

## TECHNOLOGY ADOPTION PROJECT

A program that enables corporates to cool their interiors sustainably and efficiently.

### Why?

India is yet to build 70% of the buildings that will exist in 2030<sup>1</sup>. To cool the interiors of these buildings, there will be a 700% increase in the number of residential air-conditioners from 32 million in 2015 to 225 million in 2035, and 1150% increase in commercial ACs from 9 Million-TR in 2015 to 104 Million-TR in 2035. This growth in energy demand will predominately be met by coal-power plants. Additionally, the cooling-refrigerant inside air-conditioners sold in India are made from HCFCs or HFCs, gases with high Global Warming Potential.

Alarmingly, the power that will be required to run artificial cooling systems (ACs) in Indian commercial and residential buildings is expected to require construction of 1010 power plants by the year 2030, and ACs installed in Indian commercial and residential buildings are expected to emit 338 MT CO<sub>2</sub>e by the year 2030 (approximately 12% of GHG emissions in 2010).

**Therefore, one of the main drivers of climate change in a tropical country like India is the cooling of buildings.**

The Bureau of Energy Efficiency has established the Energy Conservation Building Code and Benchmark Energy Performance Index (kWh/m<sup>2</sup>/year). However, these concepts have not yet transformed the Indian building energy consumption scenario as the majority of current corporate buildings have not been designed as **energy efficient buildings** using **sustainable cooling technologies**.

<sup>1</sup> Energy Conservation and Commercialization (ECO-III), 2010

<sup>2</sup> FairConditioning & Chaturvedi V, Sharma M, Chattopadhyay S, and Purohit P. CEEW Report titled 'HFC Emission Scenarios for India'.

<sup>3</sup> World Bank Data for India's GHG emissions in 2010: 2864.44 MT CO<sub>2</sub>e

### What?

The Technology Adoption Project (TAP) challenges the status-quo by empowering prestigious corporations of the **Indian service sectors - banking, real-estate, hospitality, IT/BPOs** - to adopt sustainable cooling technologies that will make a significant impact in reducing their energy costs, their GHG emissions and will create a "pioneer-pull-effect" on urban India. The target corporates within these sectors are those whose primary operating cost is cooling, and are cluster-consumers with high cooling-related energy savings potential per location.

If you feel this describes your company, we can conduct a **completely sponsored HVAC technical feasibility study** that will develop an implementable HVAC-system energy conservation strategy for a key building (existing or planned) through building energy modelling and life-cycle energy analysis. **This could save you up to 40% on HVAC energy bills.** Join us!

### Benefits for Your Business



Save Money



Reduce Energy Demands



Save the Planet

## Passive & Active Sustainable Cooling Strategies addressed

- Natural Refrigerant (R290) uptake for ACs & centrally-cooled buildings
- Direct/Indirect Evaporative Cooling uptake
- Passive (Structure) and Active Radiant Cooling
- Solar Vapor Absorption Machines
- Passive Cooling Technologies: Roof and Wall-Insulation, Radiant Barriers / Night-Sky Radiation Systems, Efficient Fenestration Systems such as Engineered Glazing and Double-Glazed Units, Shading Devices, and Spectrally Selective Window Films

### Roundtables are held once a year

In each of the eight selected cities where senior management and engineering executives from corporates, sustainable cooling technology suppliers, practicing Architects and HVAC consultants connect and engage. These roundtables delve into business cases, feasibility studies for each commercial sector, and address specific technical issues leading to knowledge transfer and information dissemination – ultimately, leading to adoption of sustainable cooling technologies that reduce energy use/cost and carbon footprint.

### Fully non-profit

Funded by the State of Geneva and the Oak Foundation. We are open to proposals from additional interested donors.

## Where?

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The TAP operates in these eight major Indian cities:  
**Mumbai, Pune, Delhi, Jaipur, Chennai, Bangalore, Hyderabad, Ahmedabad.**

## Join Us

Visit [www.fairconditioning.org/tap](http://www.fairconditioning.org/tap) to register your company for a fully sponsored HVAC feasibility study and start saving money by reducing HVAC energy use today.

We are also open to collaboration with sustainable cooling technology services/products, architecture firms, HVAC consultants, universities and any other strategic partnership imaginable if you share a common mission of reducing cooling-related energy-use.

## Contact

**Dhruv Gupta**  
Project Manager  
[dhruv@cbalance.in](mailto:dhruv@cbalance.in)  
+91-99306.93364

**Dhruvit Parekh**  
Project Assistant  
[dhruvit@cbalance.in](mailto:dhruvit@cbalance.in)  
+91-94274.63809