The multiple benefits of Cooling Efficiency

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KIGALI
COOLING EFFICIENCY PROGRAM

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Introduction

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K-CEP genesis

- Developing country demanded help on energy efficiency
- 18 philanthropists responded with an offer of help ($50m+) subject to an ambitious Kigali agreement
- ClimateWorks offered to coordinate
- In partnership with: UN, IEA, WB, ASHRAE, academia, NGOs

K-CEP aims:

- to support developing countries to integrate energy efficiency into the refrigerant transition
- to help countries explore opportunities, learn and share lessons

Carbon Pollution

- 80 GT from F-gases
- 80 GT from energy efficiency
- 1 degree C – largest single climate solution

Articulating needs

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- SDGs: cooling supports a plethora of SDGs

Four examples and critical policy aims:

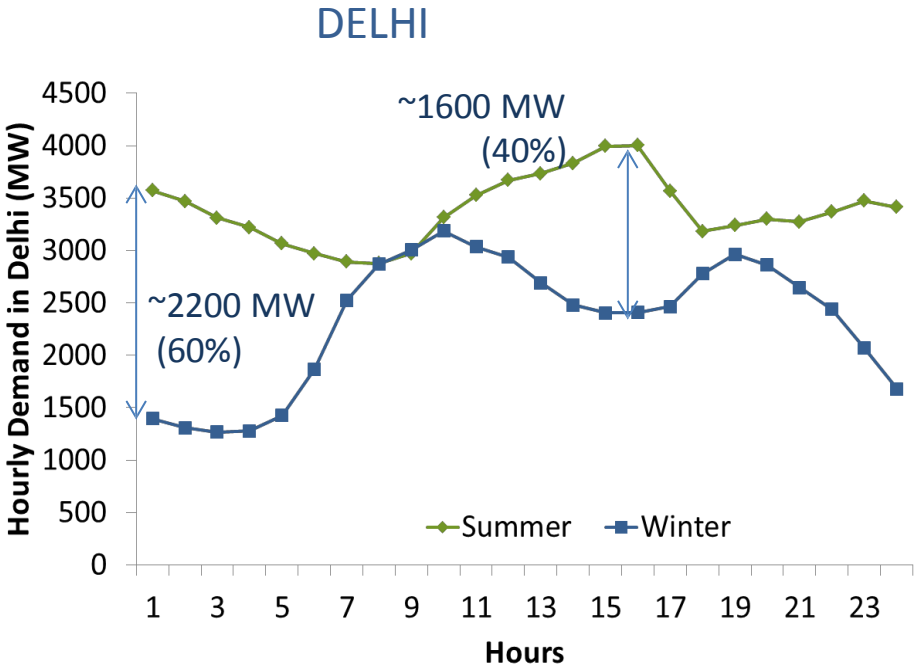
- **Health:** calculate people at risk from excess heat, from food poisoning, from vaccines and medicine spoiled
- **Economy:** calculate value at risk, eg spoiled food, calculate jobs in cooling manufacture AND servicing (compare with supply side)
- **Education:** impact on concentration and exam results
- **Energy:** cooling is often the biggest driver of peak demand

Various existing studies (IEA, LBNL, Clasp, NRDC, ACEEE, GAVI..)

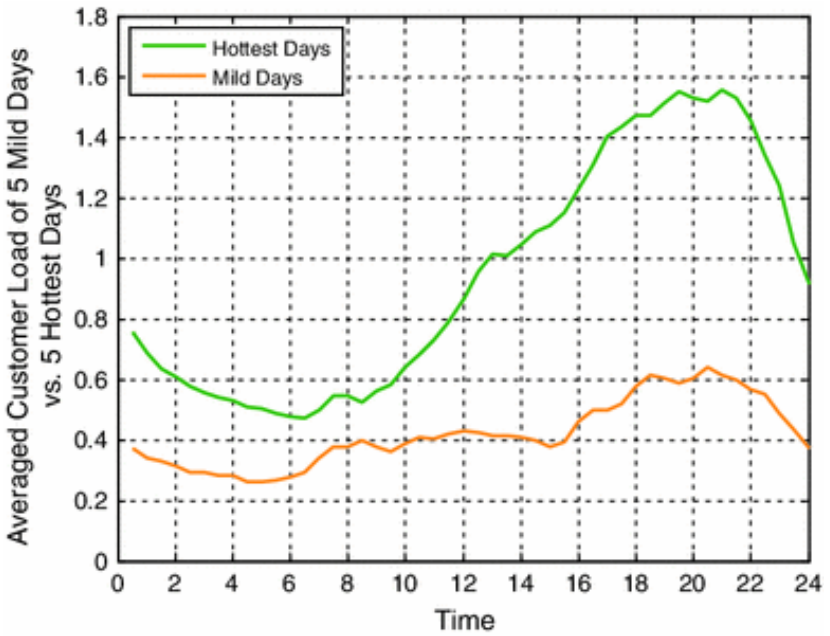
Forthcoming studies

- Cooling for All report by SE4All
- Cool jobs: briefing paper by K-CEP, UNDP and others
- Cooling in hospitals: briefing paper by K-CEP and partners

Cooling has a Significant Peak Load Impact



Source: DSLDC, 2012



Ausgrid, Australia

Source: Smith et al., 2013

Cooling comprises 40%–60% of summer peak load in large metropolitan cities with hot climates, such as Delhi, India …

…and can triple load on the hottest days in some areas, e.g., New South Wales, Australia.

Articulating needs

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Top 3 policy levers to improve cooling efficiency (and access):

1. Minimum energy performance standards: knock out the 'junk'
2. Labels / enforcement: disclose and police
3. Financial mechanisms: incentives, bulk procurement

All require: market analysis (technology, prices, consumer preferences), industry impacts, environmental impacts, equity impacts, trade restrictions, energy savings, comparisons with supply side solution costs….

A warming world

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- World getting hotter: 10 warmest years since 2005
- Cities growing: urban heat island. 5 Degree C more. Pheonix = 1 degree more just from AC!
- Disposable income up
- Population growing

= Demand for AC: 900-1.5bn-2.5bn!
= Business boom - Environmental crises
= Cooling will continue to be a huge cost to governments, society and business. Efficiency can change that.

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Thank you!