

# Energy Efficiency in Danish buildings & Government to Government in Indonesia

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# Starting in 1961...

## Bygningsreglement

for

KØBSTÆDERNE OG LANDET

1961

### 8.3. Etageadskillelser og tage.

*Stk. 1.* Etageadskillelser og tage direkte mod beboelsesrum skal udføres således, at transmissionstallet  $k$  ikke overstiger de nedenfor nævnte tal:

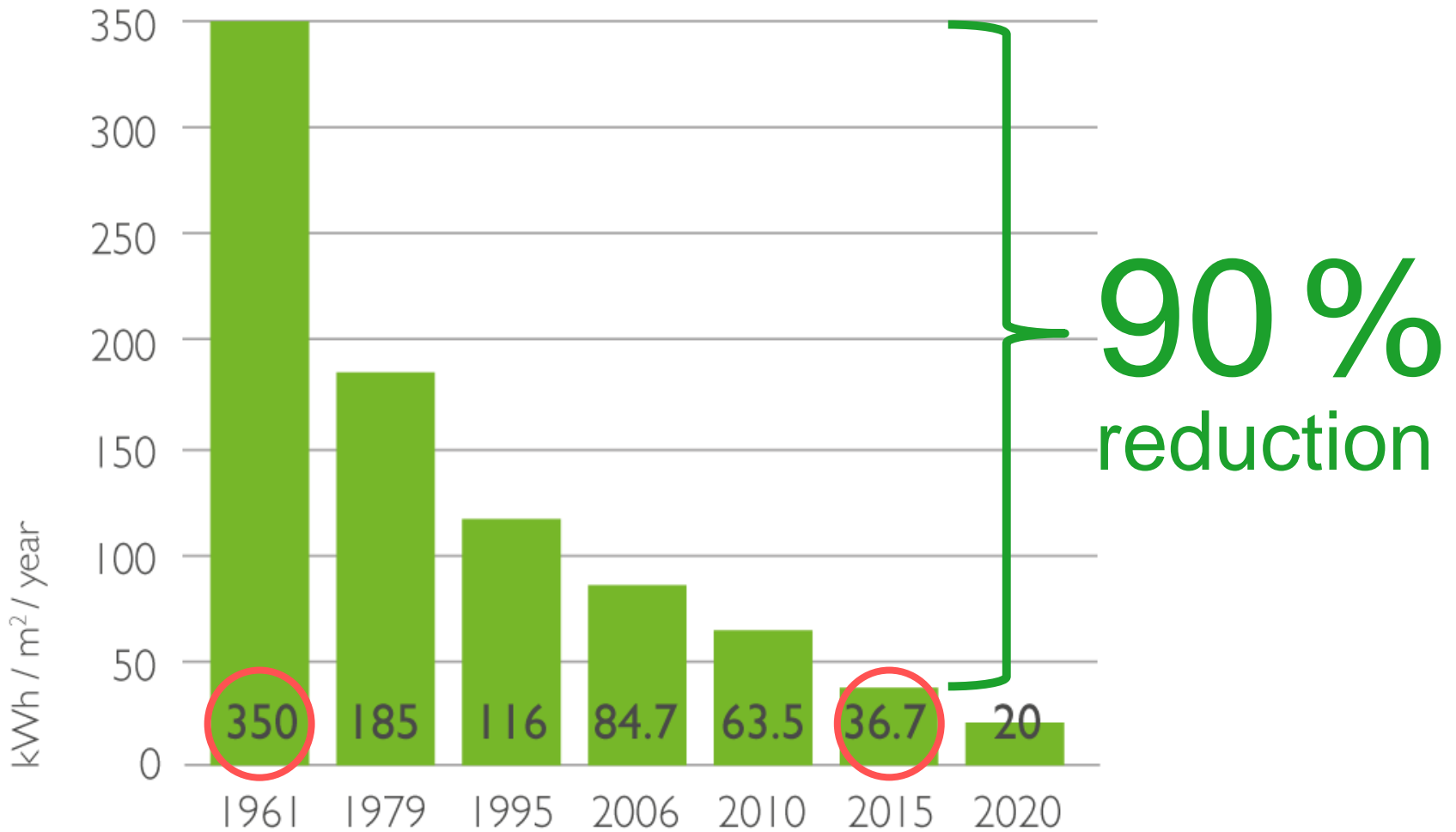
Tage, der begrænser opholdsrum ..... 0,4

*Stk. 2.* De i stk. 1 nævnte krav til varmeisolering kan normalt anses for opfyldt ved følgende konstruktioner:

*For  $k = 0,4$  eller mindre:*

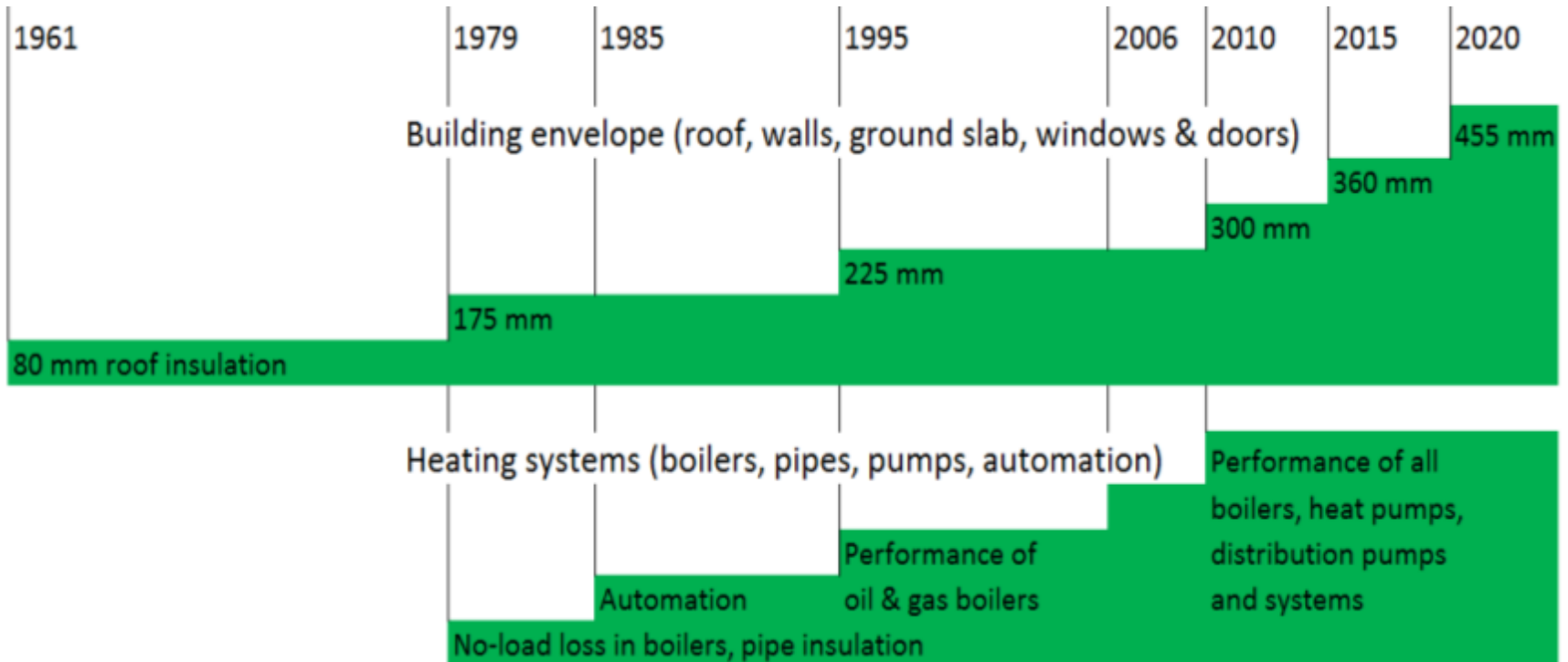
teglstenstag med forskalling og puds, isoleret med 8 cm mineraluld eller tilsvarende,  
tagpaptag med forskalling og puds, isoleret med 8 cm mineraluld eller tilsvarende.

# Regulation greatly reduces max allowed energy demand

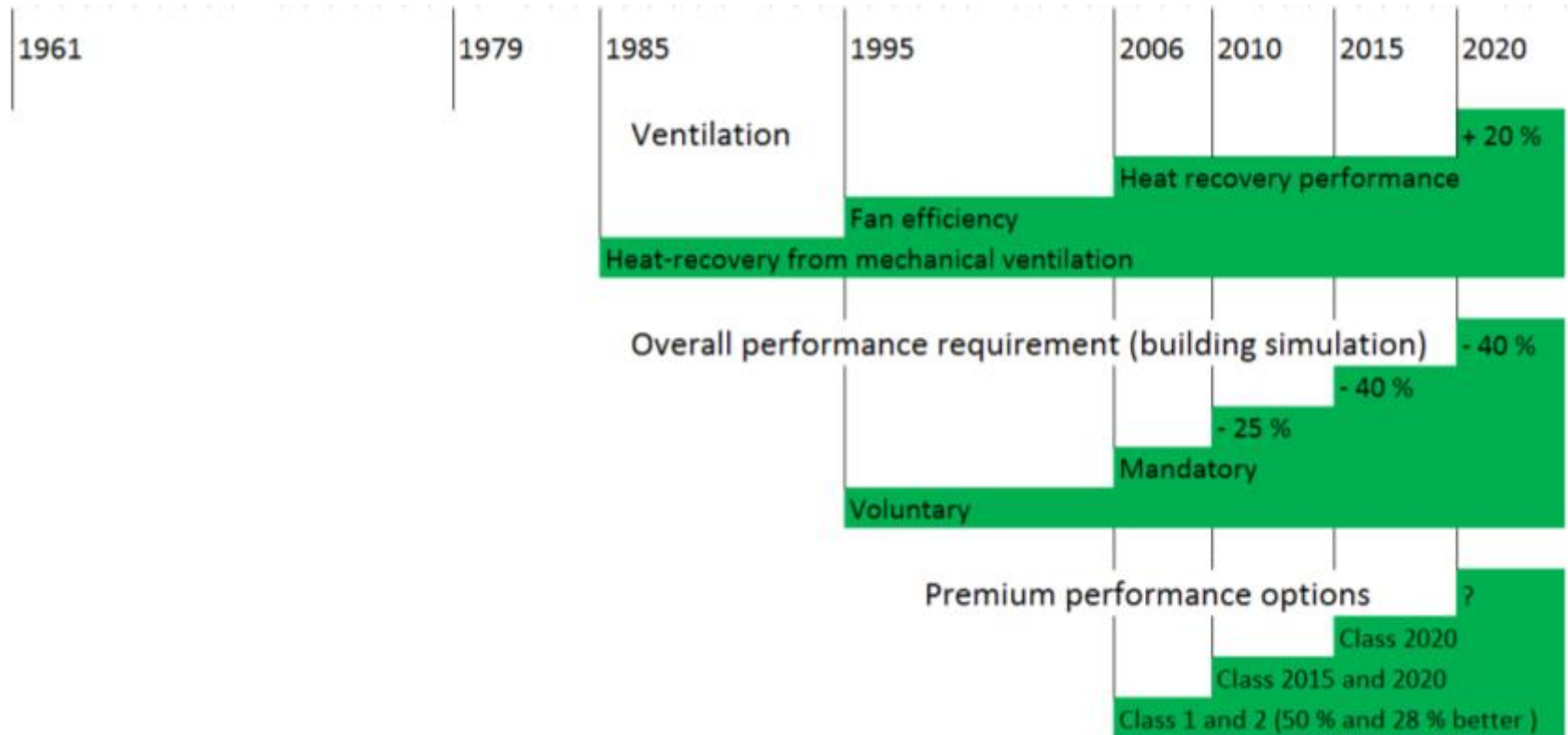


*Maximum allowed energy demand per m<sup>2</sup> heated floor space and per year in a new, 150 m<sup>2</sup> Danish home.*

# Gradually more stringent...



# And more comprehensive

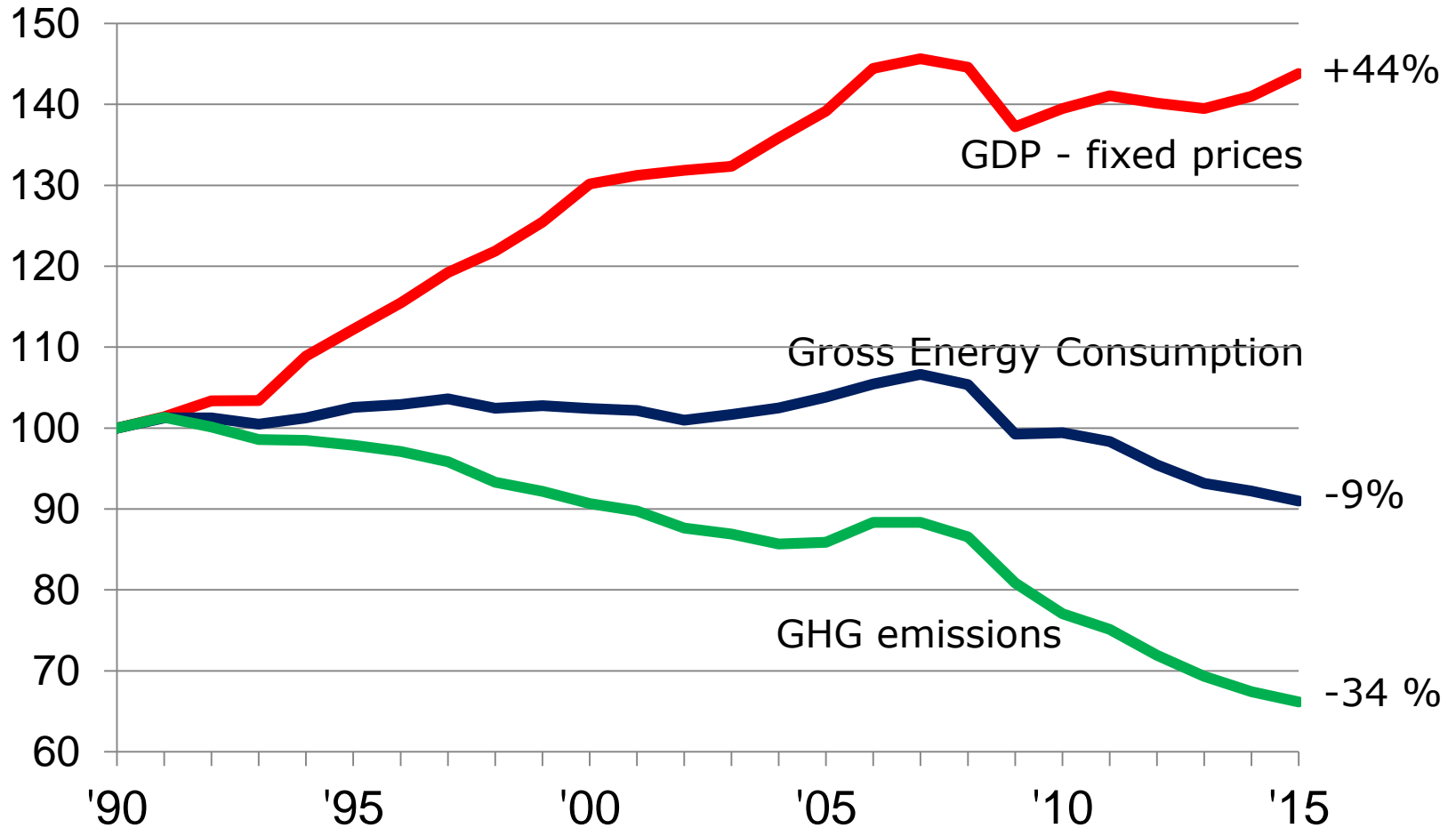




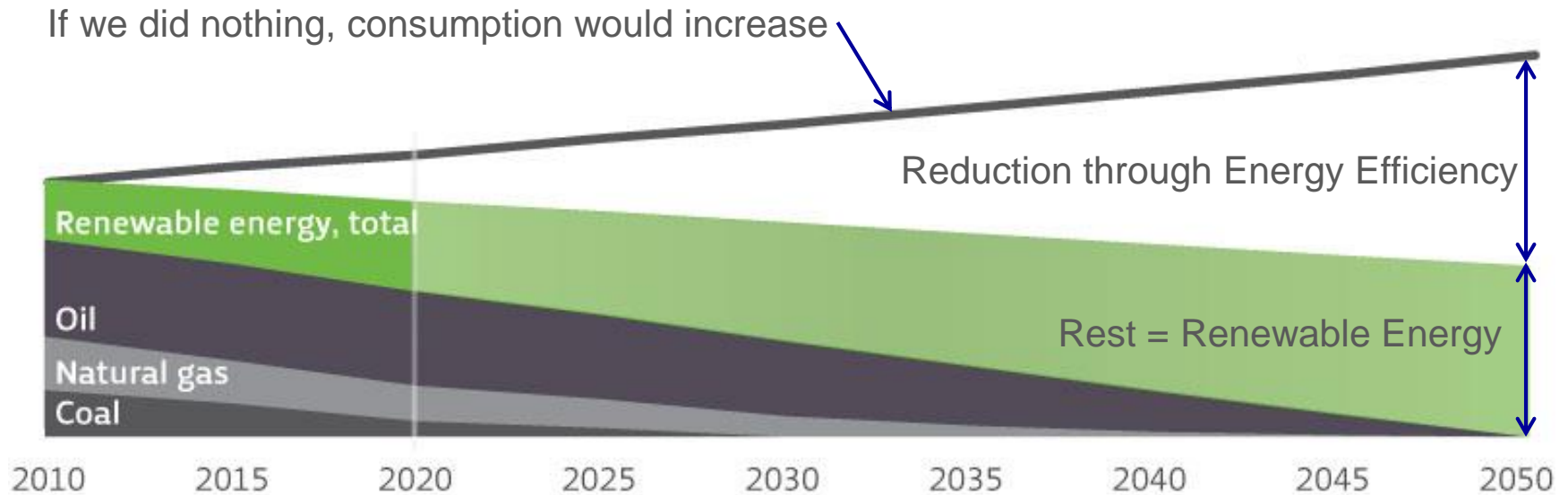
In 2013 fully 30 % of all new floor space was built to the 2015 or 2020 standards rather than the present, mandatory standard.

# Green growth track record

Doing more with less



# And the road ahead...



**Ambition of Denmark:  
by 2050 to be independent from fossil fuels**



# Danish Energy Policy Agreement 2018: Energy Efficiency Initiatives

40 million €  
to reduce  
business  
energy  
consumption

26 million €  
for energy  
savings in  
households



Support for  
replacement of oil fires



Support for municipal  
and regional energy  
renovation



Information on  
energy savings

# Strategic Sector Cooperation between Indonesia and Denmark on energy

Danish experiences for low carbon transition are shared with partner countries

Main partners include:

- Ministry of Energy and Mineral Resources
- National Energy Council
- PLN

2016 – 2018 and 2019 – 2021

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# Focus areas of the SSC project in Indonesia

## **Modelling and long term energy planning**

Technology catalogue on power generation, Indonesian energy outlook, power sector modelling and energy modelling in Lombok

## **Renewable energy integration**

Economic merit order dispatch for energy, grid codes, pre-feasibility study on hybrid systems

## **Energy efficiency**

Study on existing Indonesian Power Plants, demand side modelling and building codes

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# Thank you for the attention

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