

NORTHAMPTON CASE STUDY



Home:

- New construction, built 2019
- 3,100 square feet (including an unfinished basement)
- Weatherization measures: High levels of insulation in the roof, walls, and basement slab, plus triple pane windows and HRV
- Peak heat load: 23,103 btu/hr at 0°F

Heat Pumps:

- Three Fujitsu AOU9RLS3 single-head units (45,000 btu/hr at 5°F)
- House occupied September 2019
- Cost: \$13,750 (including markup from general contractor)



Customer experience:

- Overall, heat pumps do their job without being noticeable, very easy to live with.
- Units are quiet, no noise or vibrations from the wall-mounted outdoor units
- Winter 2019/20, household only ran the first-floor heat pump to heat the entire house. Bedrooms were slightly cooler, but that matched his family's preference.
- During hot periods of the summer, they ran the upstairs unit for cooling, overall this unit cooled the house well, but the bedrooms stayed slightly warmer, especially with the doors closed. Would consider more distribution upstairs.
- With a 10kW solar array, the home has been producing more energy than it consumes