



**BONUS!**  
Get 2 NCI Exclusive  
Design Programs -  
PreLoad™ & EQVerify™  
A \$395 VALUE for  
NO Extra Cost!

## Design and Sell High Quality HVAC Retrofits & System Renovations

*Cut design time by 70% and  
deliver profitable solutions to  
comfort and high bill complaints!*

Tired of spending an hour or more doing load calculations before you even sell the job? NCI's proprietary PreLoad™ and EQVerify™ software (a \$395 value) included with this class will help you perform an initial load calculation and determine correct equipment selection in 15 minutes or less!

Learn how to deliver accurate and profitable system renovations and retrofits that work.

The process begins with a comprehensive evaluation of the existing system design and equipment sizing and verification of real-time performance. Next you'll learn the steps to redesign and renovate the system to deliver the quality, comfort and performance your customers want and deserve.



**Courses Qualify for  
NATE, BPI & Most  
State CEUs**



# Residential HVAC System Renovation & Retrofit

## Benefits:



- Learn how to provide customers with optimized solutions that address their home's comfort, health, safety and energy efficiency
- Take your HVAC performance testing knowledge and skills to the next level by learning how to diagnose and repair performance issues during the renovation process
- Learn to effectively utilize NCI's exclusive redesign tools called PreLoad™ and EQVerify™ to check a home's approximate load and to help select an equipment size to match a building's cooling and heating load
- Accurately size ducts to match the required airflow of a room and the fan's capacity using NCI's exclusive duct sizing tools and methods using live, field-based air balancing test and diagnostics data
- Effectively evaluate existing duct fittings, transitions, grilles and registers, and specify replacements as needed
- Produce a final renovation that you can prove works through a final Test-Out showing delivered BTUs, efficiency and comfort

## Agenda:

### Day 1 - System Redesign and Renovation Basics, Retrofits and Load Calculations

- Definition of renovation and retrofit and what the renovation process entails
- How to apply diagnostics and air balancing techniques to system renovations
- Interpreting ComfortMaxx™ test-in reports
- How to develop a preliminary scope of work
- PreLoad™ fast initial block load calculation software based on initial testing
- Equipment sizing and selection
- EQVerify™ existing equipment capacity verification for proper equipment sizing
- Step-by-step duct redesign procedure
- Duct renovation basics

### Day 2 - Final Renovation Plans, Scope of Work, and Test-Out Process

- How to identify critical system defects
- Fan sizing, coil and filter pressure drops
- Step-by-step duct renovation procedures
- Grilles and Registers - diagnostics and retrofit
- Creating a final scope of work
- The hand-off: Turning the renovation over to the installation team
- Performing a final test-out to verify your design is delivering the performance, efficiency and comfort you promised
- Hands-on group exercises: System renovation from start to finish

“We wouldn't be where we are without NCI.”

*Bill Kennihan  
Owner, Kennihan Plumbing, Heating & AC  
Valencia, PA*

“I love my job! Thanks NCI for giving me the tools to be the best I can!!”

*John Ellis  
President, So Cal Air Dynamics  
Northridge, CA*

“NCI has opened up more profit centers for my business than just about anything I've been a part of over the past 40 years. The innovative ideas, accompanied by simple how-to procedures have made my association with NCI one of the best moves I've made.”

*Jim Altman  
President, Four Seasons AC & Heating  
Kingsville, TX*

“NCI is the standard for getting airflow right in the home.”

*Ed Lammers  
President, Lamb Home Services  
Winter Park, FL*

**Register now and discover the Performance-Based Contracting™ Difference!**

# Training



## Who Should Attend?

Sales People, Owners, Managers, System Renovators and Designers

## Additional Educational Opportunities from NCI:

- *Residential HVAC System Performance & Air Balancing*
- *Commercial Air Balancing*
- *Carbon Monoxide Safety & Combustion*
- *Performance-Based Selling*
- *Home Performance for HVAC Professionals*
- *And much more*



"I am now able to solve some real problems for my customer(s) and I guarantee you that they will be a constant source of referral sales for many years to come. This stuff is exciting!"

Charlie Dieringer,  
Air Force One Heating & Cooling,  
Canyon Lake, CA

## Frequently Asked Questions

**Q: What training or experience should I have prior to taking this class?**

This is an advanced class for contractors and sales people with a good foundation in system sizing and the HVAC system sales process.

**Q: Do I need to bring any special tools to the class?**

While you do not need to bring any tools to class, you will need to bring a laptop to participate in the group sessions with the included PreLoad™ and EQVerify™ software. Most of the hands-on will be done using the software, so be sure to bring a laptop computer to get the most value from the training. The software is not available for iPad or Droid devices at this time.

**Q: What are the start and end times of the class and is lunch included?**

The typical NCI training day is 8:00 am to 5:00 pm. Light refreshments and lunch are included.

**Q: How much does the PreLoad™ and EQVerify™ software cost?**

The software, a \$395 value, is included with your class registration at no additional charge!

## Who is NCI?

National Comfort Institute (NCI), the HVAC industry's leader in Performance-Based Service Contracting™, is an international membership and training organization that provides heating, air conditioning, plumbing and electrical contractors with services and tools to help them improve their businesses.

NCI coined the phrase "Performance-Based Contracting™", a unique approach to managing a contracting business through accountability and measurable results. During the past two decades, NCI has trained and certified more than 18,000 HVAC industry professionals. For more information about NCI, please call 800-633-7058 or visit [www.nationalcomfortinstitute.com](http://www.nationalcomfortinstitute.com).



**Call 800-633-7058**