Adam Flint, Director of Clean Energy Programs
Anna Purtell, Sustainable Energy Coordinator
The Network for a Sustainable Tomorrow is a non-profit community-based network of programs working towards social, environmental, and economic justice and equity in our region. NEST catalyzes and convenes new initiatives and partnerships, and does outreach and education to build a stronger and more resilient Southern Tier.
Overview

- What is Heat Smart Southern Tier?
- Why HeatSmart?
- HeatSmart Technologies
  - Weatherization and Home Energy Assessments
  - Heat Pump Technologies
- Incentives & Financing
- Steps for Participating
- Q/A
What is HeatSmart Southern Tier?

- HeatSmart Southern Tier (HSST) is a NYSERDA-funded community outreach program that connects you to local heating and cooling and energy efficiency experts who offer the latest clean energy technologies.

- We work to educate the public about sustainable heating and cooling systems through our workshops, webinars and tabling events.
Where Are We Now?

Main Sources Of Greenhouse Gases in NYS

TRANSPORTATION: 36%
BUILDINGS: 30%
ELECTRICITY GENERATION: 15%
WASTE: 7%
REFRIGERANTS: 5%
AGRICULTURE: 4%
Benefits of HeatSmart Southern Tier

- Reduce energy costs
- Home comfort & safety
- Reduce greenhouse gas emissions
- Community awareness
- In our collaboration with the Endicott Clean Energy Communities program, the village can receive points toward monetary awards and other benefits
Clean Energy Communities (CEC)

- The Clean Energy Communities program is run by NYSERDA that provides municipalities with the opportunity to be more sustainable in exchange for awards.
- Communities make energy efficiency and ‘green’ improvements to earn points. Once a community has earned a certain number of points, they receive an award.
Endicott CEC

- Endicott is a participating Clean Energy Community and you can help support the Village’s sustainability goals!
- As residents sign up for our HeatSmart program, Endicott gets closer to reaching their clean energy goals and receiving grant money from NYS
- Getting just five residents to sign contracts for energy efficiency improvements and heat pump installations benefits CEC campaigns, such as Endicott’s
HeatSmart Southern Tier Program Covers:

- Weatherization
- Heat Pumps
  - Ground Source
  - Air Source
  - Water Heater
HeatSmart Southern Tier’s Competitively Selected Partners

Air Source Heat Pumps

Ground Source Heat Pumps

Home Performance and Efficiency

Air Source Heat Pump Specialists

Dailey Geothermal

Pending New Partnership

NP Environmental (Delaware County)

NP Environmental (Delaware County)
First Step: Weatherization
Weatherization Benefits

- Reduce energy consumption and costs
- Increase home safety
- Improve home comfort
  - Reduce drafts
  - Improve humidity control
  - Improve indoor air quality
  - Reduce risk of ice dams
Heat Pump Technologies
What is a Heat Pump?
Types of Heat Pumps

Space Heating & Cooling

- Air Source Heat Pump
- Ground Source Heat Pump

Hot Water Heating

- Heat Pump Water Heater
Ground Source Heat Pump Benefits

- An efficient heating/cooling system
- Long system lifetime
- Eliminate fossil fuels from your home
- Can include domestic hot water
Air Source Heat Pumps

Ductless Heat Pumps

Outdoor Units

Indoor Units

Wall Mount

Floor Mount

Ceiling Cassette

Mini Duct
Air Source Heat Pumps Benefits

- Energy savings
- Full heating replacement not required
- Flexible
- Zone control
- Air conditioning without ductwork
- Quiet
Heat Pump Water Heaters

- Uses indoor air to heat your hot water
- Has backup for meeting high demand

Benefits

- More efficient than typical electric water heaters
- Provides dehumidification
Incentives & Financing
<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
<th>Eligibility Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cold Climate Air Source Heat Pump</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial Load Heating Rebate</td>
<td>$500 per outdoor unit (-$100 per outdoor unit to contractor)</td>
<td>All ASHPs must be NEEP-listed Cold Climate Air Source Heat Pumps</td>
</tr>
</tbody>
</table>
| Full Load Heating Rebate           | $1,000 per 10,000 Btu/h of maximum capacity at 5°F (-$500 per project to contractor) | Partial Load: Must be mini-split heat pump  
Full Load: Can be central or mini-split heat pump, must be sized to 90-120% of building heat load                                                                                                           |
| **Ground Source Heat Pump**        |                                                                             |                                                                                                                                                           |
| Full Load Heating Rebate           | $1,500 per 10,000 Btu/h of heating capacity (certified by AHRI) (-$500 per project to contractor) | GSHP must be ENERGY STAR certified and meet ENERGY STAR Tier 3 requirements and be sized to 90-120% of building heat load.  
This incentive only covers closed-loop systems. Speak with your installer for more information about incentives for open-loop systems. |
| **Water Heating**                  |                                                                             |                                                                                                                                                           |
| Heat Pump Water Heater             | $700 per unit                                                               | Must be ENERGY STAR certified and under 120 gallons in capacity                                                                                           |
| GSHP Desuperheater                 | $100 per unit                                                               | Desuperheaters are installed as an optional component to eligible GSHP systems to offset some of your hot water load. Speak with your installer to learn more about desuperheater integration. |
| Ground-Source Water Heater         | $900 per unit                                                               | This incentive is for ground source heat pump systems dedicated to providing 100% of domestic hot water load. The GSHP must be ENERGY STAR Tier 3 Certified. |

**Custom incentives and incentives for commercial-scale systems are also available based on the expected annual energy savings ($80/MMBtu). Speak with your installer to learn more.**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal Tax Credit</strong></td>
<td>$300**</td>
<td>30%</td>
<td>$300</td>
</tr>
<tr>
<td><strong>State Tax Credit</strong></td>
<td>—</td>
<td>25%, up to $5,000</td>
<td>—</td>
</tr>
</tbody>
</table>
## Financing

<table>
<thead>
<tr>
<th>Provider</th>
<th>Loan Product Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYSERDA*</td>
<td>Smart Energy Loan</td>
<td>Up to $25,000; terms of 5, 10, and 15 years; 3.49 or 6.99% interest</td>
</tr>
<tr>
<td></td>
<td>On-Bill Recovery Loan</td>
<td>Up to $25,000; terms of 5, 10, and 15 years; 3.49 or 6.99% interest; paid on utility bill</td>
</tr>
<tr>
<td></td>
<td>Companion Loan</td>
<td>Up to $25,000; terms of 5, 10, and 15 years; 6.99% interest additional to OBR or SEL for larger work scopes. Cost effectiveness &amp; other requirements apply. *</td>
</tr>
<tr>
<td>ASHP/GSHP Manufacturer Financing (E.g. Synchrony, EnerBank)</td>
<td></td>
<td>Unsecured loans with dealer fees (can be terms of up to 20 years)</td>
</tr>
<tr>
<td>Local Banks (e.g. Home Equity, consumer loans)</td>
<td></td>
<td>Dependent on bank</td>
</tr>
</tbody>
</table>
Enabling LMI Participation: Income-eligible programs

Assisted Home Performance with Energy Star
Energy Efficiency/Weatherization

Provides those who apply with a discount of 50% of project costs
- Limit of $5,000 for single-family
- Limit of $10,000 for 2-4 unit multi-family
- Includes heat pumps

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Income Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$43,664</td>
</tr>
<tr>
<td>2</td>
<td>$57,104</td>
</tr>
<tr>
<td>3</td>
<td>$70,554</td>
</tr>
<tr>
<td>4</td>
<td>$83,984</td>
</tr>
<tr>
<td>5</td>
<td>$97,408</td>
</tr>
<tr>
<td>6</td>
<td>$110,848</td>
</tr>
</tbody>
</table>

(Income levels subject to change)
Enabling LMI Participation: Income-eligible programs

EmPower NY
Energy Efficiency/Weatherization

- Available to homeowners that are under 60% of state median income that pay utility bills
  - HEAP eligible = up to $20,000 off full project costs
  - non-HEAP = up to $10,000 off
- Includes heat pumps

### EmPower New York Income Eligibility Guidelines 2021-2022

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Maximum Gross Monthly Income</th>
<th>Maximum Gross Annual Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$2,729</td>
<td>$32,748</td>
</tr>
<tr>
<td>2</td>
<td>$3,569</td>
<td>$42,828</td>
</tr>
<tr>
<td>3</td>
<td>$4,409</td>
<td>$52,908</td>
</tr>
<tr>
<td>4</td>
<td>$5,249</td>
<td>$62,988</td>
</tr>
<tr>
<td>5</td>
<td>$6,088</td>
<td>$73,056</td>
</tr>
<tr>
<td>6</td>
<td>$6,928</td>
<td>$83,136</td>
</tr>
<tr>
<td>7</td>
<td>$7,086</td>
<td>$85,032</td>
</tr>
<tr>
<td>8</td>
<td>$7,243</td>
<td>$86,916</td>
</tr>
<tr>
<td>9</td>
<td>$7,975</td>
<td>$95,700</td>
</tr>
<tr>
<td>10</td>
<td>$8,712</td>
<td>$104,540</td>
</tr>
</tbody>
</table>

The current income guidelines for EmPower New York are set at 60% of the state median income. (Income levels subject to change)
Municipal Customer NYS-Based Incentives

### Qualifying Measures Worksheet

<table>
<thead>
<tr>
<th>EQUIPMENT &amp; REBATE LEVELS</th>
<th>HEATING BTU</th>
<th>MANUFACTURER</th>
<th>CONDENSER MODEL # (OUTSIDE UNIT)</th>
<th>INSIDE UNIT COIL MODEL #</th>
<th>HEAT PUMPS/ AIR HE # WATER HEATERS/ UEF #</th>
<th>TOTAL INCENTIVE</th>
</tr>
</thead>
</table>
| Cold Climate Central Heat Pumps  
Must be on the NEEP cc:ASHP Product & Specification List | | | | | | $1,200/system |
| Cold Climate Mini-Split Heat Pumps  
Must be on the NEEP cc:ASHP Product & Specification List  
[ ] Partial Heating Load*  
[ ] Full Heating Load* | | | | | | Partial: $800/system  
Full: $1,200/system |
| Ground Source Heat Pumps (GSHP)  
Must be ENERGY STAR® certified | | | | | | $2,000/unit |
| GSHP Desuperheater | | | | | | $100/unit |
| GSHP Water Heater  
Must be ENERGY STAR® certified  
UEF ≥ 2.3 | | | | | | $750/unit |
| Air Source Heat Pump Water Heater  
Must be ENERGY STAR® certified  
UEF ≥ 2.3 | | | | | | $750/unit |

**GRAND TOTAL:**

- Municipal Electric customers have certain incentives
- Independent Energy Efficiency Program Heat Pump Rebates
  - Access form here or at tinyurl.com/ieepform
- EmPower eligible - OTDA Funding Available

*Partial heating load <90% of the building’s design heating load. Full heating load = 90%-120% of the building’s design heating load.
Home Energy Audits

- **Residential Energy Audit (REAP Audit)**
  - Free for anyone, but does not include diagnostic testing

- **Full Energy Audit including diagnostic testing**
  - Market rate: Must pay fee
  - LMI: Must fill out joint application & have project done in order to be free
  - Diagnostic testing such as IR cameras
Steps for Participating

1. Sign up for a home energy assessment (and/or)
2. Sign up for site assessment from HSST installer(s)
3. Receive a quote for energy improvements
4. Apply for incentives/financing (if applicable)
5. Sign contract for desired systems (if any)
6. Complete installation work
Dickinson Project: LMI Community Shared Solar

- Local Business (ex: 50 panels)
- Four person family (ex: 24 panels)
- Studio apartment (ex: 10 panels)
Benefits and How It Works

- Receive 20% savings annually on your NYSEG bill.
- Support locally produced renewable electricity & union jobs.
- Pre-enroll today to get your place in the queue!
- Income qualification required.
- Join with no upfront cost or fees.

**Benefits**

- **Savings:** 20% on NYSEG bills.
- **Renewable Energy:** Support locally produced electricity and union jobs.
- **Pre-enrollment:** Secure your place in the queue.
- **Affordability:** No upfront cost or fees.

**How It Works**

1. **Solar Panels:** Installed offsite in sunny locations for energy production.
2. **Utility Customer:** Can be a subscribing member.
3. **Energy Credit:** Each subscriber's bill is credited when excess energy is produced.

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*Note: The diagram illustrates the process of solar power generation and distribution to utility customers.*
Questions?
Thank You!

Follow us on Social Media:
Facebook: Network for a Sustainable Tomorrow
Instagram: @ny_nest
Twitter: @ny_nest

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