Renewable Heating and Cooling Policy Framework

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Policy Framework

- First step to developing a long-term, integrated strategy to support market growth in renewable heating and cooling (RH&C) in New York
- Ground source heat pumps (GSHP), air source heat pumps and solar hot water
- Building blocks:
  - Reducing costs and lowering barriers
  - Mandates
  - Incentives
- Near-term market continuity incentive for GSHP while implementation of the wider Framework is underway
Context – Benefits from RH&C

Heating and cooling is responsible for around a third of GHG emissions

- Role of RH&C in reducing GHG emissions 40% by 2030
- RH&C can also provide other benefits including: bill savings, improved comfort, electricity grid benefits
Moving the sector from niche to mainstream

- RH&C has a large technical potential in New York (~700 TBtu out of statewide HVAC annual load of ~1,000 TBtu);
- Today, RH&C occupies a niche position: current cost-effective RH&C resource of 41 TBtu (of which 6 TBtu GSHP)
- Only 4% of the State’s 1,000 TBtu load could be met cost effectively with RH&C today
- Combination of deep cost reductions and value monetization is needed to increase the RH&C potential to a level where mainstream adoption can occur
Unlocking the potential of RH&C – strategic approach

<table>
<thead>
<tr>
<th>Approach over the next five years (to 2021)</th>
<th>Impact – cost-effective RH&amp;C resource</th>
<th>% of state load</th>
<th>Impact – cost -effective GSHP resource</th>
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<tbody>
<tr>
<td>Current state</td>
<td>41 TBtu</td>
<td>4%</td>
<td>6 TBtu</td>
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<tr>
<td>Energy prices trending up</td>
<td>79 TBtu</td>
<td>8%</td>
<td>13 TBtu</td>
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<tr>
<td><strong>With cost reductions</strong></td>
<td><strong>116 TBtu</strong></td>
<td><strong>12%</strong></td>
<td><strong>58 TBtu</strong></td>
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<tr>
<td><strong>With potential value monetization</strong></td>
<td><strong>264 TBtu</strong></td>
<td><strong>26%</strong></td>
<td><strong>174 TBtu</strong></td>
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<td>Remove barriers</td>
<td></td>
<td>Increase uptake rates</td>
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- Market positioned for mainstream penetration by the beginning of the 2020s
- As cost-effective resource and uptake increase, economies of scale start to unlock further volume-dependent cost reductions
Reducing costs and lowering barriers: options for policies and market-based strategies

1. Implement community procurement programs (e.g. Solarize for Heat) to promote local clustering
2. Develop a customer targeting and engagement tool to enable contractors to identify local clusters of high-potential customers
3. Facilitate standardized equipment and design approaches by encouraging industry best practice and/or through requirements in incentive programs
4. Develop a unified, streamlined permitting process for RH&C technologies and encourage adoption across NYS municipalities
Reducing costs and lowering barriers: options for policies and market-based strategies (cont.)

5. Provide technical and engineering assistance and project development support for larger projects in key market segments (e.g. GSHP in college campuses)

6. Integrate RH&C into existing trade channels such as the HVAC emergency replacement market or oil heat dealer sector in order to reach a broader customer base

7. Enable broader availability and development of cheaper finance options

8. Work with utilities and energy service companies (ESCOs) to pilot third-party ownership and other innovative models under REV
Mandates and Incentives

Concepts put forward in the Framework for possible mandates:
- Lead by example (State-owned buildings)
- Stretch Code (New construction & major renovations)
- Net zero energy code (New construction & major renovations)

Three key venues for consideration of financial incentives for RH&C:
- Electricity rate reform
- Clean Energy Standard (T-RECs)
- Clean Energy Fund
Market continuity – near-term GSHP incentive

- Recognizes the unique challenge to the ground source heat pump sector resulting from the loss of federal tax credits
- Proposal:
  - Residential & small-scale: $1,500 per ton of installed capacity
  - Medium & large scale: $1,200 per ton of installed capacity
  - $15 million budget over two years
  - Available to complement the PSEG GSHP rebate in Long Island, so available in other parts of the State
  - Eligibility start January 1
- Implement by 2017 Q2
Next steps

- Find the Framework at: www.nyserda.ny.gov/renewable-heating-and-cooling
- Comments by March 10 to: renewableheatingandcooling@nyserda.ny.gov
- Stakeholder webinar/meeting
  - March 2, 10am, NYSERDA office Albany
  - see website above for details
- Stakeholder meeting on design of the near-term GSHP incentive
- Decisions and rollout of the first tranche of policy options and market-based strategies in early 2017