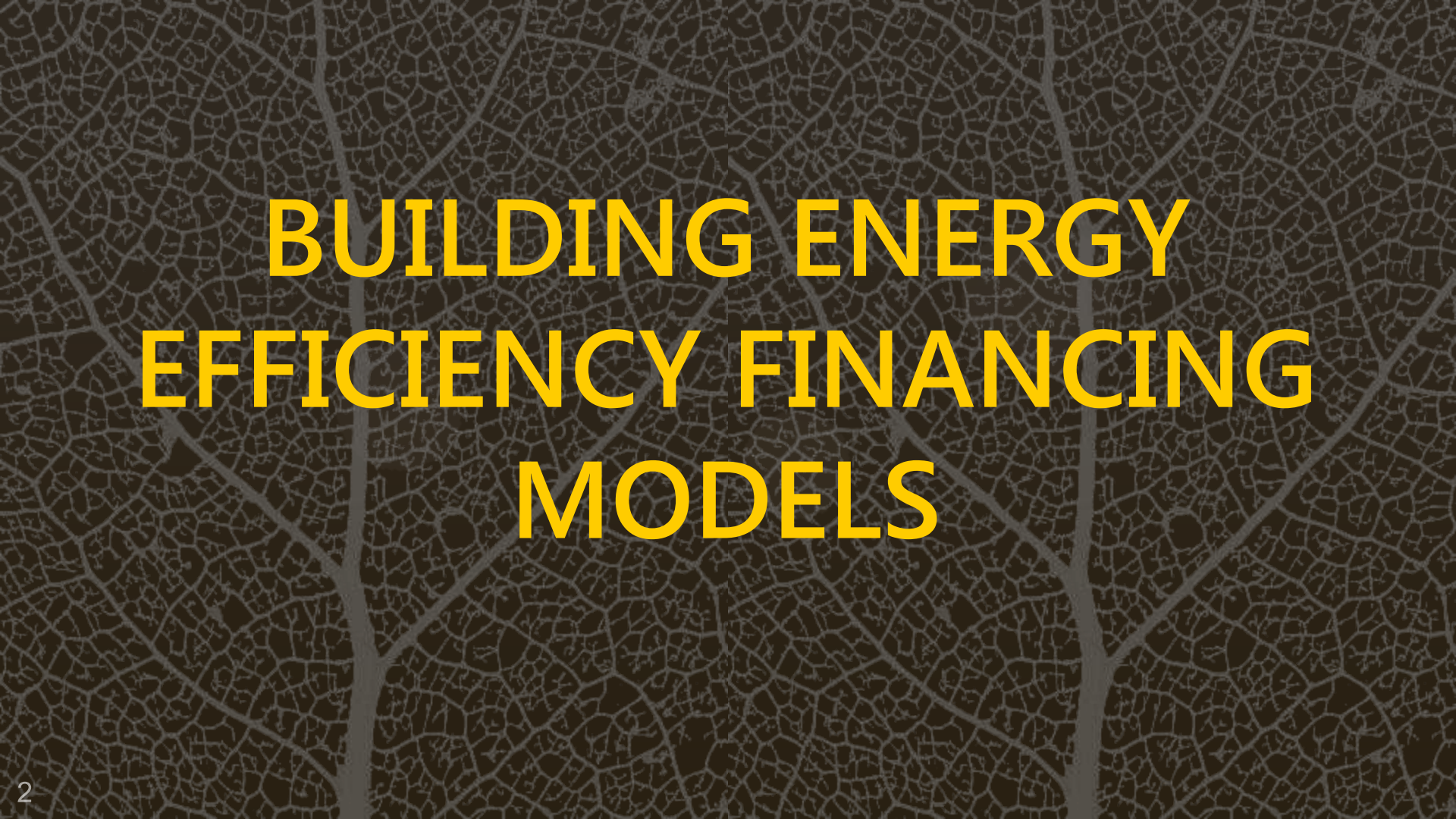


10th GRIHA SUMMIT

SESSION: BUILDING ENERGY EFFICIENCY FINANCING MODELS



December 13, New Delhi



BUILDING ENERGY EFFICIENCY FINANCING MODELS

PREFERENTIAL LOANS

- Direct financial assistance for building owners borrowing capital for investing in energy efficiency
 - Additional borrowing capacity
 - Concessional lending interest rates
- Typically available both as finance or re-finance option
- Government and private sector collaborate to build capital and reduce risk
- KfW-NHB programs in India and PowerSaver program in US



FINANCING THROUGH TAXES

- Model 1: Building owners receive tax incentives for investing in energy efficient building technologies
Capital for investment to be arranged by owner
- Model 2: Government or municipalities secures funding for owners through private capital



US Property Assessed Clean Energy (PACE) Program



ENERGY SERVICE COMPANY MODEL

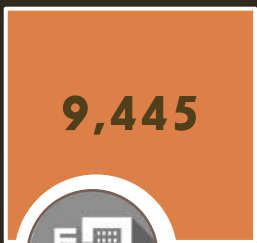
- ESCOs can be public or private sector companies
- Mobilize finance and technical resources for achieving energy cost reductions at minimal to zero upfront cost for building owners
- Energy Savings Performance Contracting (EPSC) or Energy Performance Contract (EPC):
 - ESCO compensation linked to performance of implemented energy efficiency solutions
 - ESCOs offer guaranteed cost savings to owners. Savings after ESCO cost recovery accrues to the owner.

ESCO MODEL

- EESL's Building Energy Efficiency Program (BEEP) is the flagship program to undertake large scale appliance replacement in existing buildings
- EESL offers 100% financing on upfront cost of energy efficient retrofits to building owners at pre-approved interest rates
- EESL supplies lighting and cooling appliances at discounted prices and maintains them for a period of five years
- Cost recovered over a five year period from electricity cost savings realized from retrofits

**EESL is the first SUPER ESCO in
India**

EE BUILDINGS

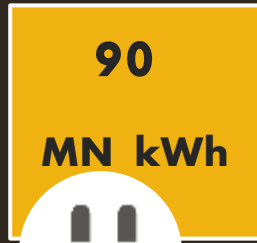


BUILDINGS
COMPLETED



ONGOING
BUILDINGS

ENERGY SAVINGS



ENERGY
SAVINGS

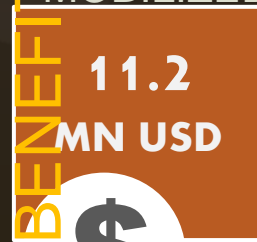


AVOIDED PEAK
DEMAND

MONETARY



INVESTMENT
MOBILIZED



COST SAVINGS

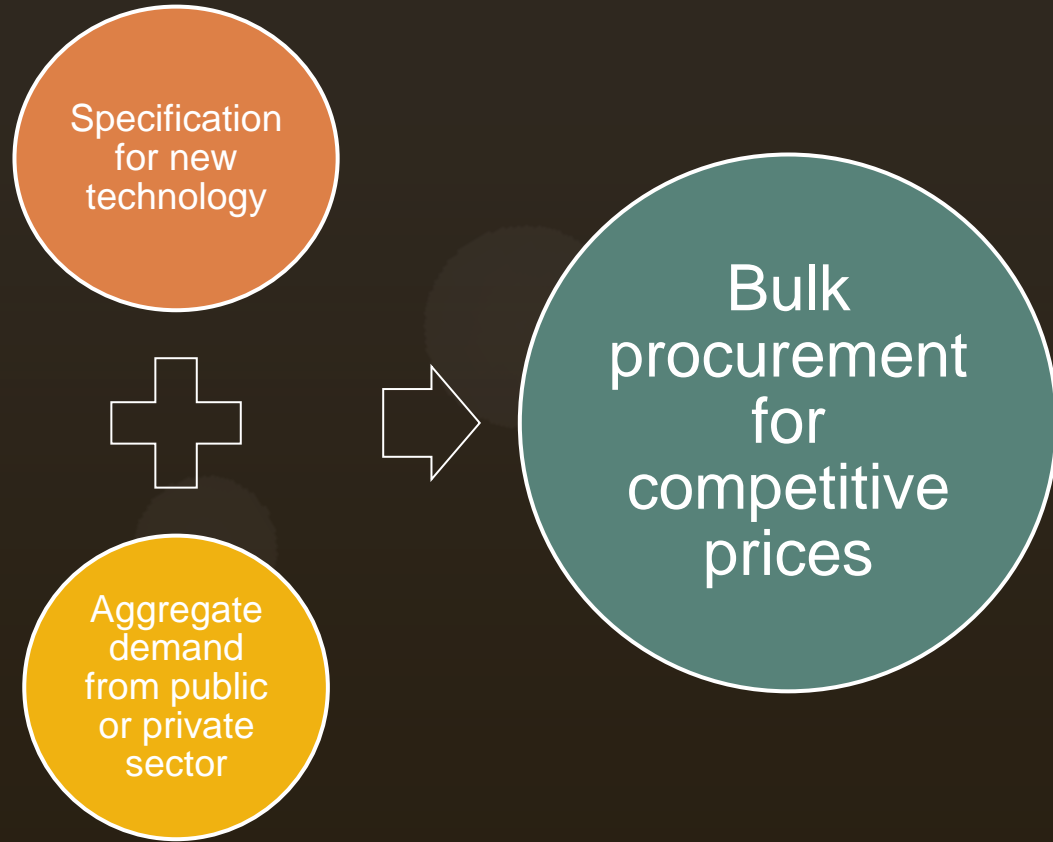
BENEFITS

IMPACT: BEEP

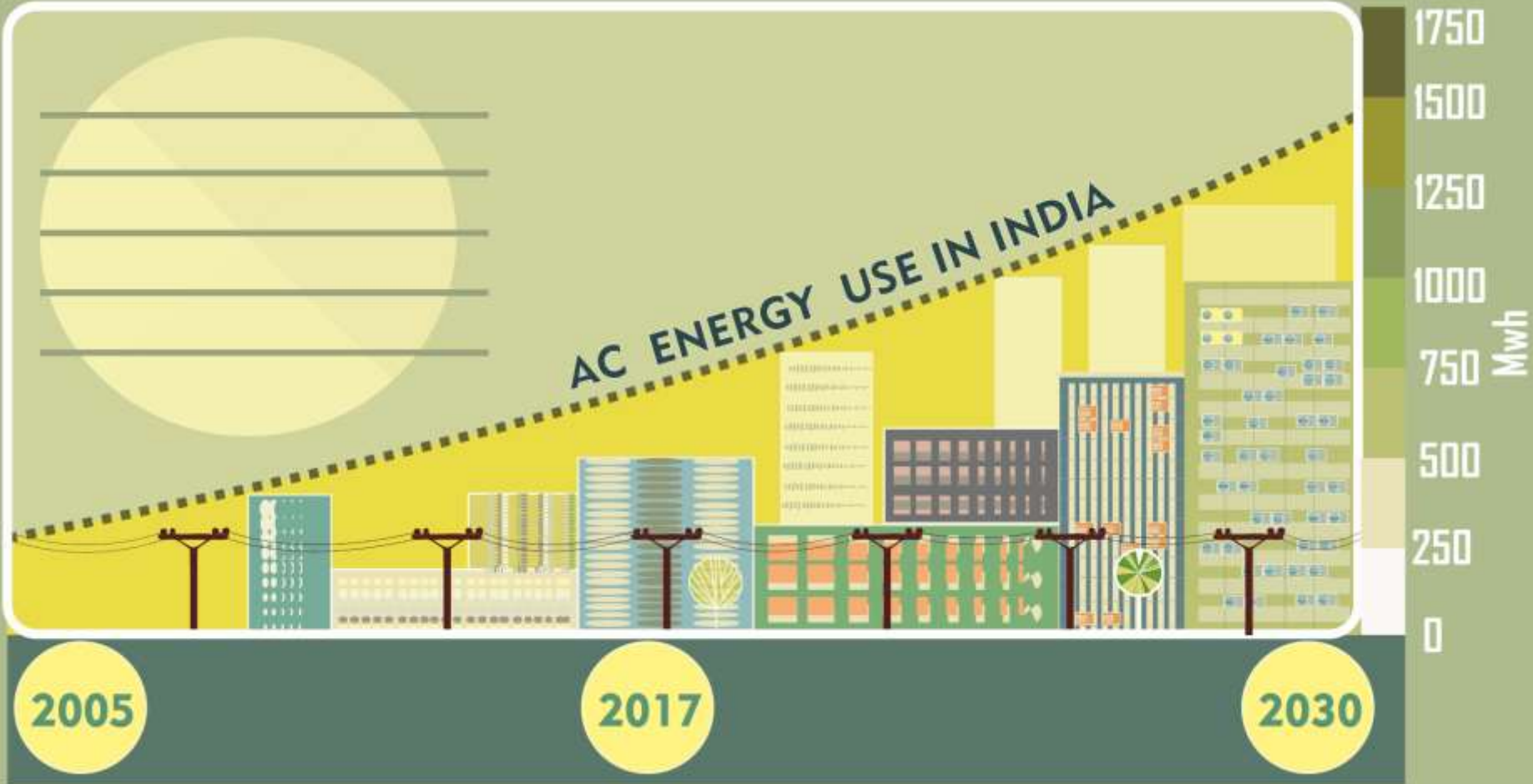


BULK TECHNOLOGY PROCUREMENT

Technology procurement programs are a tested strategy for governments and large private sector organizations for inducing manufacturers to provide advanced, energy efficient building technologies at competitive prices.



AC ENERGY USE IN INDIA



2005

2017

2030

1750

1500

1250

1000

750

500

250

0

Mwh



Super-efficient Air conditioner Program is the first bulk procurement program for ACs in India .

- Energy Efficiency Services Limited with USAID's technical assistance started the program
- Introduced the first super-efficient AC in India: 30% more efficient than other ACs
- 100,000 ACs procured through a competitive tender
- 79 million USD investment mobilized
- Market creation: New, competing super efficient ACs introduced by other companies at lower cost

**5.2
ISEER**

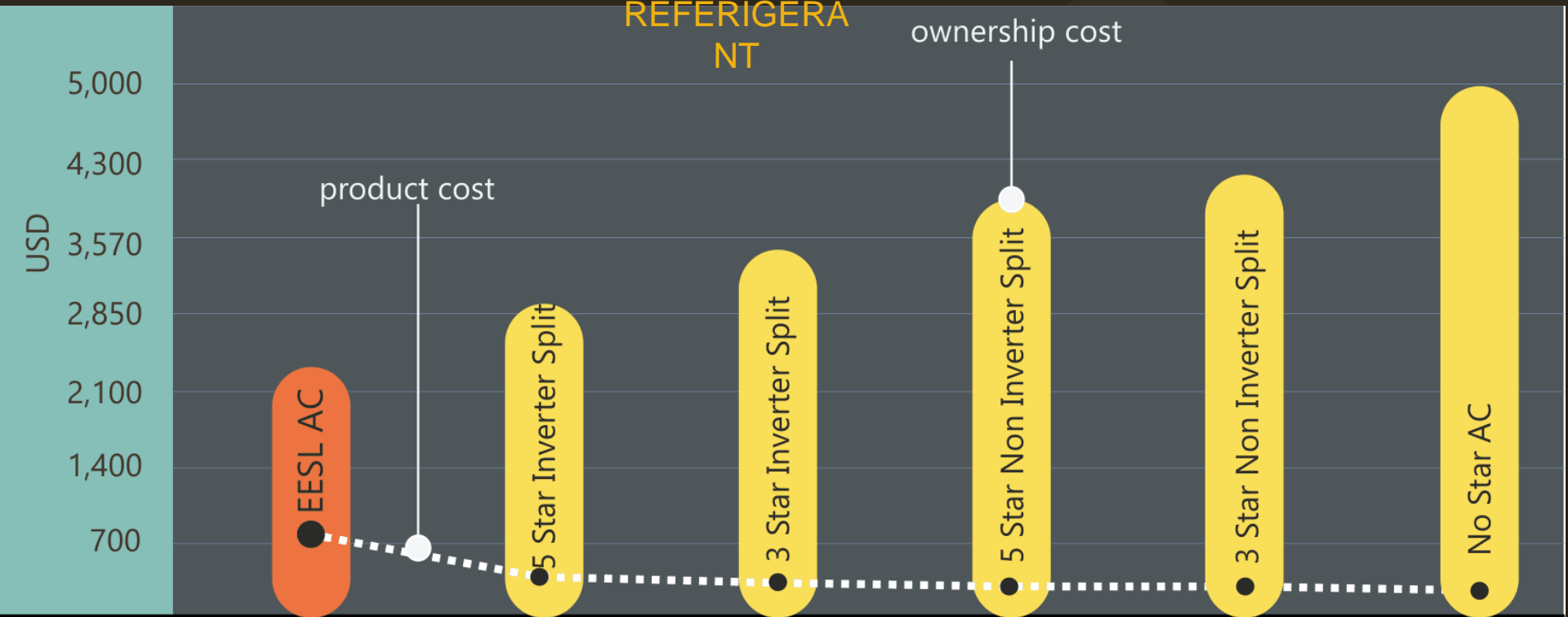
EFFICIENCY

R-290

**GREEN
REFRIGERA
NT**

**100%
from EESL**

FINANCING





USAID
FROM THE AMERICAN PEOPLE



GOVERNMENT OF INDIA
MINISTRY OF POWER

MAITREE

MARKET INTEGRATION AND
TRANSFORMATION
FOR ENERGY EFFICIENCY



1 Energy Efficiency in Buildings



Supporting Energy Conservation Building Code (ECBC) implementation



Moving towards a super-efficient and net-zero target for new buildings



Large-scale energy efficiency upgrades of existing buildings

2

Sustainable Cooling

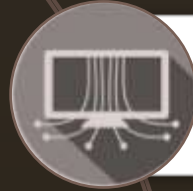


Program design and implementation support for low-energy comfort systems

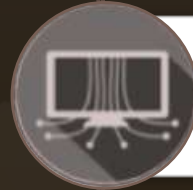


Supporting large-scale deployment of super-efficient cooling technologies

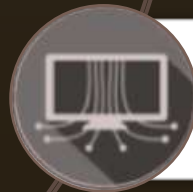
3 Training & Consumer Engagement



Skill development for building sector professionals



Capacity building for EE design, construction and operation



Consumer outreach for EE behavior modification



Thank You

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