

# ENERGY END-USE ACTION PLAN

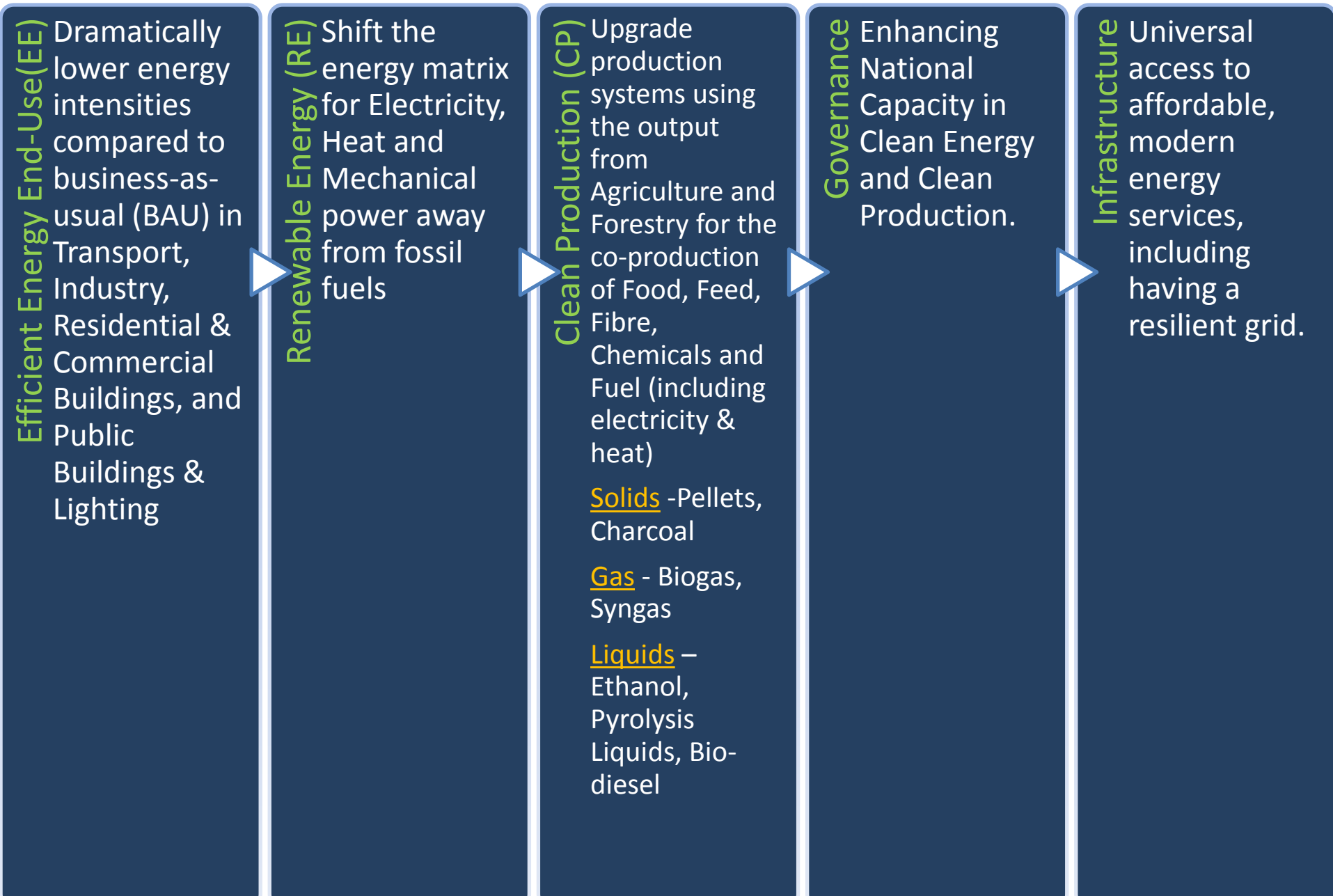
BELIZE 2014-2030

Ambrose Tillett

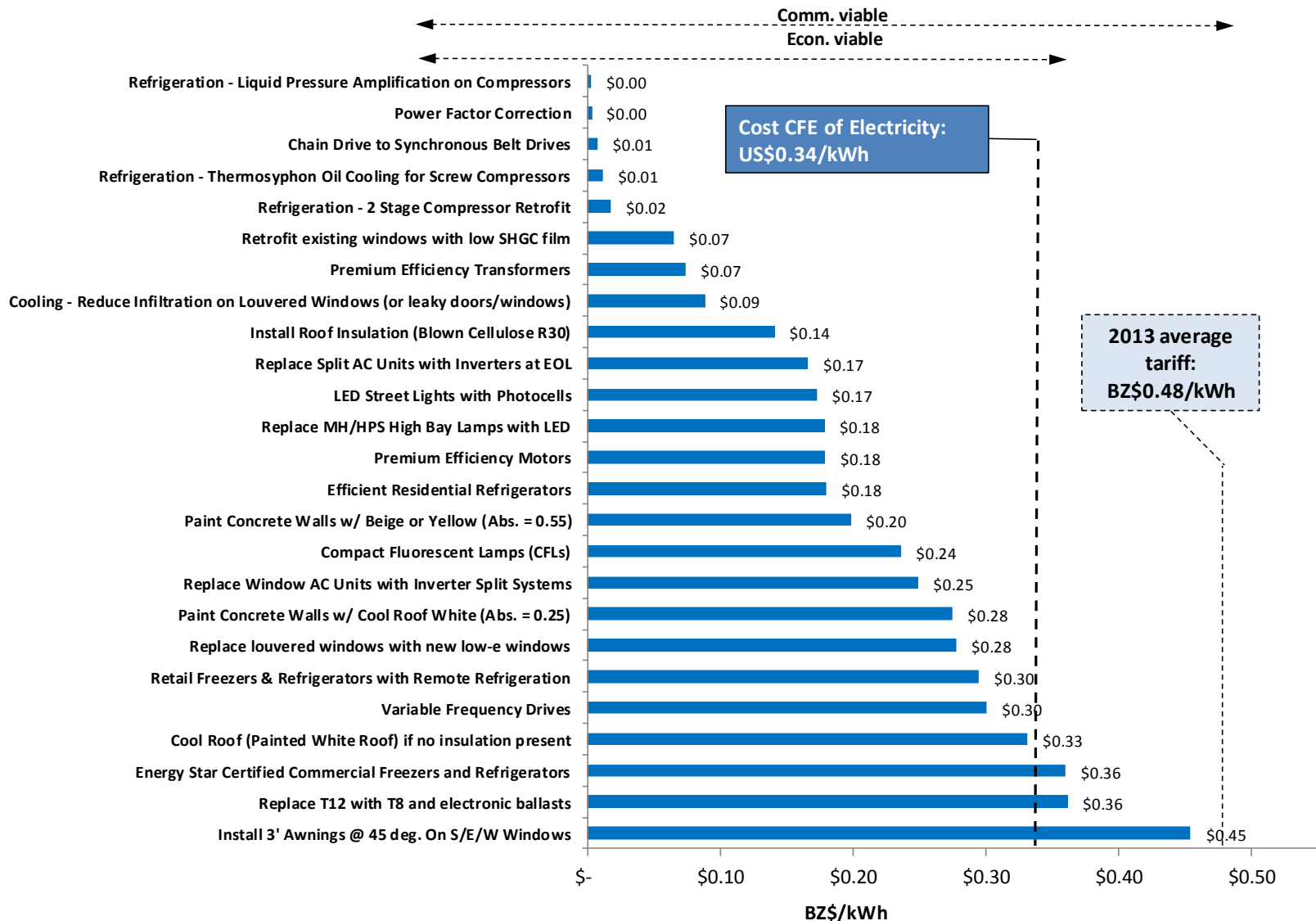
Energy Director

Ministry of Energy, Science & Technology - BELIZE

# Five-(5) Pillars - Belize Sustainable Energy Roadmap 2030



# Energy efficiency (2 of 4): A wide range of electrical measures to save money quickly



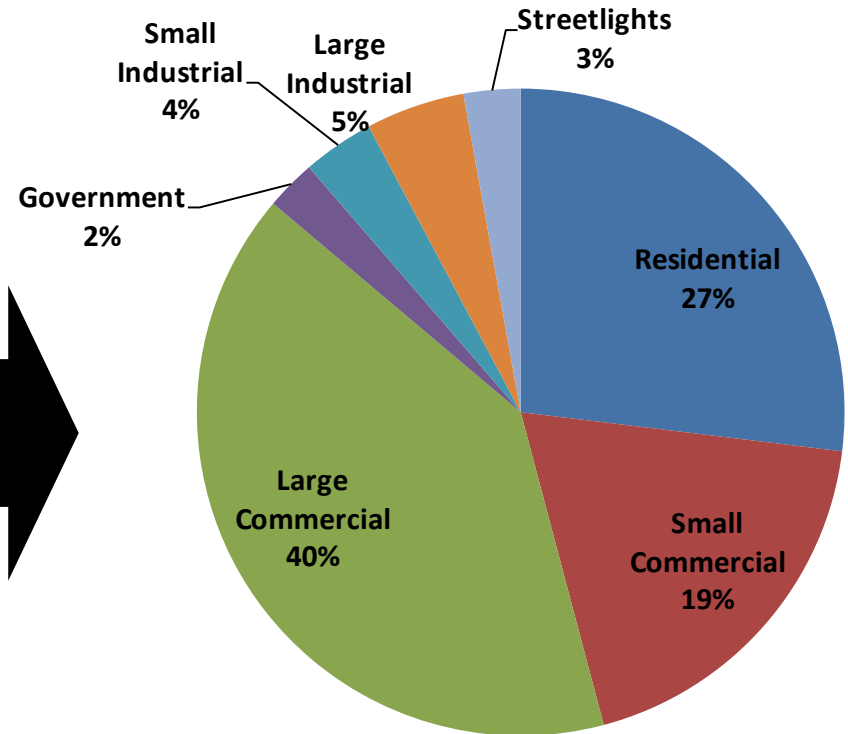
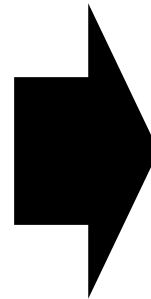
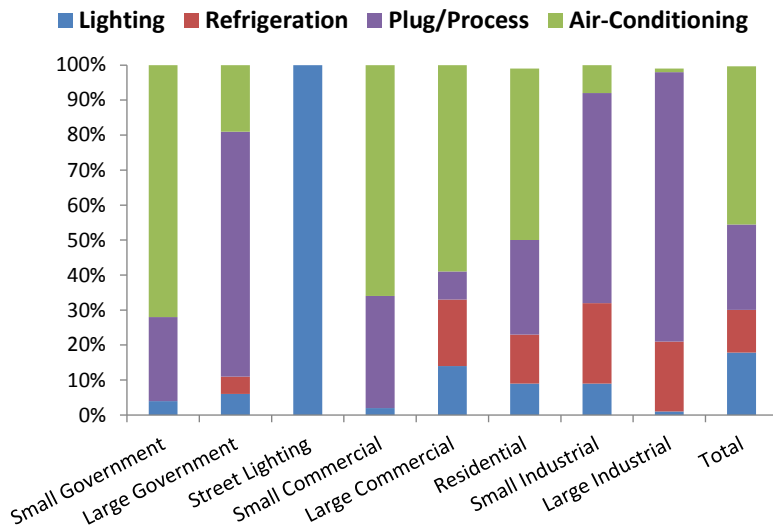
Assumes discount rate of 6%; assumes replacement of residential and commercial refrigerators at end of life

# Energy efficiency (3 of 4): Sectors and uses with the most untapped electricity savings

## A typical customer can save...

Residential	17%
Small commercial	29%
Large commercial	35%
Government	12%
Small industrial	23%
Large industrial	26%
Streetlights	40%

## ...focusing on key end uses:



**Net economic savings of over  
BZ\$150M if 90% of consumers were  
efficient by 2033**

# The market:

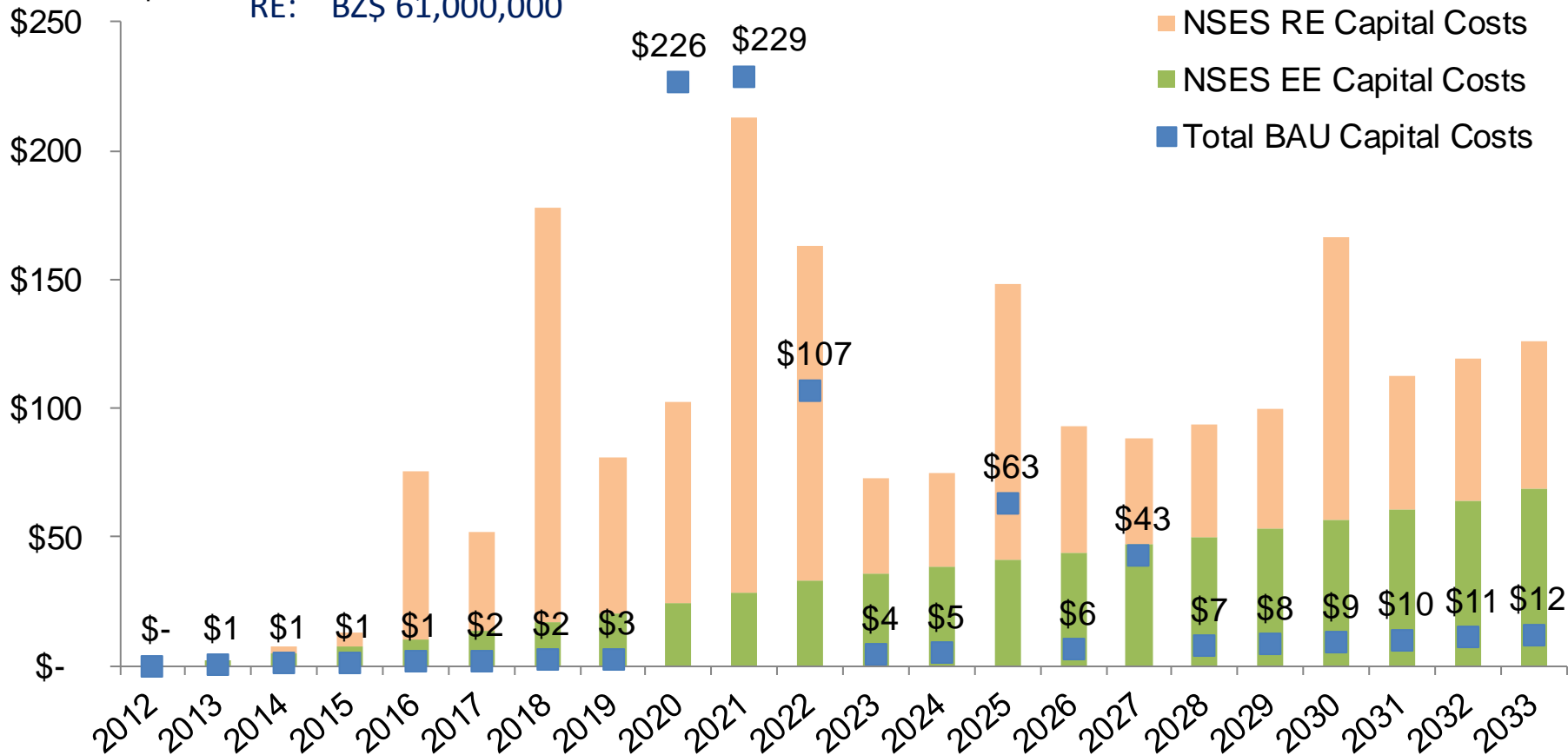
## Investments required... to make BZ\$524 M in net savings to 2033

### NSES average annual investment

EE: BZ\$ 33,000,000

RE: BZ\$ 61,000,000

Millions BZ\$



# CREATING AN ENABLING ENVIRONMENT FOR ENERGY EFFICIENCY (OVERCOMING BARRIERS)

*Crossing the Bridge to more Energy Efficient Buildings*

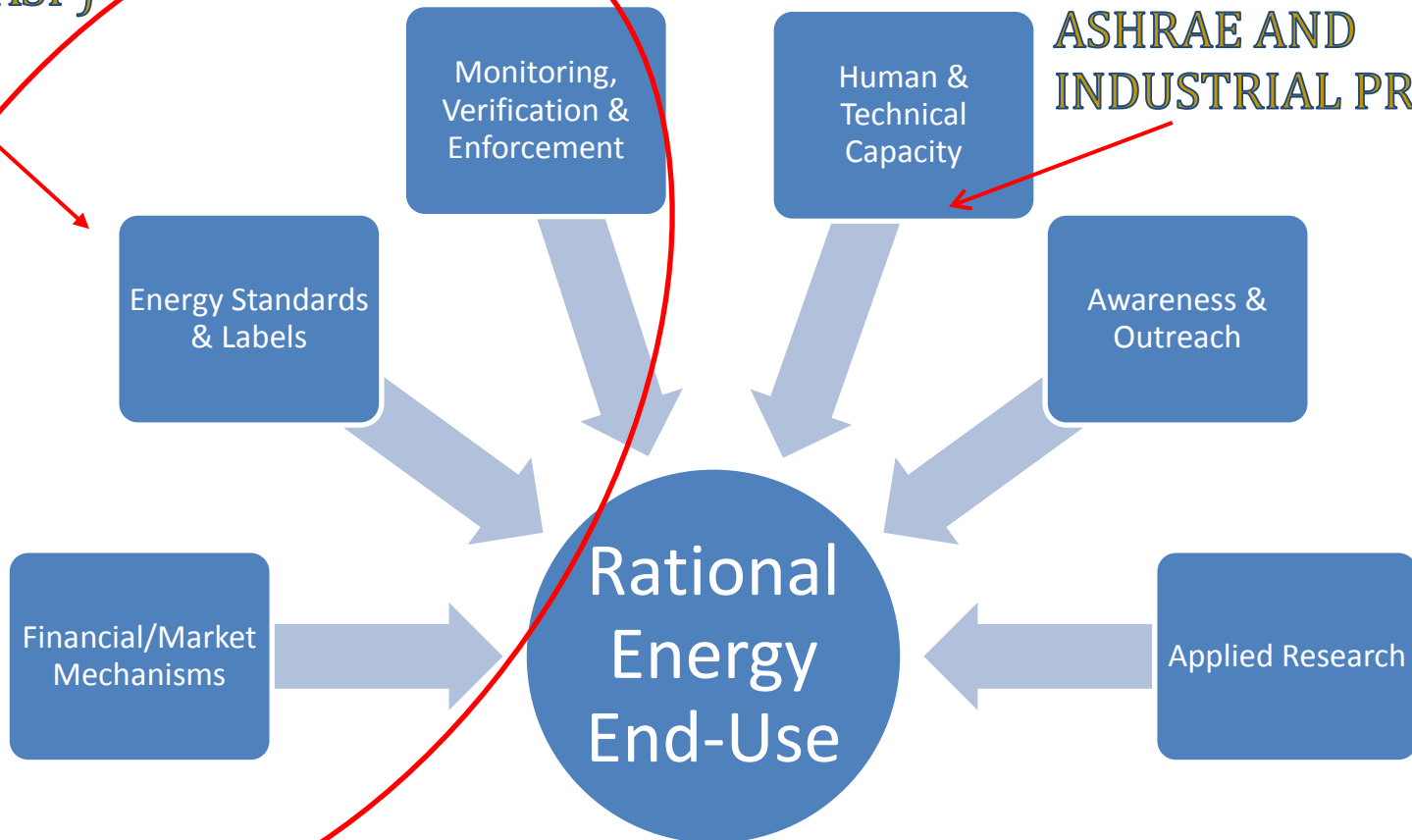


*Source: Institute for Building Efficiency, Johnson Controls Inc. (2011)*

# CREATING AN ENABLING ENVIRONMENT FOR ENERGY EFFICIENCY (MARKET TRANSFORMATION TOOLKIT)

OAS/SECBI (MCGEOWN ASSOCIATES AND U.S. NREL/CLASP)

CERTIFICATION IN ASHRAE AND INDUSTRIAL PROCESSES



# END-USE PILLAR CONCLUSIONS



Adequate Financial Incentives and Funding is a prerequisite for implementing a successful Rational Energy End-Use programme.

ESL's and compliance are necessary to guarantee sustained improvements in energy at the point of use.

The co-benefits of ESL's: product market for electrical goods shifts to higher quality and lower cost of ownership for end-users.

ESD-Caraibes is the principal vehicle for achieving the goals and objects on rational energy end-use, a pillar of Belize's Sustainable Energy Policy & Strategy.

Important stakeholders like the Utility, the Bureau of Standards, Department of Environment, Suppliers, ESCO's, etc. must be engaged in market transformation