Event: **Energy in Buildings Epirus Conference 2026**
Date: Saturday November 28, 2026
Place: Hotel DuLac, Ioannina, Greece

ASHRAE Hellenic Chapter

#	**Aristotelis Tsekouras** Consultant Engineer in Sustainable Energy Systems – Energy Auditor	
Title:	Consultant Engineer in GRAND ALPHA – Sustainable Engineering & Consulting	
email:	atsekouras@grand-alpha.gr	•
Presentation title:	**Engineering for Lasting Sustainability: Future-Proofing a Resort's Geothermal HVAC System, Five Years On**	

Through a real energy upgrade project at an existing resort, this presentation explores how to use available data—and how to generate the data we need—to design a retrofit that delivers lasting value. The project transformed an open-loop geothermal HVAC system supported by oil-fired boilers into a geothermal system with heat recovery, serving cooling, heating and domestic hot water needs.

Operational data and targeted measurements help us understand actual demand, reduce uncertainty and avoid excessive safety margins. This allows us to establish a realistic budget and make informed engineering decisions without compromising quality or performance, or relying on overdesign to compensate for missing information.

The next step is commissioning and system fine-tuning, ensuring that the installation operates as designed and delivers the performance promised. But what happens five years later?

Revisiting the project, we examine how the original design decisions stand up to everyday operation, and how serviceability, maintenance and adaptability support sustained performance and resilience. The case study connects retrofit engineering with long-term operation, exploring what future-proofing means in practice and how sustainability can be maintained throughout a system's life.

Short CV (EN) :	

Consulting engineer specializing in innovative heat and power generation technologies and central HVAC systems, with expertise in open-loop geothermal systems, heat recovery, biomass utilization, combined heat and power (CHP), district heating, SCADA and building management systems (BMS), and emerging energy technologies such as hydrogen.

Founder of Grand Alpha, an engineering consultancy focused on innovative solutions. An active member of the ASHRAE Hellenic Chapter, co-coordinator of the Permanent Energy Committee of the Technical Chamber of Greece (TEE), and committee coordinator at TEE's Eastern Crete Regional Department. Participates in European research projects focusing on renewable energy, smart grids, and alternative energy sources.

Short CV (GR) :

Σύμβουλος μηχανικός με εξειδίκευση σε πρωτοποριακά συστήματα παραγωγής ενέργειας (θερμότητα – ηλεκτρισμός) και HVAC κεντρικά συστήματα με εξειδίκευση σε Γεωθερμία Ανοιχτού Βρόχου, Ανάκτηση Θερμότητας καθώς και σε αξιοποίηση Βιομάζας, Συμπαραγωγής, Τηλεθέρμανση, SCADA-BMS και διείσδυση νέων μορφών ενέργειας όπως το Υδρογόνο. Ιδρυτής γραφείου συμβουλευτικής μηχανικής (Grand Alpha) με έμφαση στις καινοτόμες λύσεις, ενεργό μέλος της ASHRAE (Hellenic Chapter) συν-επιμελητής Μόνιμης Επιτροπής Ενέργειας ΤΕΕ και επιμελητής Μόνιμης Επιτροπής Ενέργειας στο ΤΕΕ Ανατολικής Κρήτης . Συμμετέχει σε Ευρωπαϊκά Ερευνητικά έργα με αντικείμενο τις ΑΠΕ, τα Έξυπνα Δίκτυα και τις Εναλλακτικές Μορφές Ενέργειας.

CV:

Aristotelis Tsekouras is a Production and Mechanical Engineer with experience in the design, implementation, and monitoring of energy projects. He holds a Master of Engineering degree from the School of Production Engineering and Management at the Technical University of Crete.

Since 2014, he has worked with engineering firms on turnkey energy projects covering geothermal HVAC, heat recovery, district heating, medium-voltage substations, SCADA systems, and e-mobility. In 2022, he founded **Grand Alpha**, an engineering consultancy focused on innovative and sustainable energy solutions for commercial and industrial applications.

His expertise includes central HVAC systems, with a particular focus on open-loop geothermal systems, as well as biomass utilization, combined heat and power (CHP), district heating and cooling, hydrogen technologies, and SCADA and building energy management systems (BEMS). He maintains long-term collaborations with companies on engineering, procurement, and construction (EPC) projects and the design and development of energy equipment, including biomass, steam, and thermal oil boilers, as well as thermal storage tanks.

As an Energy Auditor and Inspector, he also advises companies on circular economy plans and corporate carbon footprint assessments to support environmental, social, and governance (ESG) reporting. He is a member of the scientific team of the Minoan Energy Community and participates in European-funded research projects focusing on renewable energy, smart grids, hydrogen, and alternative energy technologies.

He is actively involved in the Technical Chamber of Greece (TEE), serving as co-coordinator of its Permanent Energy Committee and as a committee coordinator within its Eastern Crete Regional Department. He is also an active member of the ASHRAE Hellenic Chapter.