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# **Con Edison's Central Air Conditioning Direct Load Control Program**

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# Program Participation Levels

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Year End 2005

	Total participants	
	Customers	Thermostats
Residential	12,096	14,822
Business	1,837	2,476
Total	13,933	17,298



# System Features

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- Thermostat and Controller Board
- Server
- User Interface Website
- Utility Load Curtailment Software

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# Curtailment Strategy

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- Curtailment is accomplished by cycling the compressor off for 30 continuous minutes per hour
- Utility has the ability to refresh the curtailment event in two-hour increments
- Load control is initiated during NYISO declared curtailment event or during times of excessive demand on the transmission and distribution system as declared by Con Edison
- There is no limit to the number of times the utility can initiate load curtailment



# Installation Process

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- Installers selected for technical competence and interpersonal skills
- Conduct brief interview with customer prior to installation
- Visually inspect the control wiring, equipment and field-qualify installation conditions
- Follow the installation procedure for the system
- Installers review the program materials including information on thermostat operation and the customer service process
- Installation process is approximately 1.5 hours
- Follow-up quality control survey calls demonstrate high level of customer satisfaction

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# Customer Service

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- Telephone support to program participants 24 hours a day, seven days a week
- Provide assistance in programming the thermostat
- Assist customers in using the internet to control their thermostats
- Provide on-site service when necessary

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# Process Enhancements

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## **New Software System**

- New utility load curtailment software application for the controller system was installed in 2005

## **Non-Responding Thermostat Process (NRT)**

- The controller monitors the operation of each system by “heartbeat”
- NRTs are defined as missed “heartbeat”  
(3 consecutive weeks)
- NRTs are repaired and placed back in active service or determined to have been removed

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# Lessons Learned

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- Curtailment event time periods – The duty cycles on A/C equipment for **business** customers show a significant drop-off after 5:00 p.m.
- Refreshing events – no measurable impact in customer complaints. Customers can still opt-out of a curtailment event.
- Business customer overrides – concerns regarding acceptance of load control resulting in high override rate.
- July 2005 control day - average overrides under 20%





# Future Plans

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## Program Expansion

- Residential Program – Total 18,000 installs by Summer 2007
- Business Program – Total 11,500 installs by Summer 2007

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# Contact

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