Sunsetting of IGSHPA Legacy Training Courses/Certifications: Recommendations for Utility/State/Provincial Programs

by Jeff Hammond
Executive Director, IGSHPA rev. 260114

Background

The International Ground Source Heat Pump Association (IGSHPA), founded in 1987, has been a leader in training, standards, and technical resources for the ground source (geothermal) heat pump industry since its inception. The 1988 NRECA (National Rural Electric Cooperative Association) / Oklahoma State University / IGSHPA Installation Guide for GSHPs was the basis for much of the industry's training, design and installation guidelines, minimum requirements / standards, and the basis for utility and state / provincial incentive programs. One of the first training programs developed was the Accredited Installer course, training over 7,000 individuals. There are many drawings and specifications, stating "Must be an IGSHPA Accredited Installer", as well as utility and state / provincial programs that require IGSHPA training and certification.

Other IGSHPA developed training programs include commercial designer training / certification, *Certified GeoExchange Designer* (CGD), residential designer training / certification, *Certified Residential Geothermal Designer* (CRD), and project inspector training / certification, *Certified Geothermal Inspector* (CGI). These programs have been crucial to industry growth, helping to ensure that the design, installation, and verification (inspection) of systems meet the requirements of the building owner, state / province, utility, or AHJ (Authority Having Jurisdiction).

When the Accredited Installer training was developed, the industry was in its infancy, which required training that covered a wide range of topics because the technology was not familiar to engineers, drillers / excavators, HVAC contractors, and other practitioners. The training was three days in length to cover as much material as possible. As the industry grew, more specialization has occurred, which requires a job-specific approach to avoid requiring individuals to take courses that may not be relevant to their job functions. For example, the Accredited Installer covered topics ranging from ductwork to borehole grouting. Although useful information, the industry needed a "modular" approach, focusing on the specific job to provide more in-depth training and to measure (via certification / certificate exams) specific qualifications. A 2013 report compiled for the U.S. Department of Energy, *National Certification Standard for the Geothermal Heat Pump Industry,* provided job descriptions for the industry, which was the basis for IGSHPA's new training program (https://www.osti.gov/servlets/purl/1116539/).

New Training/Certification Programs

Starting in July 2023, IGSHPA began a new training / certification program to replace the legacy IGSHPA training with a modular approach, while incorporating the latest technology and standards. IGSHPA partnered with CSA Group for an ANSI / CSA accredited training curriculum and CSA / IGSHPA certification program based upon ISO 17024. Additional training to support the accredited program was developed by the IGSHPA training committee with a certificate program. The goal was to replace all legacy training by the end of 2025, which was accomplished. In May 2025, the 2017 *IGSHPA Design and Installation Standards* were sunset, and IGSHPA adopted the CSA / ANSI / IGSHPA C448:25 Standard, *Design and Installation of Ground Source Heat Pump Systems for Commercial and Residential Buildings*. All new training and certification / certificate programs are based upon the C448:25 Standard, which includes significant updates and new applications.

INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION
312 S. 4th Street, Suite 100
Springfield, Illinois 62701 USA
igshpa.org • 1-217-212-2112 • info@igshpa.org

The legacy Accredited Installer program (three days of training) was replaced with four courses, GSHP Residential Designer Workshop (two days), GHX (Ground Heat Exchanger) Installer Workshop (two days), GSHP Installation Technician Training (one day), and GSHP Service Technician Training (one day). The job specific training requires six instead of three days, but it would be unlikely that one person would take all four courses since the new training is job specific. The GSHP Residential Designer Workshop consists of up to seven self-paced online courses as prerequisites, depending upon the participant's experience, the two-day instructor-led course, and a GRSD (GSHP Residential System Designer) certification exam. The GSHP Installation Technician and GSHP Service Technician courses require HVAC industry experience or trade school / college degree as prerequisites and an exam for a certificate, demonstrating understanding of the job requirements. The GHX Installer training does not have prerequisites; a certificate is also offered upon successful completion of the exam.

The legacy commercial training, CGD was replaced by the GSHP Commercial Designer Workshop (two days). The GSHP Commercial Designer Workshop consists of up to seven self-paced online courses as prerequisites, depending upon the participant's experience, the two-day instructor-led course, and a GCSD (GSHP Commercial System Designer) certification exam. The legacy residential designer training (CRD) is referenced in the above paragraph as part of the transition from the Accredited Installer course.

The legacy inspector training, CGI was replaced by the GSHP System Verification and Inspection course (four self-paced online modules, approximately one full day of total coursework). The GSVI (GSHP System Verification and Inspection) certification exam is available after completing the course.

IGSHPA's new training program and legacy courses are available on the website at https://igshpa.org/training-certification/. Individuals with current certifications may maintain their certifications indefinitely if CEUs are provided upon renewal and provided that the certification does not lapse. There is also a path for upgrading to the new certifications / certificates as shown in the "Training Paths" notes on page 3.

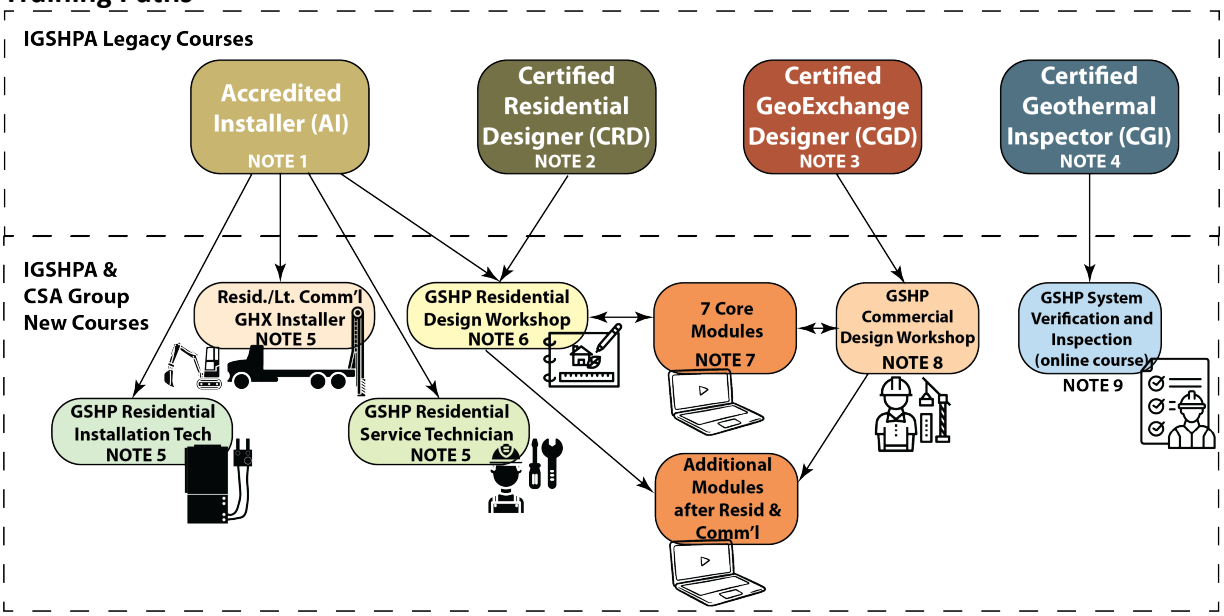
Recommended Utility and State / Provincial Program Requirements Updates

Most program requirements have included Accredited Installer certification for residential applications and Certified GeoExchange Designer (CGD) certification for commercial applications. The new GCSD (GSHP Commercial System Designer) certification is a direct replacement for CGD. However, IGSHPA recommends some changes based upon the new job-based courses for residential applications, since there is typically not an engineer designing residential installations or formal drawings / specifications. Following is verbiage that may be helpful in providing guidance for program updates:

- Commercial Applications: The project designer must be CSA / IGSHPA GCSD (GSHP Commercial System Designer) certified or AEE / IGSHPA CGD (Certified GeoExchange Designer) certified. The GHX (Ground Heat Exchanger) installer must have a current IGSHPA GHXI (Residential / Light Commercial GHX Installer) certificate or IGSHPA Accredited Installer certificate.
- Residential Applications: At least one person from the installation / design company must be CSA / IGSHPA GRSD (GSHP Residential System Designer) certified or have a current IGSHPA Accredited Installer certificate. It is recommended that at least one person from the installation / service company have a current IGSHPA GSHP Installation Technician and IGSHPA GSHP Service Technician certificate. The GHX (Ground Heat Exchanger) installer must have a current IGSHPA GHXI (Residential / Light Commercial GHX Installer) certificate or IGSHPA Accredited Installer certificate.

INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION
312 S. 4th Street, Suite 100
Springfield, Illinois 62701 USA
igshpa.org • 1-217-212-2112 • info@igshpa.org

Training Paths



NOTES:

1. The Accredited Installer (AI) course is being replaced by four modules. IGSHPA certificates and NATE certification for the AI course may be renewed indefinitely, as long as CEUs are submitted and the certificates do not lapse. Individuals may upgrade to the new Residential Designer Certification and/or Ground Heat Exchanger Certificate if desired by successfully completing the GRSD and/or GHX Installer exams.
2. The Certified Residential Designer (CRD) course is being replaced by the GSHP Residential Design Workshop. The IGSHPA certificate may be renewed indefinitely, as long as CEUs are submitted and the certificate does not lapse. Individuals may upgrade to the new Residential Designer Certification if desired by successfully completing the GRSD exam.
3. The Certified GeoExchange Designer (CGD) course is being replaced by the GSHP Commercial Designer Workshop. The CGD certification may be renewed indefinitely through AEE (Association of Energy Engineers) as long as CEUs are submitted and the certification does not lapse. Individuals may upgrade to the new Commercial Designer Certification if desired by successfully completing the GCSD exam.
4. The Certified Geothermal Inspector (CGI) course is being replaced by the GSHP System Verification and Inspection Workshop. The IGSHPA certificate may be renewed indefinitely, as long as CEUs are submitted and the certificate does not lapse. Individuals may upgrade to the new Verification and Inspection Certification if desired by successfully completing the GSVI exam.
5. This new course provides an IGSHPA certificate, upon successful completion of the exam.
6. Upon completion of this new course, an exam may be taken to obtain GRSD (GSHP Residential System Designer) certification. Note that this course includes prerequisites from the 7 Core Modules. Attendees of the Workshop determine if all, some, or none of the Core Modules are needed based upon their industry experience.
7. The 7 Core Modules are self-paced online courses that support the GSHP Residential Design Workshop and GSHP Commercial Design Workshop. Each of the courses includes prerequisites from the 7 Core Modules. Attendees of the Workshops determine if all, some, or none of the Core Modules are needed based upon their industry experience.
8. Upon completion of this new course, an exam may be taken to obtain GCSD (GSHP Commercial System Designer) certification. Note that this course includes prerequisites from the 7 Core Modules. Attendees of the Workshop determine if all, some, or none of the Core Modules are needed based upon their industry experience.
9. Upon completion of this new course, an exam may be taken to obtain GSVI (GSHP System Verification and Inspection) certification.

INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION
312 S. 4th Street, Suite 100
Springfield, Illinois 62701 USA
igshpa.org • 1-217-212-2112 • info@igshpa.org