Elevate Energy and New Ecology

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Community-Based Sustainable Development





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Remote Monitoring and Optimization Services

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Elevate Energy and New Ecology

- Elevate Energy and New Ecology have been partnering since 2013 to make buildings more efficient, healthy, and resilient
 - Elevate Energy designs and implements programs that reduce costs and protect people and the environment
 - New Ecology works nationally to bring the benefits of sustainable development to the community level







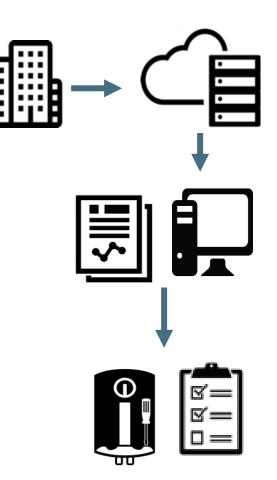
Primary Focus of ReMO

- Natural gas and water
- Boiler-based heating and DHW systems, CHP
- Low-cost, system approach
- Single platform, expandable, equipment agnostic
- Delivers actionable intel, not just data
- Better building operation, equipment coordination



ReMO- Remote Monitoring and Optimization

- Install sensors, collect data, send it to the cloud
- Analyze the data and identify opportunities to optimize systems
- 3. Implement and save energy



Years of Development and Investment

- \$2.85 million investment to date
- 2012
 - Began investigating and testing
- 2016-2018
 - 100+ building pilot
- 2019
 - Launched U.S. DOE Machine Learning Project
 - MA DOER supporting installations for 275 buildings

Pilot Studies – Key Findings

80% had temperature settings that needed to be lowered

58% had outdoor air sensors in the wrong location

19% had inappropriate controls configurations

54% of buildings with combined systems are mixing water

30% of boilers are excessively cycling

HEATING

39% were delivering unsafe potable water temperatures to tenants

60% of hot water heaters show excessive cycling

31% need DHW tank temperatures lowered

54% of buildings with combined systems are mixing water

39% had mixing valves needing service, repair or changes

DOMESTIC HOT WATER

Case Study

- Reduced gas use by 16.2%, 24,271 therms saved in three years
- Improved efficiency, even in a newer building
 - Property managed by national, well-regarded management firm
 - Modular, condensing boilers less than 5 years old
- Project paid back in 1.6 years



Property Description:

- 9-stories
- 120 Units
- 120,736 gross square feet
- Subsidized multi-family housing

Positive Impacts

Improve existing buildings

- Energy savings of 5-9%
- Over 1.2M units of multifamily housing in IL, approximately 50% is affordable
- Aligns with local and state carbon reduction strategies
- Improve building operations
 - Measures and monitors building performance
 - Improves operation and maintenance
 - Early detection of equipment failure
- Affordable
 - Accessible to buildings that can not afford systems

Thank you!





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