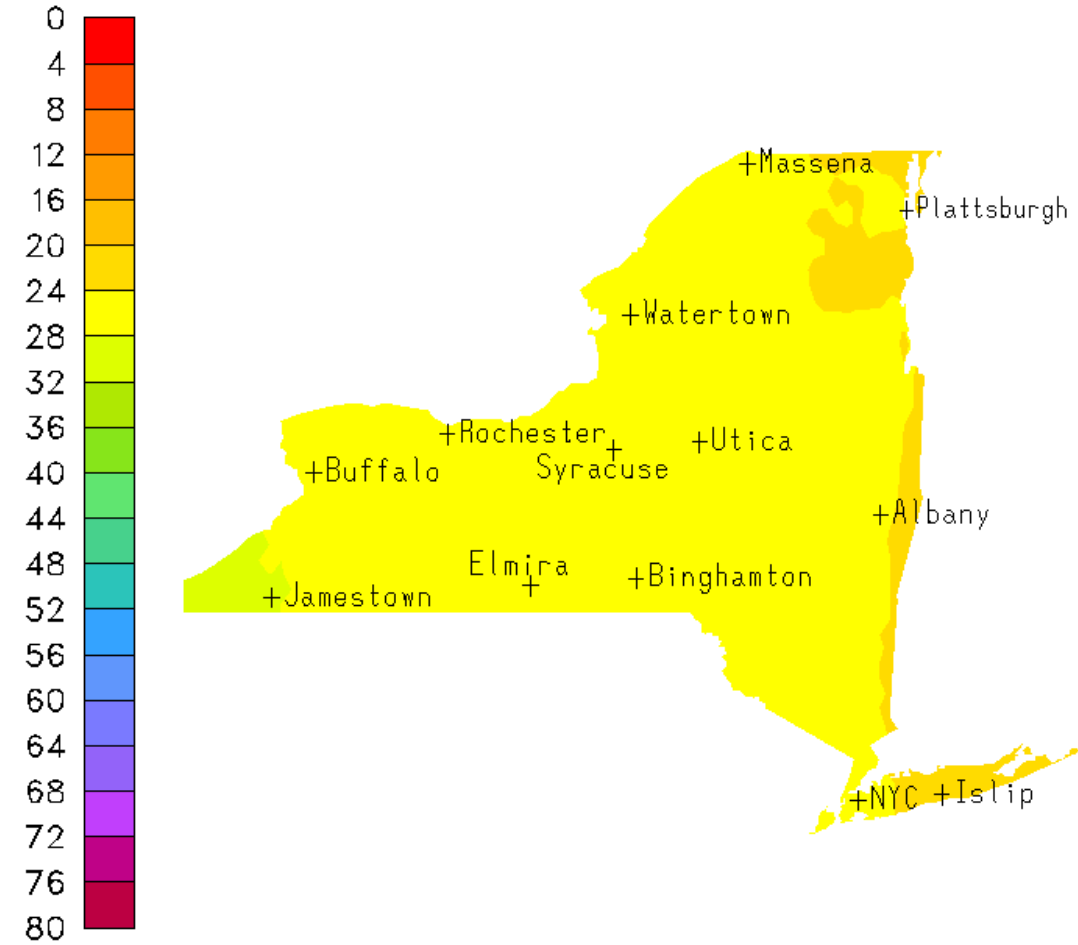


Payback (years)

System ID 110

Simple Payback  
Flat Plate Model "A" - 3 Collectors  
Double Heat Exchanger Tank  
Oil

New York State

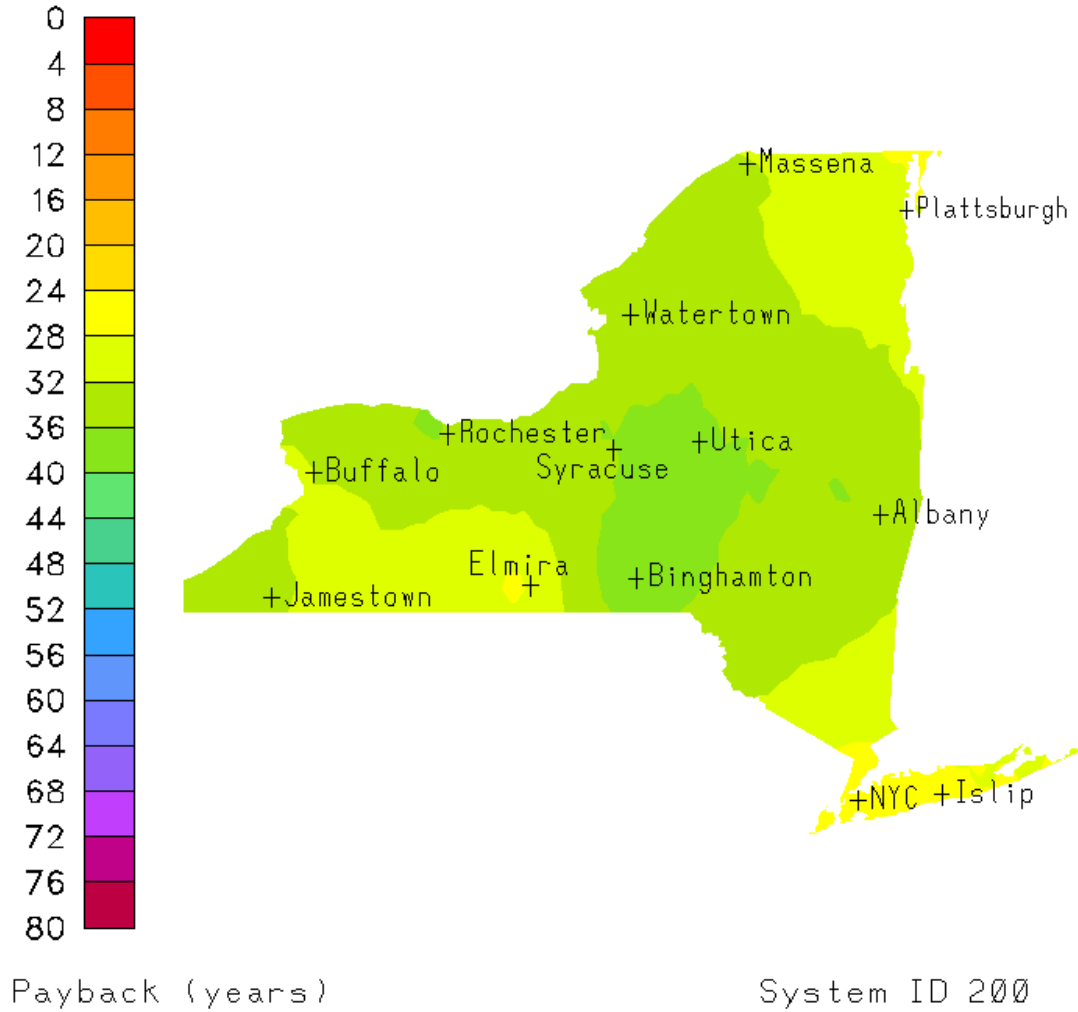


Payback (years)

System ID 143

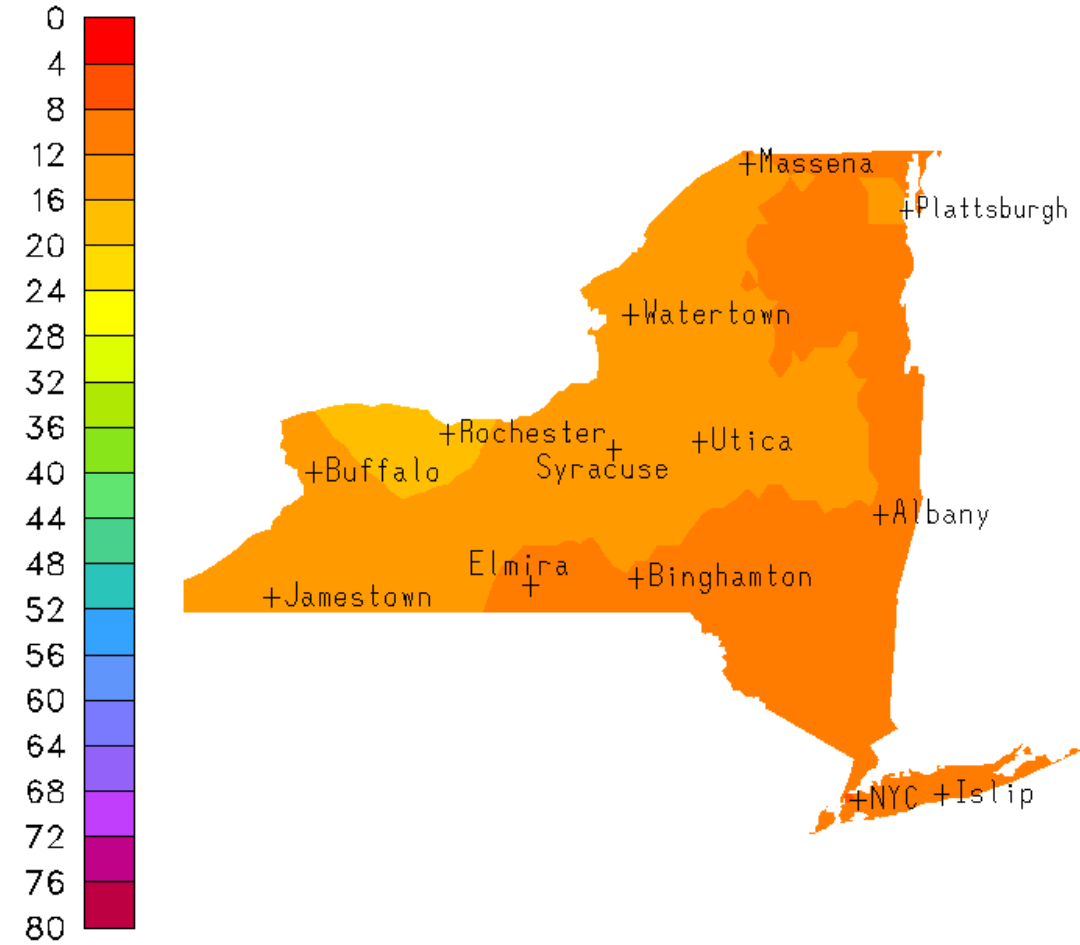
Simple Payback  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State



Simple Payback  
Evacuated Tube Model "A" - 24 Tubes  
Solar preheat tank/Conventional Tank  
Electric

New York State

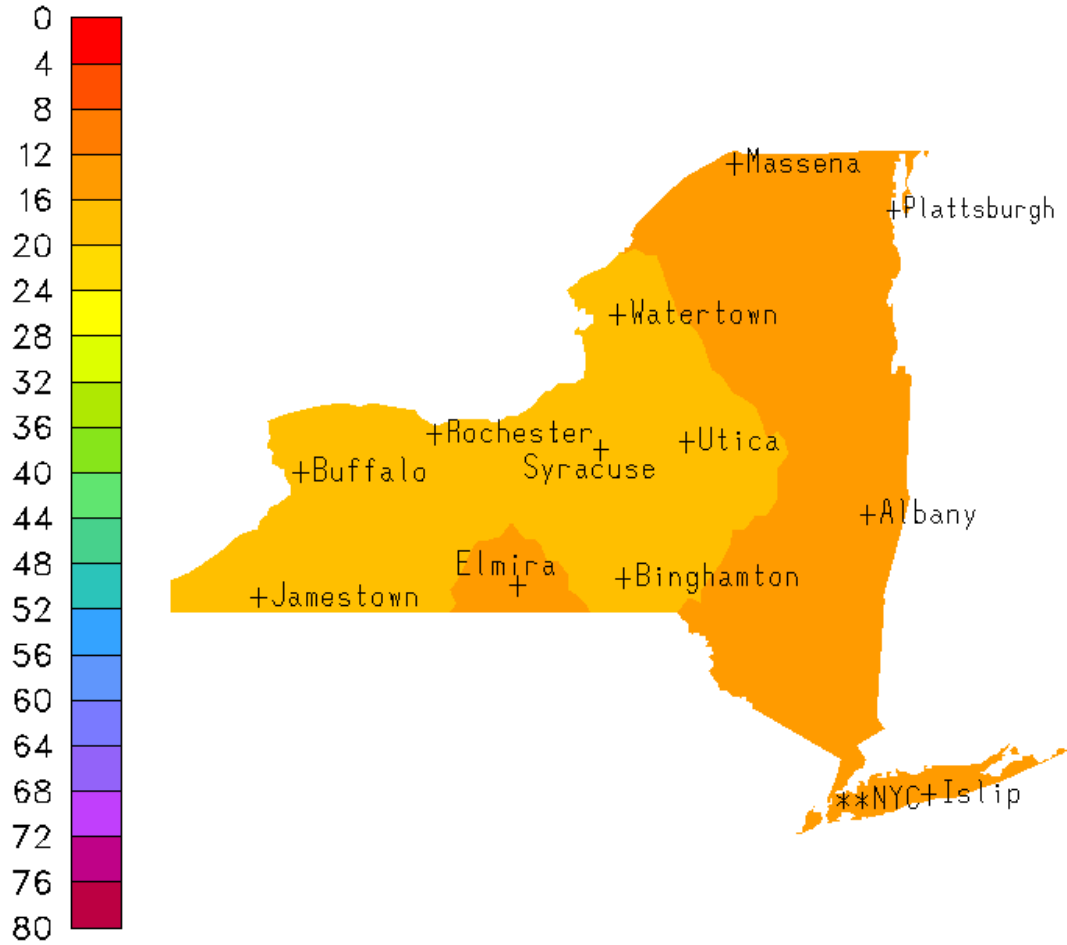


Payback (years)

System ID 201

Simple Payback  
 Evacuated Tube Model "A" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Propane

New York State



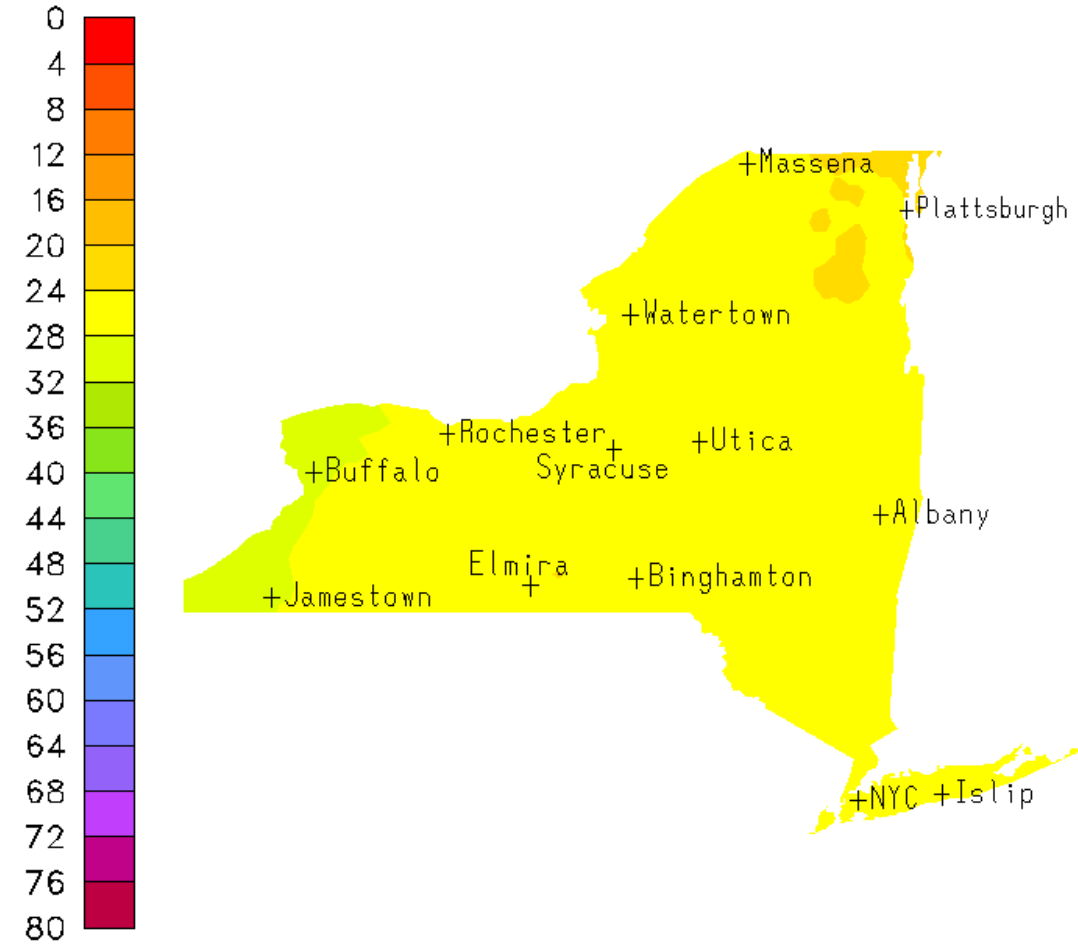
Payback (years)

System ID 202

\*\*Propane not available for heating in the NYC AREA

Simple Payback  
Evacuated Tube Model "A" - 24 Tubes  
Double Heat Exchanger Tank  
Oil

New York State

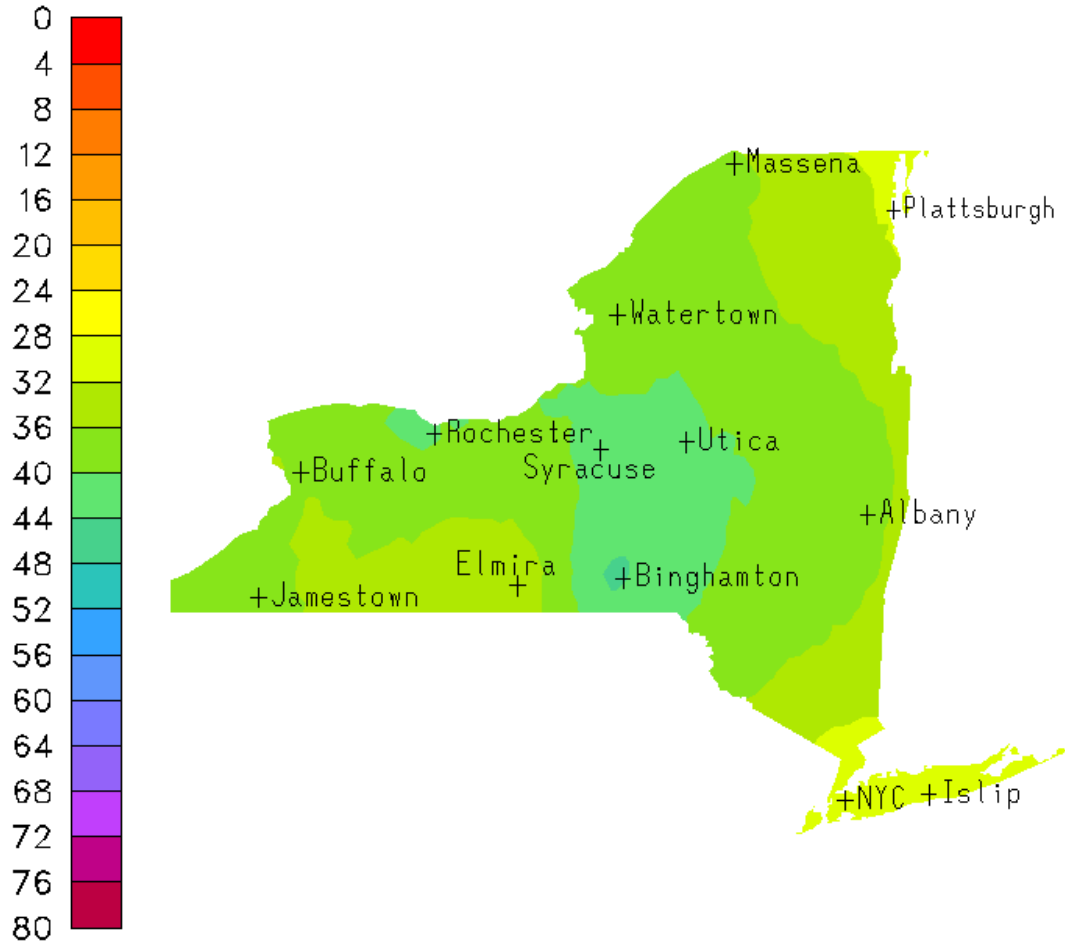


Payback (years)

System ID 243

Simple Payback  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Natural Gas

New York State

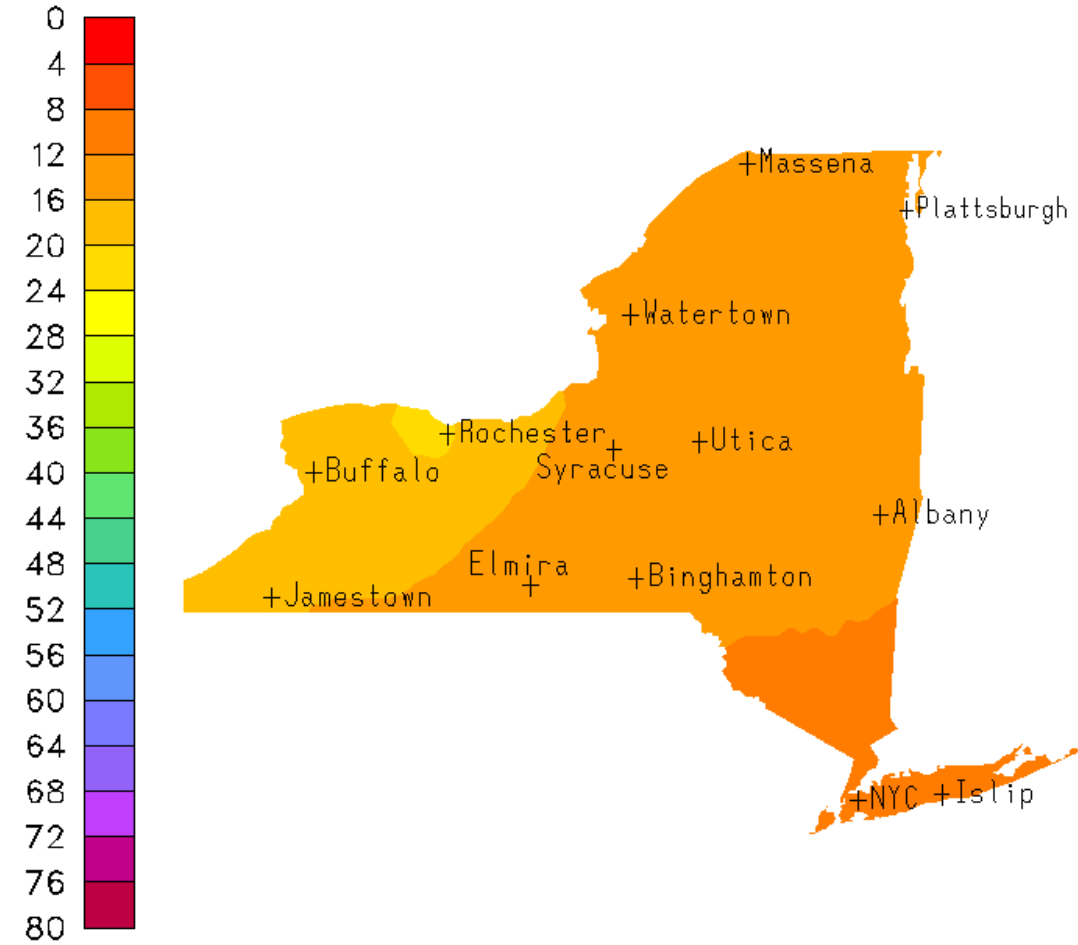


Payback (years)

System ID 300

Simple Payback  
 Evacuated Tube Model "B" - 24 Tubes  
 Solar preheat tank/Conventional Tank  
 Electric

New York State



Payback (years)

System ID 301