

The Pretence Tax: What Mismatched Standards Cost in Energy, Money, and Health

Every rupee spent forcing Western specs onto Indian heat is a rupee wasted.

At a Glance

Every rupee spent forcing Western comfort standards onto Indian heat is money that should have stayed with the occupants. The energy cost. The equipment cost. The monthly electricity bill. None of it needs to exist. [1]

Summary

Retrofitting an Indian building to ASHRAE Standard 55 thermal specifications costs roughly 40 to 60 percent more in HVAC capacity than an adaptive comfort retrofit. A 200-person office in Bengaluru designed for ASHRAE 55 specifies 150 kilowatts of cooling capacity. The same office designed for adaptive comfort, using Biothermal Microconditioning integrated with mechanical systems, requires 100 kilowatts. [1]

Operating that oversized HVAC system through March-to-November heat consumes approximately 800 to 1,000 kilowatt-hours per month during peak thermal season. At INR 12 per kilowatt-hour (typical corporate electricity rate), the monthly cost is INR 9,600 to INR 12,000. Annually, across 9 months, that is INR 86,400 to INR 108,000 in unnecessary cooling electricity. For a building with 100 such office spaces, the pretence tax is INR 8.6 to INR 10.8 million per year. [2]

Maintenance costs multiply the damage. Oversized HVAC equipment runs inefficiently. Compressors cycle more frequently. Filters clog faster. Refrigerant losses increase. Equipment lifespan shortens. Replacement capital expenditure accelerates. Over 10 years, the total cost of pretence exceeds the original equipment investment. [3]

Biothermal Microconditioning removes this tax. Areca palm clusters provide passive cooling through evapotranspiration and shade, reducing mechanical HVAC load. The system adapts as occupant thermal comfort naturally shifts through the season. No oversizing. No pretence. One day deployment. No building redesign. The cost difference between ASHRAE retrofit and Biothermal retrofit is paid back in reduced electricity consumption within 18 to 24 months. After that, every rupee stays with the occupants. [4]